

# Ph. D. Cognitive Neuroscience

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## Board of Governors, State University System of Florida Request to Offer a New Degree Program

(Please do not revise this proposal format without prior approval from Board staff)

Florida International University

**University Submitting Proposal**

Arts, Sciences, & Education

**Name of College(s) or School(s)**

Behavioral Neuroscience

**Academic Specialty or Field**

42.2706

**Proposed CIP Code**

Fall 2021

**Proposed Implementation Term**

Department of Psychology

**Name of Department(s)/ Division(s)**

M.S. in Cognitive Neuroscience; Ph.D. in  
Cognitive Neuroscience

**Complete Name of Degree**

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.

**Date Approved by the University Board of Trustees** 6/17/2020

DocuSigned by:

Claudia Puig

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**President**

6/16/2020  
**Date**

**Signature of Chair, Board of Trustees**

**Date**

**Vice President for Academic Affairs**

5/19/2020  
**Date**

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1 in Appendix A. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2 in Appendix A. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Enrollment (From Table 1)		Projected Program Costs (From Table 2)				
	HC	FTE	E&G Cost per FTE	E&G Funds	Contract & Grants Funds	Auxiliary Funds	Total Cost
Year 1	15	15	\$24,255	\$363,824	\$364,967	n/a	\$728,791
Year 2	20	20					
Year 3	20	20					
Year 4	22	22					
Year 5	20	20	\$19,243	\$384,858	\$482,369	n/a	\$867,227

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix A and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.

## **INTRODUCTION**

### **I. Program Description and Relationship to System-Level Goals**

- A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including majors, concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.**

The proposal will move an existing Ph.D. major in Psychology to a stand-alone Ph.D. in Cognitive Neuroscience (75 credits) under a new STEM CIP code. In addition, this proposal will move an existing M.S. major in Psychology to a stand-alone M.S. in Cognitive Neuroscience (36 credits) under a new STEM CIP code. FIU does not directly admit students into this Master's-level program. This M.S. program is needed as a potential off-ramp for the newly-proposed Ph.D. in Cognitive Neuroscience for students who are unsuccessful in reaching doctoral candidate status. The degrees will be housed in the College of Arts, Sciences, and Education Department of Psychology.

This new degree proposal will treat both the M.S. and Ph.D. as one program, and for consistency of presentation, for the remainder of the document we will refer to it as the M.S./Ph.D. program, although the University will be adding both degrees to its inventory. As the main focus of this proposal is the Ph.D., only characteristics unique to the M.S. will receive additional attention (i.e., need and demand, curriculum).

The goal of the M.S./Ph.D. program is to train students to be scientists involved in basic research with expertise in cognitive neuroscience. The program emphasizes research analysis and design skills that will be useful in the laboratory and in the field. More specifically, the M.S./Ph.D. program's purpose is to provide a rigorous, broad-based graduate education with an emphasis on topic-specific skills in neuroscience research methodology and data analysis; cognitive, developmental, and behavioral neuroscience; learning and memory; and neuropsychological disorders, combined with broader STEM-related skills.

The addition of a stand-alone Cognitive Neuroscience program would accomplish several key areas of strategic emphasis toward FIU and SUS missions, including increasing the number of graduate STEM degrees awarded, increasing graduate participation in research, contributing to increased innovation, strengthening the quality and relevance of FIU, and increasing the quality of enrolling graduate students.

Students graduating with a Ph.D. in Cognitive Neuroscience will be competitively prepared for research careers in neuroscience, medical science, pharmacology, neuropsychology, biomedical sciences, brain-machine interface technologies, and various areas within the field of psychology more broadly. The U.S. Bureau of Labor Statistics reports that these sectors are growing at a "faster than average" rate for 2018-28. Likewise, a number of growing employment sectors in Miami-Dade County (e.g., 13.9% growth, Professional, Scientific, and Technical Services; 13.8% growth, Education and Health Services) will be filled by neuroscience-trained graduates with higher degrees (Florida Department of Economic Opportunity, Fastest-Growing Occupations, 2019-2027 Statewide and Regional Projections, <http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections>). In addition, Cognitive Neuroscience Ph.D. graduates can work as postdoctoral fellows and research scientists at Florida research universities and research institutions, such as the Max Planck Florida Institute for Neuroscience, Cleveland Clinic Florida Research and Innovation Center, Scripps Research Institute Florida, and Torrey Pines @FIU.

If students instead earn a Master's degree in Cognitive Neuroscience, this path will also afford graduates with opportunities at the state level, as researchers at several of the aforementioned institutions within Florida. Moreover, the State of Florida Department of Economic Opportunity's employment projections out to 2027 suggest growth in a number of specific job areas for which Master's students could be employed, and the national

Bureau of Labor Statistics projections mirror the state projections. Potential employment avenues include the following disciplines and their projected growth at the state and national levels: Social Science Research Assistants (6% state); Biological Technicians (10.8% state; 7% national); Life, Physical, and Social Science Technicians (10.1% state; 7% national); Psychology Teachers, Postsecondary (14.6% state; 13% national); and Technical Writers (15.5% state; 8% national). This degree would also be desirable in applying to advanced training in medical and health professions.

Several of our cognitive neuroscience faculty have collaborations with SUS neuroscience researchers, providing training opportunities for students (e.g., 10 faculty across SUS institutions recently formed the Florida Consortium for the Neurobiology of Cognition to share ideas and technology at annual meetings).

Neuroscience education and research is critically important. The World Health Organization estimates that neurological disorders affect up to 1 billion people worldwide, and that neurological diseases account for 11% of the world's disease burden, excluding addiction and mental health disorders. Yet the understanding of many aspects of neural functioning, basic as well as disease related, remains elusive. Because of this, neuroscience as a field and its impact overall has grown substantially since 2006 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5360093/>). Neuroscience is also rapidly growing in its share of funding at the national level. The BRAIN (Brain Research for Advancing Innovative Neurotechnologies) Initiative is a significant federal investment in neuroscience research through NIH and NSF (<https://www.braininitiative.nih.gov/>) aimed at revolutionizing our understanding of the human brain. Through 2018, NIH has invested over \$950M in 550 new awards for neuroscience research from BRAIN Initiative Institutes and Centers, with funding levels expected to reach \$500M per year by 2021, according to the BRAIN 2025 plan. FIU researchers in cognitive neuroscience have taken advantage of these funds with the acquisition of one of the largest grants in FIU history (\$12.7M NIDA ABCD study), the acquisition of a new MRI magnet, establishment of the Center for Imaging Science, and acquisition of 23 other neuroscience-related awards (including 10 R01s and 4 NSF awards, totaling over \$47M) in recent years.

- B. Please provide the date when the pre-proposal was presented to CAVP (Council of Academic Vice Presidents) Academic Program Coordination review group. Identify any concerns that the CAVP review group raised with the pre-proposed program and provide a brief narrative explaining how each of these concerns has been or is being addressed.**

The pre-proposals for both the Ph.D. and M.S. were presented to the CAVP on February 28, 2020. No concerns were voiced.

- C. If this is a doctoral level program please include the external consultant's report at the end of the proposal as Appendix D. Please provide a few highlights from the report and describe ways in which the report affected the approval process at the university.**

Dr. Craig Stark, James L. McGaugh Professor, Neurobiology and Behavior, University of California, Irvine conducted the external review in early May 2020 (see Appendix D). The review found a distinguished group of well-funded researchers who serve as productive mentors in the current degree major. Dr. Stark was very enthusiastic about the future potential for the graduates who have trained in the state-of-the-art research facilities at FIU. His interaction with faculty led to fruitful discussions about new didactic practices that improve access to higher-level training in computer programming through existing curricula, including incorporation into the weekly Topics in Neuroscience colloquium. Dr. Stark was impressed with the level of quantitative methodology and analytic training the students receive, which makes them competitive for related data science occupations experiencing rapid growth in the next decade. Dr. Stark noted that "by bringing the degree into a STEM classified degree and by removing it from the requirements tied to your excellent Clinical Psychology program, FIU is responding well to the evolution of the field."

In his initial review, Dr. Stark expressed concern with the large amount of formal classwork that was required for the degree. This proposal was modified utilizing Dr. Stark's feedback to be more in line with similar programs at flagship universities, to provide more time for students' independent research, and to provide for high-level, discussion-based instruction on advances in the field. With this modification, which was accomplished prior to the Board of Trustees' final approval, Dr. Stark reported that the proposal was well-suited to achieve its goal of training advanced students in the field of cognitive neuroscience.

**D. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which specific goals the program will directly support and which goals the program will indirectly support (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

(1) Strengthen Quality and Reputation of Academic Programs and Universities: *Directly Support*. Cognitive Neuroscience is a highly relevant and necessary addition to the graduate curriculum as a stand-alone program. These degree programs will provide students a strong foundation in the material, making them more competitive for regional and national jobs requiring a neuroscience background, and for postdoctoral and faculty positions in psychology and neuroscience. The addition of the Cognitive Neuroscience M.S./Ph.D. degrees will contribute to the SUS Strategic Plan by providing a high-quality academic degree program to meet state economic and workforce needs and contributing to cutting edge research that brings about innovation and discovery while elucidating critical mechanisms of the brain.

(2) Increase Degree Productivity and Program Efficiency: *Directly Support*. The proposed Cognitive Neuroscience M.S./Ph.D. program will increase the number of the STEM degrees awarded annually in the SUS, including those awarded to women, Black and African-American students, and Hispanic students. As one of the highest enrolled universities in the country, FIU is currently the largest producer of psychology degrees among Hispanic students. Of the 4,217 undergraduate FIU students enrolled in psychology in 2019, 71% were Hispanic, 13% were Black/ African American, and 80% were female. Fifty-six percent of the psychology majors are Pell recipients, and 27% are first generation students. These students will benefit from a strong graduate program in this area. In addition, 68% of current Cognitive Neuroscience major students are women, and 23% are Hispanic or Black. The program will continue to be one of the primary degree granting programs for minorities in the field of Cognitive Neuroscience.

(3) Increase the Number of Degrees Awarded within Programs of Strategic Emphasis: *Directly Support*. Based on the Cognitive Neuroscience program projected enrollments, the proposed program is expected to increase the number and proportion of M.S./Ph.D. degrees in STEM.

(4) Strengthen Quality and Reputation of Scholarship, Research, and Innovation: *Directly Support*. The proposed Cognitive Neuroscience M.S./Ph.D. program will increase the percentage of graduate students engaged in STEM research. Students participating in research labs have been shown to have greater retention and overall better performance outcomes. Students conducting research enhances the number of possible experiments being run and data collection, which generates more presentations, papers, and grant opportunities for the faculty and FIU overall. More productivity in the lab also contributes to more possibilities for innovative endeavors, such as patents being awarded. For example, cognitive neuroscience faculty within the Psychology Department were awarded three patents between 2017-2019.

**E. If the program is to be included in a category within the Programs of Strategic Emphasis as described in the SUS Strategic Plan, please indicate the category and the justification for inclusion.**

The Programs of Strategic Emphasis Categories:

1. Critical Workforce:

- Education
- Health
- Gap Analysis
- 2. Economic Development:
  - Global Competitiveness
- 3. Science, Technology, Engineering, and Math (STEM)

Please see the Programs of Strategic Emphasis (PSE) methodology for additional explanations on program inclusion criteria at [the resource page for new program proposal](#).

The proposed M.S./Ph.D. program falls under STEM CIP code 42.2706 (CIP 2020 Behavioral Neuroscience, CIP 2010 Physiological Psychology/Psychobiology; <https://nces.ed.gov/ipeds/cipcode/searchresults.aspx?y=56&aw=42.2706>). The proposed curriculum “focuses on the scientific course study of the biological bases of behavior and psychological functioning, and their application to experimental and therapeutic research problems.” In addition, proposed coursework includes several of the topics included within the CIP code, such as functional neuroanatomy, neural system development, memory storage and retrieval, physiology of cognition and perception, physiological bases of psychopathology and behavioral disorders, comparative psychobiology, and specialized experimental design and research methods.

**F. Identify any established or planned educational sites at which the program is expected to be offered and indicate whether it will be offered only at sites other than the main campus.**

The proposed M.S./Ph.D. program will be offered only at FIU’s main Modesto A. Maidique Campus.

## **INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY**

### **II. Need and Demand**

**A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

Cognitive neuroscience is a growing field in general. The increasing number of journals, societies, and funding mechanisms devoted to the topic evidences the pace of growth in the area. There are several journals devoted exclusively to cognitive neuroscience research (e.g., *Journal of Cognitive Neuroscience*; *Cognitive Neuroscience*; *Developmental Cognitive Neuroscience*; *Neurobiology of Language*; *Brain and Language*; *Human Brain Mapping*; *Neuropsychologia*; *NeuroReport*; *NeuroImage*; *Cortex*; *Cerebral Cortex*) and even more if one includes those closely related disciplines in social and clinical neuroscience, communication sciences, and neurology, and those that publish on broader neuroscience topics. Further, there are several conferences and societies devoted to topics that fall under the cognitive neuroscience umbrella (e.g., Cognitive Neuroscience Society, Society for the Neurobiology of Language, Flux Developmental Cognitive Neuroscience, and Organization for Human Brain Mapping). In addition, with advances in imaging and other psychophysiological techniques, more researchers outside of the cognitive neuroscience field are exposed to and have become invested in the research in cognitive neuroscience. For example, there is a growing emphasis on how neuroscience research can contribute to education practice and education reform (e.g., “Pedagogy Meets Neuroscience”, *Science*, 310, p. 745). Cognitive neuroscience increasingly draws on research and research methodologies across a variety of disciplines in the sciences and humanities, including psychology, physics, biomedicine, chemistry, philosophy, occupational and physical therapy, and biology. Federal funding agencies have taken notice of this, and have specific foci for cognitive neuroscience (e.g., the National Science Foundation Cognitive Neuroscience Panel, the Systems and



Cognitive Neuroscience cluster at NINDS; <https://www.ninds.nih.gov/Current-Research/Research-Funded-NINDS/Basic-Neuroscience>). The M.S./Ph.D. program in Cognitive Neuroscience would attract a variety of students and professionals from several undergraduate disciplines in addition to psychology. Students with philosophy, physics, biology, chemistry, communication sciences and health-related disciplines such as biomedical engineering could consider the program. Given this variety of student background, there is a potential for broad career paths and opportunities.

In this next section, we will consider labor statistics resources and databases to establish the need for more people to be prepared in this program at the graduate level. Due to differing qualifications, the M.S. and Ph.D. degrees will be handled separately related to job demand data.

### **M.S. Degree**

Cognitive neuroscience is a fast-growing field. Understanding basic neurobiological principles that govern behavior can enrich basic research programs in a number of disciplines. Further, there is enormous potential for the application of neuroscience to a number of fields outside these disciplines, notably to the clinical, medical and educational fields – cognitive neuroscience research informs clinical psychological therapeutics, pharmaceutical development, medical interventions, and educational practice. The award of a Master’s degree in Cognitive Neuroscience will afford graduates opportunities at the state level. For example, the proposed program has emanated from a perceived local and Southeast Florida need from area institutions that can hire our graduates, such as the Max Planck Florida Institute for Neuroscience, and similar types of institutions that have research specialties (e.g., Cleveland Clinic Florida Research and Innovation Center, Torrey Pines @FIU- formerly Torrey Pines Institute for Molecular Studies, Scripps Research Institute Florida). See Appendix E Supporting Documentation regarding Torrey Pines’ role and Max Planck’s support.

Moreover, the State of Florida Department of Economic Opportunity’s employment projections out to 2027 suggest growth in a number of specific job areas for which Master’s students could be employed. For example, these students can be employed as Social Science Research Assistants (6% projected state growth), Biological Technicians (10.8% projected state growth), Life, Physical, and Social Science Technicians (10.1% projected state growth), Psychology Teachers, Postsecondary (14.6% projected state growth), and Technical Writers (15.5% projected state growth). This degree would also be desirable in applying to advanced training in medical and health professions, and will have direct local impact, as a number of the fastest growing professions in Miami-Dade County can be filled by neuroscience-trained graduates. The national Bureau of Labor & Statistics projections mirror the State projections. Thus, students who receive a Master’s in Cognitive Neuroscience are competitive for jobs experiencing national growth in the following sectors: Biological Technicians (7% projected national growth), Life, Physical, and Social Science Technicians (7% projected national growth), Psychology Teachers, Postsecondary (13% projected national growth), and Technical Writers (8% projected national growth).

### **Ph.D. Degree**

Students graduating with a Ph.D. in Cognitive Neuroscience will be competitively prepared for research careers in neuroscience, medical science, pharmacology, neuropsychology, biomedical sciences, brain-machine interface technologies, and various areas within the field of psychology more broadly. The U.S. Bureau of Labor Statistics reports that these sectors are growing at a “faster than average” rate for 2018-28. Likewise, a number of growing employment sectors in Miami-Dade County (e.g., 13.9% growth, Professional, Scientific, and Technical Services; 13.8% growth, Education and Health Services) will be filled by neuroscience-trained graduates with higher degrees (Florida Department of Economic Opportunity, Fastest-Growing Occupations, 2019-2027 Statewide and Regional Projections, <http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections>). As with M.S. graduates, the proposed program has emanated from a perceived local and Southeast Florida need from area institutions, such as the Max Planck Florida Institute for Neuroscience, and similar types of institutions that have research specialties (e.g., Cleveland Clinic Florida Research and Innovation Center, Torrey Pines @FIU- formerly Torrey Pines Institute for Molecular Studies,

Scripps Research Institute Florida). Ph.D. graduates can work as postdoctoral fellows and research scientists at Florida research universities and at the aforementioned research institutions. See Appendix E Supporting Documentation regarding Torrey Pines' role and Max Planck's support.

Other supporting documentation included in Appendix E is from Miami Dade College and Miami-Dade County Public Schools. FIU's rich partnerships with these institutions will continued to be enhanced with the proposed degree program.

Cognitive Neuroscience as a field is "data heavy," which means students must learn to deal with "Big Data," and learn computer programming languages that are designed to deal with large data sets and databases. Because of this significant training in data management, data analysis, advanced statistics, and computer programming, Cognitive Neuroscientists are also competitive for fields outside of psychology. Several of these have been tagged as important and growing employment sectors at the local, state, and national levels. Thus, Cognitive Neuroscientists can work as Psychology Teachers, Postsecondary (3% projected Florida growth; 11% growth nationally), Biological Scientists (2% growth in Miami-Dade and Florida), Medical Scientists (6% growth in Miami-Dade and Florida; 8% nationally), Statisticians (9% growth in Miami-Dade and Florida; one of the top 10 occupations growing nationally), Miscellaneous Mathematical Science Occupations (6% growth in Miami-Dade and Florida; 30% growth nationally), Survey Researchers (6% growth in Miami-Dade and Florida; 1% growth nationally), and Psychologists, Other (6% growth in Miami-Dade and Florida; 14% growth nationally).

Moreover, the importance of neuroscience to medicine and the economy has exploded in recent years, with corresponding increases in awards funded through NIH and NSF. For example, the NIH BRAIN Initiative (Brain Research for Advancing Innovative Neurotechnologies) is a significant federal investment in neuroscience research, with projected funding levels of \$500M by 2021 in addition to increased emphasis on neuroscience applications in the missions of standing NIH institutes. FIU cognitive neuroscience researchers have taken advantage of these funds with the acquisition of 23 neuroscience-related awards in recent years, totaling over \$47M. Grants like these at FIU and at other SUS schools provide opportunities for employment of Ph.D. graduates as postdoctoral research fellows.

Appendix E contains a support letter from The Society for Developmental Cognitive Neuroscience President Beatriz Luna, Ph.D. who stated, "The proposed program promises to continue a track record of excellence in the training of the next generation of cognitive neuroscientists, especially in the sub-discipline of developmental cognitive neuroscience."

**B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.**

As the M.S. degree will not provide a direct-admit avenue, establishing sufficient student demand is not relevant for this degree.

Cognitive Neuroscience is a very popular discipline nationally and statewide at the undergraduate level, and there is high demand for a direct-entry Ph.D. program in this area. Students are drawn to this field because it is a rapidly growing field with job prospects in medical, pharmaceutical, tech and biotech, marketing, and research industries. The objective of this proposal is to move an existing program to a new CIP code. Thus, we know that all of the courses currently offered in the area often draw interdisciplinary student interest, indicating broad student demand.

The current Cognitive Neuroscience Ph.D. in Psychology major, started in 2015, has 22 matriculated students from diverse undergraduate backgrounds (e.g., neuroscience, psychology, physics, biology) and includes a high number of women who are generally underrepresented in STEM fields. This statistic is compared to FAU's enrollment of 14 in the same CIP code. Even though we are in close proximity, the current success of both programs mitigates concerns about duplication. Both Universities have robust



sponsored research programs. Twelve of the 13 current Cognitive Neuroscience Faculty at FIU have active NIH or NSF funding that support students in the program (see Table in Section IX D). Faculty have collaborative grants with researchers at FAU and UF, indicating that all of these programs can equally thrive in our state.

As an institution that serves an underrepresented population generally, the addition of this major would educate and train a largely underrepresented minority in the field, promoting diversity of thought and background. The FIU-RCMI (Research Center in Minority Institutions) grant specifically funds such students, and includes Cognitive Neuroscience faculty as PIs.

- C. If substantially similar programs (generally at the four-digit CIP Code or 60 percent similar in core courses), either private or public exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). In Appendix C, provide data that support the need for an additional program.**

FAU is the only other university in the SUS offering a neuroscience-related Ph.D. using the CIP code 42.2607 (Complex Systems and Brain Sciences, 2018 enrollment 14 students). However, they have recently proposed to move the program to an interdisciplinary CIP code (26.1501). Our program is unique in that it has a strong developmental, clinical, and cognitive neuroscience representation with a focus in neural imaging techniques in humans. Participating cross-disciplinary faculty have expertise in developmental neuroimaging, public health, physics, and neurofinance, in addition to basic neuroscience. There are currently no Master's-level programs in this proposed CIP code.

FIU faculty have formal collaborations with neuroscience researchers at other SUS institutions. FIU researchers Raul Gonzalez and Angela Laird acquired one of the single largest grants in FIU history (\$12.7M and acquisition of a new MRI magnet) to run a data collection site for the Adolescent Brain Cognitive Development (ABCD) study – the largest long-term study of brain development and child health in the US. They are collaborating with PIs Linda Cottler and Sara Jo Nixon who run an ABCD site at UF (see Special Issue of *Developmental Cognitive Neuroscience*; <https://www.sciencedirect.com/journal/developmental-cognitive-neuroscience/vol/32>). Another valuable collaboration includes the Allen Lab at FIU with the Vertes Lab at FAU (subcontracted a portion of the work on an R01 grant). This joint effort recently resulted in publications of a journal article in *Cell Reports* (Jayachandran, et al., 2019) and a review article in *Learning & Memory* (Dollemann-van der Wheel, et al., 2019).

In addition, FIU researchers were critical to establishing the Florida Consortium on the Neurobiology of Cognition (FCNC, <http://fcneurocog.org/>) in 2017, comprised of internationally recognized cognitive neuroscience researchers across the state of Florida, including FIU, FAU, UF, FSU and UCF. FIU psychology faculty Timothy Allen is a co-founder and president, and Aaron Mattfeld is a founding faculty fellow. Through FCNC, faculty and students are able to present data and exchange ideas and research techniques, facilitating collaborations and innovating the concept of team-based science (<https://www.wufl.org/news/2018/04/11/team-based-science-to-change-the-way-neurobiology-research-is-done-in-florida/>).

- D. Use Table 1 in Appendix A (1-A for undergraduate and 1-B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 30 credit hours per year and graduate FTE will be calculated as 24 credit hours per year. Describe the rationale underlying enrollment projections. If students within the institution are expected to change majors to enroll in the proposed program at its inception, describe the shifts from disciplines that will likely occur.**

The rationale for the enrollment projections was based on analyses of FIU current Cognitive Neuroscience Ph.D. in Psychology majors. It is expected that there will be funding for five new students per annual cohort. FTEs were calculated anticipating 24 credits taken per year per student to yield one FTE each. Current students in the existing Cognitive Neuroscience major are accounted for in Appendix A Table 1B, row 6. This number is projected to be 10 students in Year 1, and zero students in Year 5. Thus, they will matriculate out of the program by Year 4. This trend accounts for the higher total FTEs in Year 4 (22 students) compared to the surrounding Years 3 and 5 in the Table. New students entering the program in Year 1 are not expected to graduate until Year 6. Thus, enrollment FTEs increase each year in the “new student” rows (rows 7-9).

- E. Indicate what steps will be taken to achieve a diverse student body in this program. If the proposed program substantially duplicates a program at FAMU or FIU, provide, (in consultation with the affected university), an analysis of how the program might have an impact upon that university’s ability to attract students of races different from that which is predominant on their campus in the subject program. The university’s Equal Opportunity Officer shall review this section of the proposal and then sign and date Appendix B to indicate that the analysis required by this subsection has been completed.**

The proposed Cognitive Neuroscience M.S./Ph.D. program will increase the number of the STEM degrees awarded annually in the SUS, including those awarded to Black/ African American students and Hispanic students. As one of the highest enrolled universities in the country, and the only public research institution in Miami, FIU is currently the largest producer of psychology bachelor’s degrees among Hispanic students in the U.S., a population that is largely underrepresented in the field of neuroscience and behavior. In addition, there are gender disparities in neuroscience (<https://www.nature.com/articles/s41593-017-0052-6>). As an institution that serves an underrepresented population generally, the addition of the Cognitive Neuroscience M.S./Ph.D. program would educate and train a largely underrepresented minority in the field, promoting diversity of thought and background. The FIU-RCMI (Research Center in Minority Institutions) grant specifically funds such students, and includes Cognitive Neuroscience faculty as PIs. We will also direct marketing efforts towards Black/ African American, Hispanic, and female students to ensure they are aware of the Cognitive Neuroscience Ph.D. and the types of opportunities this degree would offer to them. This effort will be done in concert with the equal opportunity office’s policies, as well as our marketing and strategic planning teams in the College of Arts, Sciences, and Education (CASE).

### **III. Budget**

- A. Use Table 2 in Appendix A to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 in Appendix A to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)**

The Appendix A Budget represents the M.S./Ph.D. program budget. Table 2 shows salaries and benefits for faculty members participating in the proposed program. Faculty effort towards the degree represents teaching and doctoral student supervision as detailed in Appendix A. A portion (20%) of the department graduate secretary line will now be attributed to this program.

Graduate Assistantships are budgeted based on current levels of funding for doctoral students in the existing major (65% grant funded; 35% E&G funded). By Year 5, the proportion of grant funding increases to 70%, leaving 30% E&G funded. Given the recent seven-year renewal of the large Adolescent Brain and Cognitive Development (ABCD) study grant, as well as the recent success of Cognitive Neuroscience research grants, this five-year projection is reasonable (see Section IX D for evidence of research productivity and extramural

funding). The following grants are currently (fall 2020) providing funding to students in the major and thus available to provide funding to the new standalone degree:

Faculty Member	Active Grants as PI	Total Funding	Number of Funded Assistantships (10)
Tim Allen	R01MH113626	\$1,856,888.49	1
Anthony Dick	R01MH112588	\$5,709,108.00	1
Raul Gonzalez and Angela Laird	U01DA041156	\$13,940,663.00	2
Angela Laird and Matthew Sutherland	R01DA041353	\$150,000.00	1
Angela Laird	NSFDUE1458425; NSF1631325; FIU EMBRACE	\$1,552,717.00	1
Aaron Mattfeld and Dana McMakin	R01MH116005	\$3,654,721.02	1
Bethany Reeb-Sutherland	R01HD098152	\$1,975,458.00	1
Fabián Soto	R21MH112013	\$429,019.00	1
Matthew Sutherland	U54MD012393	\$2,238,104.88	1

In Year 1, the 10 above funded graduate assistantships will transfer from the existing major to the new degree (see Table 1-B, Appendix A). Funding averages \$25,522 per student plus tuition (\$10,920). The budget Table 2 presented approximately 60% of total assistantships from grants. As average funding can vary, the above table and described costs, in general, account for the grant funding for assistantships depicted in Appendix A, Table 2, Year 1 (\$364,967).

Program expenses of \$2000 are budgeted and include \$1600 for recruitment and \$400 for photocopies and office supplies.

Table 3 shows the projected base of the Department of Psychology's E&G account before reallocation in Year 1.

- B. Please explain whether the university intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition. Provide a rationale for doing so and a timeline for seeking Board of Governors' approval, if appropriate. Please include the expected rate of tuition that the university plans to charge for this program and use this amount when calculating cost entries in Table 2.**

The program will not be operated as continuing education. It will utilize E&G and contract and grant resources. FIU's current per-credit graduate tuition and fees are \$455.64 for residents and \$1,001.69 for non-residents, resulting in a total program cost of \$34,173 (resident)/\$75,127 (non-resident). In addition, per-semester fees include \$10 for intercollegiate athletics, \$93.69 for student health services, and \$95.13 for transportation access. Depending on the number of semesters in which a student is enrolled, total per-semester fees will vary. For example, a typical five-year enrollment will include 15 semesters at the cost of \$2982 in per-semester fees (source, FIU 2020-2021 *Graduate Catalog*).

- C. If other programs will be impacted by a reallocation of resources for the proposed program, identify the impacted programs and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate**

**programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).**

Table 3 reflects the anticipated reallocation of the Psychology Department's E&G funds to accommodate the cost of the proposed program. It is not expected that the reallocation of resources for the program will impact other programs within the Department of Psychology. All of the courses in the proposed curriculum are currently being offered, and the costs associated with those activities will now be associated with this new program.

**D. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

The M.S./Ph.D. program in Cognitive Neuroscience will be housed within Psychology. The curriculum coursework is within the department, and given the small cohort size, any additional electives taken outside the department will not significantly impact other units.

**E. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.**

External grants will be used to support graduate assistantships as depicted in Table 2 Budget of Appendix A. Cognitive Neuroscience students will also be able to apply for scholarships and travel awards from agencies that support STEM and/or neuroscience graduate students. A number of organizations, such as the Society for Neuroscience, offers travel awards and scholarships for qualified neuroscience graduate applicants (SfN; <https://www.sfn.org/Outreach/Awards/Undergraduate-Brain-Awareness-Award>).

Underrepresented Cognitive Neuroscience graduate students would also be qualified to participate in several FIU university-wide graduate student support programs. These programs include support in their scientific careers through tuition waivers, stipends, advising, travel awards, summer research opportunities, workshops, and opportunities to present their work. As these options are not controlled by the program, this funding is not depicted in Table 2.

#### **IV. Projected Benefit of the Program to the University, Local Community, and State**

**Use information from Tables 1 and 2 in Appendix A, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.**

The addition of the Cognitive Neuroscience M.S./Ph.D. program would qualitatively and quantitatively benefit the university, the local community, and the state if implemented. First, addition of the Cognitive Neuroscience program is "budget neutral," as the degrees are created from existing majors in the department. Second, addition of the Cognitive Neuroscience M.S./Ph.D. program would quantitatively change the number of STEM degrees awarded from psychology, which is an important component of the SUS and FIU strategic plans. Third, students graduating with a Cognitive Neuroscience Ph.D. degree would be qualified to apply for many of the fastest-growing jobs in the region and country, including positions at Florida research universities and research institutions. This metric can be measured quantitatively as increasing the number of students obtaining employment post-graduation.

The Cognitive Neuroscience program also qualitatively enhances the state, national, and international reputation of FIU and the State University System. Thus, graduate students' participation in this field, particularly in the research enterprise, supports the expansion of critical technical, medical, and health related research in Florida. These graduates can contribute to expanding research at Florida-based enterprises, and work as postdoctoral fellows and research scientists at Florida research universities and research institutions, such as the Max Planck Florida Institute for Neuroscience, Cleveland Clinic Florida Research and Innovation Center, Scripps Research Institute Florida, and Torrey Pines @FIU. Many program graduates will find work in Florida, enhancing the professional economy of the State. This highly trained workforce supports the continuing research enterprise, which is necessary for the continued success in obtaining extramural funding, generation of state-of-the-art patents, and enhancement of the research reputation of Florida institutions more broadly.

**V. Access and Articulation – Bachelor's Degrees Only**

- A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a separate request to the Board of Governors for an exception along with notification of the program's approval. (See criteria in Board of Governors Regulation 6C-8.014)**

This does not apply, as the proposed program is a graduate program.

- B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see link to the Common Prerequisite Manual on [the resource page for new program proposal](#)). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement includes those programs designated as "limited access."**

If the proposed prerequisites are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional "track" of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.

This does not apply, as the proposed program is a graduate program.

- C. If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that Florida College System transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in Board of Governors Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.**

This does not apply, as the proposed program is a graduate program.



- D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see link to the Statewide Articulation Manual on [the resource page for new program proposal](#)). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.**

This does not apply, as the proposed program is a graduate program.

## **INSTITUTIONAL READINESS**

### **VI. Related Institutional Mission and Strength**

- A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

#### **Mission**

Florida International University is an urban, multi-campus, public research university serving its students and the diverse population of South Florida. We are committed to high-quality teaching, state-of-the-art research and creative activity, and collaborative engagement with our local and global communities.

The goal of the M.S./Ph.D. program is to train students to be scientists involved in basic research with expertise in cognitive neuroscience that emphasizes research analysis and design skills that will be useful in the laboratory and in the field.

The Cognitive Neuroscience M.S./Ph.D. program will support the University mission by strengthening the quality and relevance of FIU with regard to state, national, and international preeminence, increasing graduate student participation in research so as to strengthen the pipeline of researchers pursuing post-graduate jobs, increasing research activities to foster an entrepreneurial campus culture, and by attracting more external funding.

- B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.**

The program capitalizes on existing institutional strengths and offers students a new opportunity to pursue neuroscience and learn from world class experts in the field. Currently, a stand-alone program does not exist at FIU, although the Ph.D. major in psychology has to date been quite successful. Students would also benefit by learning from experts in the Center for Children and Families (CCF; an FIU Preeminent Program), Center for Imaging Science, or the Florida Consortium on the Neurobiology of Cognition (FCNC). FIU has recently acquired Torrey Pines, a research institute that collaborates with Cleveland Clinic's new research labs in Port St. Lucie, FL. This partnership provides unique research opportunities for students working with genetically modified rodent models in cognitive neuroscience. Additional researchers at FIU have collaborations with Cognitive Neuroscience researchers. For example, there are several NIH-funded projects with faculty in the Robert Stempel College of Public Health and Social Work, including work through the FIU Research Center in Minority Institutions, and the Brain Behavior and Environment Program (an Emerging Preeminent Program), providing students with applied public health-related research experiences.

- C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology in table format of the activities, listing both university personnel directly involved**



**and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.**

The proposed M.S./Ph.D. program in Cognitive Neuroscience is the direct result of collaboration and planning by faculty members and administrators in the Department of Psychology, the College of Arts, Sciences and Education, and the Office of Academic Planning and Accountability. Beginning in 2018, Dr. Anthony Dick began determining the feasibility with the Department Chair and Dr. Leila Allen, who was developing a bachelor degree in behavioral neuroscience. The College of Arts, Sciences and Education Dean provided direction that this was a strategic goal of the college and university to transition existing majors to stand alone degrees that better reflect the content of the awarded degree. Given the strength of the cognitive neuroscience major, faculty and administrators supported the new proposed degree. Dr. Dick led the proposal development along with Dr. Allen who had developed expertise in new degree proposal writing in the neuroscience field and provided excellent background information support to the effort.

Beginning in fall 2019, regular proposal development meetings were held which included Dr. Susan Himburg, Academic Planning and Accountability. Given the existence of the cognitive neuroscience major both within the M.S. and Ph.D. psychology degree programs, the curriculum development process benefitted from the department's experience in delivering those degrees. Furthermore, less time was required for proposal development given the strong faculty research expertise and grant awards in this discipline. The submission of the proposal through the FIU curriculum process commenced currently with obtaining CAVP Academic Program Coordination review group input. The following table further documents the chronology of planning events:

**Planning Process**

<b>Date</b>	<b>Participants</b>	<b>Planning Activity</b>
Fall 2018	Anthony Dick (Proposed Program Director), Leila Allen (Instructor, Psychology Department) and Jeremy Pettit (Chair, Psychology Department)	Initial meeting to discuss the feasibility of offering M.S./Ph.D. in Cognitive Neuroscience
Fall 2019	Anthony Dick, Leila Allen, and Susan Himburg (Associate Vice President of Academic Planning and Accountability)	Discussion of proposal document details
Fall 2019	Anthony Dick, Leila Allen, Hector Junco (Assistant Dean of Finance and Operations), Saghira Martin (Financial Manager for College of Arts, Sciences, and Education)	Appendix A budget meeting and discussion on proposed curriculum
Fall 2019	Faculty input sought	Soliciting feedback and support for the M.S./Ph.D. program

**Events Leading to Implementation**

<b>Date</b>	<b>Implementation Activity</b>
February 2020	Pre-proposals for the M.S./Ph.D. presented to the SUS Council of Academic Vice Presidents (CAVP)
February 14, 2020	New degree proposal reviewed/approved by CASE Curriculum Committee
March 20, 2020	New degree proposal reviewed/approved by Faculty Senate Curriculum Committee/Graduate Council
April 7, 2020	Faculty Senate approved program proposal
May 19, 2020	External Consultant's Review (Dr. Craig Stark)
May 26, 2020	Proposal submitted to Academic Affairs for review and approval by Provost

June 1, 2020	Proposal submitted to President for signature and submission to the Board of Trustees
June 16, 2020	Board of Trustees approval
Summer 2020	Program proposal submitted to the Florida Board of Governors for consideration at the November BOG meeting
November 4-5, 2020	Board of Governors meeting where Ph.D. degrees are considered for approval, and subsequently added to the SUS Academic Degree Inventory
August 2021	Program start date

## VII. Program Quality Indicators - Reviews and Accreditation

**Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.**

External Program Reviews are done every seven years in the bachelor's degrees, M.S., and Ph.D. programs in Psychology. The most recent external reviews for the programs within Psychology were completed in 2014. The external review highlighted departmental strengths, weaknesses, opportunities, and challenges. Strengths included the quality of faculty, quality of graduate students, focus on doctoral programs, and graduate student mentorship. Weaknesses included low graduate stipends, institutional requirements slowing degree progress, students' comprehension of departmental changes, and departmental evaluations of student progress. These have been addressed by increases in the stipends in the past year, ensuring students are aware of form deadlines through a more comprehensive guideline, and mentors paying closer attention to those deadlines. Students are also more aware of departmental changes through meetings and the addition of two graduate student representatives who attend faculty meetings and report back minutes to the graduate students. The utility of departmental evaluations have been made clearer to graduate students as a progress tracker and means of ensuring they are on target towards graduation. Opportunities included the addition of the Cognitive Neuroscience doctoral program, accreditation for clinical Ph.D. in Psychology by the American Psychological Association-APA (which has since been attained), grant applications for external funding (which have significantly increased in recent years), and job placement. One challenge included maintaining morale in the context of major leadership change, which has been dealt with successfully in the past several years since this program review evaluation occurred. Another challenge identified was optimum utilization of laboratory space. Since the 2014 review, FIU completed two new research buildings and refurbished existing space into an MRI and psychology research space. These additions, plus other FIU-implemented space utilization policies, resulted in sufficient space assignments for all funded psychology faculty. Thus, the M.S./Ph.D. Program students and faculty will continue to occupy these allotted research labs.

The Clinical Psychology major within the Ph.D. in Psychology completed review for APA accreditation and was awarded initial accreditation on January 15, 2016. The program was determined to be consistent with all of the provisions of the accreditation domains. The Clinical Psychology program is currently under review for continuing accreditation.

## VIII. Curriculum

**A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.**

Students are judged on three learning outcome categories: Content Knowledge, Communication Skills-Oral, and Communication Skills-Written.

### Content Knowledge

Graduates will demonstrate their ability to investigate and evaluate available evidence, identify problems and questions, analyze and synthesize ideas and research findings, construct and interpret conclusions, and create new knowledge within psychology.

Assessment method - A four-member faculty panel will use the College of Arts, Sciences, and Education (CASE) rubric for the assessment of Subject Content Knowledge for all graduating students (20-points maximum, 5-points per item) to rate student dissertations on the four content knowledge indicators.

### Communication Skills-Oral

Graduates will demonstrate effective oral communication skills including demonstrating an advanced level of subject knowledge, and effectively organizing concepts and data.

Assessment Method: A four-member faculty panel will use CASE rubric for the assessment of Oral Communication for all graduating students (20-points maximum, 5-points per item) to rate student dissertation defenses on the four oral communication indicators.

### Communication Skills-Written

Graduates will demonstrate effective written communication skills to develop a topic within Psychology, organize it around a central theme, and demonstrate a command of the language, and appropriate use of language conventions and documentation.

Assessment Method: A four-member faculty panel will use the CASE rubric for the assessment of written communication for all graduating students (20-points maximum, 5-points per item) to rate student dissertations on the four written communication indicators.

## **B. Describe the admission standards and graduation requirements for the program.**

### **Admission Requirements\***

As there is no direct entry to the M.S. degree, the admission section only focuses on the Ph.D. degree. To be admitted into the doctoral program in Cognitive Neuroscience, a student must:

1. Hold a Bachelor's degree in a relevant discipline from an accredited college or university.
2. Have a 3.0 average or higher during the last two years of the undergraduate program and submit Graduate Record Exam (GRE) scores.
3. Arrange to have three letters of recommendation evaluating the applicant's potential for graduate work sent to the Psychology Graduate Program Director.
4. Send a brief essay stating reasons for interest in the program and career goals to the Psychology Graduate Secretary.
5. Receive approval from the Departmental Graduate Education Committee.
6. International graduate student applicants whose native language is not English are required to submit a score for the Test of English as a Foreign Language (TOEFL) or for the International English Language Testing System (IELTS). A total score of 92 on the iBT TOEFL (equivalent to 580 in the TOEFL) is required.

\*These are minimum requirements. Admission is competitive.

### **Degree Requirements**

### **M.S. Degree**

The M.S. in Cognitive Neuroscience requires a minimum of 36 semester credits of graduate work beyond the baccalaureate, which meet the requirements stipulated below, and which includes a master's project based upon the student's original research. A maximum of 6 credits of post-baccalaureate course work may be transferred from another institution with the approval of the program director.

### **Ph.D. Degree**

The Ph.D. in Cognitive Neuroscience requires a minimum of 75 semester credits of graduate work beyond the baccalaureate, including a master's project and a dissertation based on the student's original research. A maximum of 36 credits may be transferred from a completed master's program with the approval of the program director.

- C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.**

### **M.S. Degree – 36 Credits**

(provided here as clarification as to requirements to receive the M.S. degree as an off-ramp of the Ph.D.) Cognitive Neuroscience Master's students are required to complete 6 credits of departmental core course requirements established across majors in the Department, along with more specialized content courses and courses involving directed independent effort, as listed below:

1. **Common core courses in Statistics/Methodology** (3 credits each; 6 total credits required)
  - PSY 5939 Special Topics in Psychology (Quantitative Methods I)
  - PSY 5939 Special Topics in Psychology (Quantitative Methods II)
2. **Cognitive Neuroscience (CN) Content Courses** (15 credits required)

Students must take five courses drawn from the following 3-credit courses or a course approved by the program director:

  - DEP 5058 Biological Basis of Behavior Development
  - EXP 5667 Cognitive Neuroscience
  - EXP 5508 Applied Cognitive Psychology
  - EXP 5527 Memory and Consciousness
  - PSB 6247 Biological Bases of Behavior
  - PSB 6215 Human Neuroanatomy
  - CBH 5256 Animal Cognition
  - CLP 6426 Neuropsychology
  - PSB 6350 Cognitive Neuroimaging Methods I
  - PSB 6351 Cognitive Neuroimaging Methods II
  - PSB 5115 Introduction to Psychophysiology: Basics of Electroencephalography and Event-Related Potentials
  - PSB 6035 Introduction to Computational Cognitive Neuroscience
  - PSB 5247 Neurobiology of Learning and Memory
3. **Electives** (9 credits approved by the program director)
  - Students may choose electives from the list of content courses provided above or identify electives outside of the department based on their research interest.
  - Students may take PSY 5938 Current Topics in Neuroscience Series (0-1) to meet elective credits, up to 6 credits.

4. **Master's Project** (6 credits required)
  - PSY 5918 Supervised Research (VAR)

#### **Ph.D. Degree – 75 Credits**

Cognitive Neuroscience doctoral students are required to complete 9 credits of departmental core course requirements established across majors in the Department, along with more specialized content courses and courses involving directed independent effort, as listed below:

1. **Common core courses in Statistics/Methodology** (3 credits each; 9 total credits required)
  - PSY 5939 Special Topics in Psychology (Quantitative Methods I)
  - PSY 5939 Special Topics in Psychology (Quantitative Methods II)
  - PSY 5246C Multivariate Analysis in Applied Psychological Research
2. **Cognitive Neuroscience (CN) Content Courses** (15 credits required)

Students must take five courses drawn from the following 3-credit courses or a course approved by the program director:

  - DEP 5058 Biological Basis of Behavior Development
  - EXP 5667 Cognitive Neuroscience
  - EXP 5508 Applied Cognitive Psychology
  - EXP 5527 Memory and Consciousness
  - PSB 6247 Biological Bases of Behavior
  - PSB 6215 Human Neuroanatomy
  - CBH 5256 Animal Cognition
  - CLP 6426 Neuropsychology
  - PSB 6350 Cognitive Neuroimaging Methods I
  - PSB 6351 Cognitive Neuroimaging Methods II
  - PSB 5115 Introduction to Psychophysiology: Basics of Electroencephalography and Event-Related Potentials
  - PSB 6035 Introduction to Computational Cognitive Neuroscience
  - PSB 5247 Neurobiology of Learning and Memory
3. **Supervised research** (24 credits required)
  - PSY 5918 Supervised Research (VAR)
4. **Electives** (12 credits approved by the major area director).
  - Students may choose electives from the list of content courses provided above or identify electives outside of the department based on their research interest.
  - Students may take PSY 5938 Current Topics in Neuroscience Series (0-1) to meet elective credits, up to 6 credits.
5. **Master's Project** (6 Credits Supervised Research; 6 credits of above Supervised Research meet this requirement)
6. **Comprehensive exam**
7. **PSY 7980 Ph.D. Dissertation (15 credits)**

D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.

#### **M.S.\*/Ph.D. Degree**

\* indicates courses which meet M.S. degree requirements

<u>1st Year Fall Semester (9 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> *PSY 5939 Special Topics in Psychology: (Quantitative Methods I) (3)</li> <li><input type="checkbox"/> *CN Content Course (3)</li> <li><input type="checkbox"/> *Elective Course (3)</li> </ul>	<u>2nd Year Fall Semester (9 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> PSY 5246C Multivariate Analysis in Applied Psychological Research (3)</li> <li><input type="checkbox"/> *CN Content Course (3)</li> <li><input type="checkbox"/> *Elective Course (3)</li> </ul>
<u>1st Year Spring Semester (9 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> *PSY 5939 Special Topics in Psychology: (Quantitative Methods II) (3)</li> <li><input type="checkbox"/> *CN Content Course (3)</li> <li><input type="checkbox"/> *Elective Course (3)</li> </ul>	<u>2nd Year Spring Semester (9 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> *CN Content Course (3)</li> <li><input type="checkbox"/> *CN Content Course (3)</li> <li><input type="checkbox"/> Elective Course (3)</li> </ul>
<u>1st Year Summer Semester (6 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> PSY 5918 Supervised Research (6)</li> </ul>	<u>2nd Year Summer Semester (6 credits)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> *PSY 5918 Supervised Research (6) (Master's Project)</li> </ul>
(24 hours total)	(24 hours total)

**Years 3+:** complete PSY 5918 Supervised Research (12 remaining credits) & PSY 7980 Ph.D. Dissertation (15 credits)

**E. Provide a one- or two-sentence description of each required or elective course.**

PSY 5939 Special Topics in Psychology (3). Special topics will be announced in advance.

PSY 5246C Multivariate Analysis in Applied Psychological Research (3). Covers basic techniques of multivariate analysis, emphasizing the rationale and applications to psychological research. Includes multiple regression, Hotellings T, MANOVA, principal component analysis, and factor analysis. Prerequisites: STA 3123 or equivalent; linear algebra recommended.

PSY 5938 Current Topics in Neuroscience Series (0-1). This course provides students with the opportunity to present current topics in neuroscience either from recently published literature or their own research.

DEP 5058 Biological Basis of Behavior Development (3). Introduction to theory and research underlying behavioral development. Covers such pre-and post-natal determinants as evolution, genetics, neuroendocrines, as well as social development, behavioral ecology, and sociobiology. Prerequisites: Graduate standing or permission of the instructor. Corequisite: Proseminar courses.

EXP 5667 Cognitive Neuroscience (3). Investigation of the relation between mind and brain. Discuss literature from both patient studies and from the growing research in neuroimaging. Prerequisite: Graduate standing.

EXP 5508 Applied Cognitive Psychology (3). Covers the basic theories of cognitive psychology perception, attention, memory, learning, knowledge, with emphasis on application to real-world problems. Prerequisite: Graduate standing.

EXP 5527 Memory and Consciousness (3). The relation of memory and consciousness is explored with emphasis on issues of current research and theoretical work from both a cognitive and a neuropsychological perspective. Prerequisite: Graduate standing.



PSB 6247 Biological Bases of Behavior (3). Advanced survey of biological bases of behavior. Topics include neuroanatomy, functional organization and electrochemical processes of the nervous system, and neural bases of learning and memory. Prerequisites: Graduate standing or permission of the instructor.

PSB 6215 Human Neuroanatomy (3). Survey of human spinal, brainstem, subcortical, and cortical neuroanatomy with reference to physiology and disease. Prerequisite: Graduate standing or permission of instructor.

CBH 5256 Animal Cognition (3). Survey of comparative cognition between humans and other animals. Major topics include perception, attention, learning, memory, reasoning, tool use, and language. Prerequisites: Graduate standing or permission of the instructor.

CLP 6426 Neuropsychology (3). Introduces students to basic foundations and some advanced concepts in Neuropsychology, with a focus on clinical applications. Topics covered will include functional neuroanatomy, brain disorders across the lifespan, and assessment of neuropsychological functions. Prerequisite: Permission of the instructor.

PSB 6350 Cognitive Neuroimaging Methods I (3). Data acquisition methods and their psychological application in cognitive neuroimaging, including techniques from nuclear medicine, electrophysiology, and magnetic resonance imaging.

PSB 6351 Cognitive Neuroimaging Methods II (3). Data analysis methods and psychological applications in cognitive neuroimaging, including image pre-processing, statistical modeling, brain connectivity techniques, and the visualization, interpretation, and reporting of results. Prerequisite: PSB 6350.

PSB 5115 Introduction to Psychophysiology: Basics of Electroencephalography and Event-Related Potentials (3). This course introduces students to the concepts, theory, and methods of human psychophysiology with a specific focus on electroencephalography (EEG) and event-related potentials (ERPs). Prerequisite: Permission of the instructor.

PSB 6035 Introduction to Computational Cognitive Neuroscience (3). Survey of models and methods from the computational neuroscience literature that are helpful to answer questions about the mechanisms of cognition and behavior. Prerequisite: Permission of instructor.

PSB 5247 Neurobiology of Learning and Memory (3). Seminar focusing on the themes and questions of how the brain supports learning and memory.

PSY 5918 Supervised Research (VAR). Research apprenticeship under the direction of a research professor or a thesis advisor. Prerequisite: Full graduate admission.

PSY 7980 Ph.D. Dissertation (1-12). Supervised research on an original research project submitted in partial fulfillment of doctoral degree requirements. Prerequisites: Permission of Major Professor and Doctoral Candidacy.

**F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and indicate whether any industry advisory council exists to provide input for curriculum development and student assessment.**

The Society for Neuroscience has outlined a list of core competencies for neuroscience graduate students, which we have used to inform our curriculum. All competencies outlined are included in our curriculum (<https://www.sfn.org/careers/higher-education-and-training/core-competencies/core-competencies-in->

[graduate-neuroscience-training](#)). The external reviewer indicated that our curriculum met the requirements expected of a graduate program in cognitive neuroscience.

The M.S./Ph.D. program faculty serve as the advisory group for the degree, as is typical of programs leading to a doctorate. The documentation of faculty research grant awards and accompanying curriculum vitae attests to their expertise in the field of neuroscience (IX.D.).

- G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

There is no accreditation agency for cognitive neuroscience graduate programs.

- H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

There are no accreditation agencies for undergraduate or graduate programs in cognitive neuroscience.

- I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2 in Appendix A. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

Cognitive Neuroscience students will complete all core and general electives via traditional delivery at FIU's main Modesto A. Maidique Campus.

## **IX. Faculty Participation**

- A. Use Table 4 in Appendix A to identify existing and anticipated full-time (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

See Appendix A Table 4.

- B. Use Table 2 in Appendix A to display the costs and associated funding resources for existing and anticipated full-time faculty (as identified in Table 4 in Appendix A). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.**

Table 2 in Appendix A shows the funding needed to offer the proposed degree. Table 4 of Appendix A shows costs and efforts for existing and anticipated associated full-time faculty. Calculations are based on projected

course instruction (11% effort per course) and research mentorship (3% calendar year). Faculty salaries are paid from E&G funds. There are no visiting or adjunct faculty associated with the program.

**C. Provide in the appendices the abbreviated curriculum vitae (CV) for each existing faculty member (do not include information for visiting or adjunct faculty).**

See Appendix C for all faculty included in Table 4, Appendix A.

**D. Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, as well as qualitative indicators of excellence.**

In the Department of Psychology, teaching loads are based on 12 contact hours. Tenure-earning faculty begin their career at FIU with a 2/2 load. Faculty with research grants typically teach 1-2 courses per year. There are currently 13 tenure-track cognitive neuroscience researchers within the Psychology Department who will contribute toward this degree. These researchers are credited with the acquisition of one of the largest single grants in FIU history (\$12.7M NIDA ABCD study, and its \$13.9M renewal), the acquisition of a new MRI magnet, establishment of the Center for Imaging Science, and acquisition of 23 other neuroscience-related awards (including 10 R01s and 4 NSF awards, totaling over \$47M) in recent years. The faculty currently hold over \$35M in active grants (listed in the Table below).

Faculty Member	Active Grants as PI	Total Funding
Tim Allen	R01MH113626; Feinberg Foundation	\$1,856,888.49
Anthony Dick	R01MH112588; R01DK119814; NSF 2028680	\$5,709,108.00
Raul Gonzalez and Angela Laird	U01DA041156	\$13,940,663.00
Angela Laird and Matthew Sutherland	R01DA041353	\$150,000.00
Angela Laird	NSFDUE1458425; NSF1631325; FIU EMBRACE	\$1,552,717.00
Aaron Mattfeld and Dana McMakin	R01MH116005	\$3,654,721.02
Dana McMakin	PCORI; GMO-190602	\$3,380,770.34
Eliza Nelson	R03HD097419	\$146,500.00
Bethany Reeb-Sutherland	R01HD098152	\$1,975,458.00
Fabián Soto	R21MH112013	\$429,019.00
Matthew Sutherland	U54MD012393	\$2,238,104.88
		<b>Total: \$35,033,949.73</b>

**X. Non-Faculty Resources**

**A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved.**

The existing Library resources are sufficient to support the Ph.D. in Cognitive Neuroscience. The general collections budget of the University Libraries for the 2019-2020 fiscal year was \$7.55 million. The combined holdings of the FIU University Libraries consist of over 2 million books, including over 389,000 electronic books, and access to over 157,000 serial titles in print or online. Over 650 databases are available, including indexes, full text journal articles, videos, newspapers, and archival content. The library also holds substantial collections of federal, state, local, and international documents.

The Library maintains multiple demand-driven electronic book acquisitions programs, which are fairly comprehensive in psychology and the sciences. Through these plans, the library receives academic and professional-level titles in the social sciences and humanities published in the U.S. and U.K.

In terms of journals most likely to be relevant to this program's offerings, the Library's Discovery Service reports the following subject areas and journal counts:

• neurosciences	128,433
• brain	97,884
• neurons	94,466
• neurosciences, biological psychiatry, neuropsychiatry	51,382
• memory	45,794
• schizophrenia	44,905
• neuroscience	42,934
• hippocampus	42,860
• prefrontal cortex	41,927
• cognition	39,067
• depression	38,304
• fMRI	34,988
• Alzheimer's disease	34,373
• behavior	35,970
• social/behavioral sciences	21,719

Online Journal content can be accessed from the Library's Discovery Service or through the E-journal portal, BrowZine. Although many of the online journals are available cover-to-cover, some titles may only have selective content available through aggregator databases. The library has cover-to-cover subscriptions to titles in the following electronic journal packages of importance to the proposed degree, the counts for which are included in the above totals: *American Society for Microbiology*; *Nature Reviews Neuroscience*; *Nature Neuroscience*; *Acta Neuropathologica*; *Behavioral and Brain Sciences*; *Trends in Cognitive Sciences/Neurosciences*; *Neuron*; *Journal of Neuroscience*; *Brain*; *Neuroscience & Biobehavioral Reviews*; *Frontiers in Human Neuroscience* (and all the "Frontiers in" neuroscience titles); *Neuroscience*; *Neuroimage*; and *Brain Research*.

The Library's collections of databases and other online resources total over 650 in number. Subscribed databases in Neuroscience and Behavioral Science include PsycINFO; MEDLINE; BIOSIS; Web of Science; and American Society for Microbiology. In addition to these, the Library also subscribes to Academic Search Complete, Cambridge Journals Online, JSTOR, SAGE, Social Sciences Citation Index, Taylor & Francis, and Wiley Online Library.

**B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 2 in Appendix A. Please include the signature of the Library Director in Appendix B.**

No additional library resources are required for degree implementation.

**C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.**

The Carnegie Foundation for the Advancement of Teaching classifies FIU in its highest category: R1 Doctoral Universities – Highest Research Activity. With a student body of more than 56,500 students (Spring 2020 enrollment), more than 1,200 full-time instructional faculty, and 16,894 degrees awarded during the 2019-2020 academic year, FIU is the largest university in South Florida and the second largest in the Florida State University System (SUS).

Courses for the proposed Cognitive Neuroscience M.S./Ph.D. program will be delivered in various classrooms across the university and all are outfitted with state-of-the-art media technology equipment including a desktop computer, digital projector, whiteboards, retractable projector screen, and inputs including HDMI and VGA plus audio for external devices. Active learning classrooms are arranged so that students can sit together in small groups or in mobile desk units that can be oriented in a variety of arrangements. Active-learning classrooms have multiple projectors and some have computers for each table to facilitate small discussion and group work.

Students involved in independent graduate research projects will work in labs with faculty mentors in established laboratories on campus. The Psychology department is a member of the School of Integrated Science and Humanity (SISH). SISH was created to foster multi-disciplinary biomedical, behavioral, cognitive, and neuroscience research by bringing together academic departments and research centers. In partnership with the colleges of Medicine, Education, and Engineering, SISH and the department of Psychology foster collaborative research in physics, biomedical, biomolecular, cognitive neurosciences, developmental, and clinical science providing a supportive environment for innovation and intellectual exchange.

**Animal Care Facility.** FIU's Animal Care and Use Program (ACUP) complies with all federal, state, and local regulations for laboratory animal care and with the National Institutes of Health's (NIH) guidelines as stated in the Guide for the Care and Use of Laboratory Animals, 2011. In addition, FIU's ACUP is fully accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care, International (AAALAC Unit #1535), indicating verified compliance with the requirements for the proper care and treatment of all vertebrate laboratory animals, irrespective of species, location, investigator, use, or funding source. FIU has an approved Assurance Statement (#A3096-01) on file with the Office of Laboratory Animal Welfare (OLAW) and is registered under the Animal Welfare Act by USDA as a research facility (Registration 58-R-0136). All animal care is under the centralized jurisdiction of the Director of the Office of Laboratory Animal Research (OLAR), Horatiu V. Vinerean, DVM, Diplomate ACLAM. OLAR staff includes a coordinator, a senior laboratory animal technician and two animal caretakers. The combined square footage of all the animal facilities is approximately 25,000 square feet within secure perimeters (three rodent facilities and two aquatic facilities). Animals housed include rodents, reptiles, fish, swine, and amphibians. The main vivarium (AHC4-V) is approximately 19,000 square feet, divided as a transgenic facility (3,550 square feet), SPF vivarium (3,000 square feet), auxiliary facility (6,910 square feet) and core facilities/surgical suites (5,540 square feet).

**Psychology Department Human Experimental and Office Space.** The research and laboratory facilities, and resources of the Center for Children and Families (CCF) and Psychology Department, are state-of-the-art. CCF collaborators, including graduate students and postdoctoral trainees, conduct research and clinical activities with on-site, community, and school-based components. Psychology research and laboratory space at FIU are housed in the Academic Health Center (AHC) complex. The AHC 1 is the primary behavioral testing facility with 11,000 square feet housing 11 testing and clinical treatment rooms (with observational windows and wired for sound and video recording) ranging in size from individual testing rooms to large group rooms and a space that can be configured as a living area for *in vivo* interventions. The space also includes waiting rooms for volunteers, a journal library, two conference rooms and a larger presentation room equipped with audio-visual meeting and teleconference technology, a copy room, two large cubicle-equipped (each with a VOIP phone and networked computer) bullpen rooms for research staff and graduate students, a controlled access room for participant files, and offices for faculty and staff equipped with VOIP telephones and networked computers. The

AHC 4 building contains an additional 1,000 square feet of research space along with two large conference rooms and additional bullpen rooms for research staff and graduate students.

- D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2 in Appendix A. Do not include costs for new construction because that information should be provided in response to X (E) below.**

No additional space resources are required for degree implementation.

- E. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Table 2 in Appendix A includes only Instruction and Research (I&R) costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs in particular would necessitate increased costs in non-I&R activities.**

No new capital expenditures are required for degree implementation.

- F. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.**

**Magnetic Resonance Imaging Facilities.** FIU owns a research-dedicated 3T Siemens MAGNETOM Prisma MRI scanner, which was installed in the Fall of 2016. It is the newest MRI technology from Siemens. It is a high-performance 3T MRI magnet with benchmark homogeneity of 1.1ppm at 50cm, higher-order shim, large FOV of 50x50x50 cm<sup>3</sup>, and zero helium boil-off. The MAGNETOM Prisma was designed to deliver outstanding gradient performance, with 80 mT/m at 200 T/m/s simultaneously, which has not been achieved by any other MRI vendor, including GE and Phillips. The gradient technology includes ultra-high performance cooling, a force-compensated design for reduced vibrations, with a 60-cm bore and excellent long-term stability and minimized acoustic noise. The MAGNETOM Prisma also includes the Tim 4G integrated coil technology to accommodate a unique head/neck 32-channel head/neck coil designed for maximum signal-to-noise ratio. Beyond these hardware features, the MAGNETOM Prisma includes the most innovative software applications that enable trend-setting applications, including SMS (simultaneous multi-slice; i.e., “multiband imaging”) imaging for echo-planar imaging (EPI) (including both functional magnetic resonance imaging [fMRI] and diffusion-weighted imaging [DWI]) pulse sequences.

The MRI scanner is equipped to run the Human Connectome Protocol, which entails state-of-the art multiband data acquisition, advanced motion correction for T1 acquisitions (vNAV), EPI distortion correction (EPIC), ultra-fast data acquisition facilitating multi-shell HARDI (in place of DTI) and high-resolution, sub-second TR EPI acquisition. The MR suite is also equipped to deliver visual and auditory stimuli, and record behavioral responses and eye movements. A computer equipped with E-Prime is available for stimulus presentation and behavioral response collection. An MR-compatible Biopac system (<http://www.biopac.com/>) is available for physiological monitoring, including respiratory and cardiac signals. Weighted blankets are available to minimize participant motion and ensure comfort. A mock scanner, constructed to be nearly identical to the 3T machine, is located in the room next to the imaging suite. The realistic mock scanner is equipped to allow stimulus presentation, motion training, and create scanner noises in order to prepare participants for the imaging sessions.

The 3,178-square-foot MRI facility is housed in PG-5 on the FIU Modesto A. Maidique (Main) Campus. The facility was established as a hub for interdisciplinary neuroscience research and student training on campus. The MRI suite encompasses an MRI exam room (529 sq. ft.), MRI control room (122 sq. ft.), participant changing area



(154 sq. ft.), and MRI equipment room (213 sq. ft.). Additional facility rooms include an MRI simulator/mock scanner suite (406 sq. ft.), four private rooms for experimental procedures and behavioral assessment (415 sq. ft.), and a reception area (174 sq. ft.). The facility was designed to support an integrated community of investigators at the forefront of imaging science, with an emphasis on functional neuroimaging research. The remaining square footage is shared by the Center for Children and Families at FIU and the FIU Herbert Wertheim College of Medicine. The facility was designed to form an integrated community of investigators at the forefront of neuroscience research.

#### **Additional Equipment Housed at Florida International University.**

Transcranial Magnetic Stimulation (TMS): TMS is available for interdisciplinary research investigators at FIU's Engineering Center via a MagVenture MagPro R30 with MagOption. This system allows both monophasic and biphasic waveforms, with up to a 30pps repetition rate with butterfly coil. The TMS system has a seamless connection with an electromyography (EMG) system.

Electroencephalography (EEG): EEG is available at FIU's Engineering Center via an Advanced Neuro-technology (ANT) 64-electrode Electroencephalography ASA-lab system with 64-electrode TMS-compatible Waveguard caps, equipped with active shielding. A second 64-electrode EGI system is housed in the shared academic health center research facility (AHC5).

Eyeblink Conditioning and Startle: A San Diego Instruments eyeblink conditioning/startle portable system is available and will be housed in AHC5 during the course of the study.

Visor2 System with NeuroNavigation package: Three-dimensional optical tracking system with infrared camera allows real-time visualization of TMS coil positioning with acquired MRI scans, and facilitates source localization for EEG. This system is also available at FIU's Engineering Center.

Eye Tracking: Eye tracking data acquisition is provided using the Tobii X-60 Eye Tracker System at a sampling rate of 60Hz with fully automatic gaze recording. This system allows accurate, precise and reliable eye tracking with head movement and drift compensation (freedom of head movement 44x22x30 cm). Binocular tracking is also available to allow the analysis of individual eye movement.

Computational Resources: The Division of Information Technology at FIU established the Instructional and Research Computing Center (IRCC) to consolidate and grow computational computing resources in a centrally managed facility. The primary goal of the center is to provide the technologies, training, and support needed by faculty to help them be successful in their research and academic endeavors. IRCC's initial cluster, Panther Cluster, is a Red Hat Linux environment that consists of approximately 1500 cores, a 6 node GPU cluster for CUDA jobs, and a 3 node visualization environment. All nodes use a low latency Ethernet interconnect and a portion of the cluster also connects to a 56Gbps Infiniband fabric. A GPFS filesystem provides over 240 Terabytes of tiered storage (SSD, 15K SAS, Near Line SAS) using DDN's 12K Embedded GridScalar platform. The Panther Cluster compute nodes consist of 42 IBM H-Series Blades, 3 Dell PowerEdge C6220 Servers, 32 M420 Dell Blades with IB interconnect, one 64 cores IBM x3850 smp node. Login nodes. Login nodes, LSF scheduler and management nodes are provided on four Dell PowerEdge R420 Servers. FIU's primary datacenter has 2000 SF of raised floor space, managed and monitored 24/7 by the Division of IT's Operations department. Its power infrastructure includes enterprise grade power distribution systems, which are fed with conditioned power from a redundant Uninterruptible Power Supply (UPS) infrastructure that will provide a smooth transition to an on-site generator in the case of commercial power outages. The heating, ventilation and air conditioning (HVAC) system is redundant to ensure continuous operation should one module be out of operation as a result of equipment failure or scheduled maintenance. An advanced clean agent fire-suppression system is in place as a protective measure. To ensure security, the datacenter has a variety of access controls, including, but not limited to, two-factor entry systems, 24/7 monitored alarm and video surveillance systems. The datacenter and all IRCC resources are connected to the campus 10 gigabit backbone. This backbone connects all computing resources to the Florida Lambda Rail, which connectivity to the National Lambda Rail and

Internet2 can be achieved. Furthermore, FIU has strands of dark fiber to Verizon's NAP of the Americas connecting it to Division of IT resources at that location. Two full-time staff are dedicated to design and manage the IRCC resources. Additionally, five full-time staff members are shared between the Instructional and Research Computing Center and Enterprise Systems – both of which are departments within FIU's Division of IT.

Faculty members have personal computers equipped for word processing, data analysis, and graphics, and CCF buildings have full access to secure wireless networking. They also have access to a laser printer, digital scanner and color printer. All computers have access to the Internet, E-mail, library information, and database searches. The CCF houses a large centralized data storage system. The facility is site licensed for a wide range of statistical software packages (MPLUS, SAS, SPSS, and others) available to researchers. The University Technology Services (UTS) and the College of Arts and Sciences Technology Information Center (CASTIC) provide instructional workshops as well as maintenance, updates, and repairs of computer hardware and software as needed. CCF faculty members receive support via Microsoft Sharepoint services provided by UTS. Data server space is provided via collaboration with the Center for Advanced Technology and Education in the FIU department of Engineering and Computer Science.

The Integrated Biostatistics Center (IBC) has the mission to enhance FIU's research endeavors by providing research infrastructure support to faculty and scientists working in Colleges in the CCF and the wider University. Specifically, the IBC provides biostatistics/statistics/psychometrics faculty support for typical issues, including research strategy; study design and randomization; sample size, power, effect size; and analytical plan and data and safety monitoring procedures. Also provided are data management and data quality support. Services provided by the IBC are critical to successfully competing for research funding and for doing world-class biomedical, biobehavioral, and related research. IBC faculty consult with faculty and scientists on research design, research methods, data management, and data quality enhancement. The IBC further supports research scientists and graduate students for the preparation of funding proposals and to implement data collection and management plans, conduct statistical analyses, write reports and manuscripts, and archive data. The facilities include computer workstations, server setups, access to data storage facilities, and relevant data management and statistical analysis software. Software available through the IBC includes SAS, SPSS, Stata, M+, R, S+, REDCap, Qualtrics, all the standard office software, and a wide array of freeware for enhancing analyses and data explorations.

**G. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2 in Appendix A.**

No additional specialized equipment is required for degree implementation.

**H. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2 in Appendix A.**

There are no special categories of resources required for this degree.

**I. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2 in Appendix A.**

Graduate assistantships, which include stipends, have been budgeted in Table 2 of Appendix A. TA support is included as follows: 1 TA for Y1; 3 TAs for Y5.

FIU graduate scholarships are administered through the Office of Scholarships. Students in this proposed degree program will be eligible to apply for them, as are other FIU graduate students. As these funds are not unique to this degree program, scholarships are not included in the proposed budget.

**J. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5.**

Internships and practicums are not part of the proposed doctoral program. Engaging in research is the best way for cognitive neuroscience students to obtain practical experience related to the field. Students completing these experiences will enroll in PSY 5918 Supervised Research.

# APPENDIX A

## APPENDIX A N/A

**TABLE 1-B**  
**PROJECTED HEADCOUNT FROM POTENTIAL SOURCES**  
**(Graduate Degree Program)**

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	HC	FTE	HC	FTE	HC	FTE	HC	FTE	HC	FTE
Individuals drawn from agencies/industries in your service area (e.g., older returning students)	0	0	0	0	0	0	0	0	0	0
Students who transfer from other graduate programs within the university**	10	10	10	10	5	5	2	2	0	0
Individuals who have recently graduated from preceding degree programs at this university	2	2	4	4	6	6	8	8	8	8
Individuals who graduated from preceding degree programs at other Florida public universities	1	1	2	2	3	3	4	4	4	4
Individuals who graduated from preceding degree programs at non-public Florida institutions	2	2	4	4	6	6	8	8	8	8
Additional in-state residents***	0	0	0	0	0	0	0	0	0	0
Additional out-of-state residents***	0	0	0	0	0	0	0	0	0	0
Additional foreign residents***	0	0	0	0	0	0	0	0	0	0
Other (Explain)***	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>15</b>	<b>15</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>22</b>	<b>22</b>	<b>20</b>	<b>20</b>

\* List projected annual headcount of students enrolled in the degree program. List projected yearly cumulative ENROLLMENTS instead of admissions.

\*\* If numbers appear in this category, they should go DOWN in later years.

\*\*\* Do not include individuals counted in any PRIOR category in a given COLUMN.

**APPENDIX A**  
**TABLE 2**  
**PROJECTED COSTS AND FUNDING SOURCES**

Instruction & Research Costs (non-cumulative)	Year 1								Year 5						
	Funding Source							Subtotal columms 1+...+7	Funding Source						Subtotal columms 9+...+ 14
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	New Recurring (E&G)	New Non- Recurring (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds		Continuing Base** (E&G)	New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds	
Columns	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Faculty Salaries and Benefits	154,821	0	0	0	0	0	0	\$154,821	165,646	0	0	0	0	0	\$165,646
A & P Salaries and Benefits	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
USPS Salaries and Benefits	10,482	0	0	0	0	0	0	\$10,482	10,482	0	0	0	0	0	\$10,482
Other Personal Services	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Assistantships & Fellowships	196,521	0	0	0	364,967	0	0	\$561,488	206,730	0	0	482,369	0	0	\$689,099
Library	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Expenses	2,000	0	0	0	0	0	0	\$2,000	2,000	0	0	0	0	0	\$2,000
Operating Capital Outlay	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Special Categories	0	0	0	0	0	0	\$0	\$0	0	0	0	0	0	0	\$0
<b>Total Costs</b>	<b>\$363,824</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$364,967</b>	<b>\$0</b>	<b>\$0</b>	<b>\$728,791</b>	<b>\$384,858</b>	<b>\$0</b>	<b>\$0</b>	<b>\$482,369</b>	<b>\$0</b>	<b>\$0</b>	<b>\$867,227</b>

staff support (20% graduate secretary)

Y 1 -graduate students 65% grant funded, 35% E&G funded (stipend); Y 5- graduate students 70% grant funded, 30% E&G funded (stipend)

\$1600 recruitment / \$400 copies and office supplies

\*Identify reallocation sources in Table 3.  
 \*\*Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5.  
 \*\*\*Identify if non-recurring.

**Faculty and Staff Summary**

Total Positions	Year 1	Year 5
Faculty (person-years)	0.82	0.94
A & P (FTE)	0	0
USPS (FTE)	0.20	0.20

**Calculated Cost per Student FTE**

	Year 1	Year 5
Total E&G Funding	\$363,824	\$384,858
Annual Student FTE	15	20
E&G Cost per FTE	\$24,255	19,243



## APPENDIX A

**TABLE 3  
ANTICIPATED REALLOCATION OF EDUCATION & GENERAL FUNDS\***

Program and/or E&G account from which current funds will be reallocated during Year 1	Base before reallocation	Amount to be reallocated	Base after reallocation	
Department of Psychology	7,950,585	363,824	7,586,761	0.045761
<b>Totals</b>	7,950,585	363,824	7,586,761	

\* If not reallocating funds, please submit a zeroed Table 3

APPENDIX A

**TABLE 4**  
**ANTICIPATED FACULTY PARTICIPATION**

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Speciality	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
A	Timothy Allen, PhD Behavioral Neuroscience	Asst Prof	Tenure	Fall 21	9	0.75	0.03	0.02	9	0.75	0.20	0.15
A	Anthony Dick, PhD Developmental Psychology	Assoc Prof	Tenure	Fall 21	9	0.75	0.17	0.13	9	0.75	0.09	0.07
A	George A. Buzzell, PhD Cognitive Neuroscience	Asst Prof	Tenure-Track	Fall 22	9	0.75	0.00	0.00	9	0.75	0.17	0.13
A	Raul Gonzalez, PhD Neuropsychology, Cognitive & Addictions Neuroscience	Professor	Tenure	Fall 21	9	0.75	0.03	0.02	9	0.75	0.03	0.02
A	Angela Laird, PhD Physics (Neuroimaging and Neuroinformatics)	Professor	Tenure	Fall 21	9	0.75	0.12	0.09	9	0.75	0.12	0.09
A	Robert Lickliter, PhD Psychobiology (Developmental Psychobiology)	Professor	Tenure	Fall 21	9	0.75	0.06	0.05	9	0.75	0.00	0.00
A	Aaron Mattfeld, PhD Neurobiology and Behavior (Cognitive Neuroscience)	Asst Prof	Tenure-Track	Fall 21	9	0.75	0.20	0.15	9	0.75	0.09	0.07
A	Dana McMakin, PhD Child Clinical Psychology (Developmental Neuroscience)	Assoc Prof	Tenure	Fall 21	9	0.75	0.03	0.02	9	0.75	0.03	0.02
A	Eliza Eccles (Nelson), PhD Neuroscience and Behavior (Developmental/Cognitive Neuroscience)	Assoc Prof	Tenure	Fall 21	9	0.75	0.11	0.08	9	0.75	0.14	0.11
A	Bethany Reeb-Sutherland, PhD Behavioral Neuroscience	Assoc Prof	Tenure	Fall 21	9	0.75	0.03	0.02	9	0.75	0.03	0.02
A	Bennett Schwartz, PhD Cognitive Psychology	Professor	Tenure	Fall 21	9	0.75	0.03	0.02	9	0.75	0.03	0.02
A	Fabian Soto, PhD Psychology(Computational Cognitive Neuroscience)	Asst Prof	Tenure-Track	Fall 21	9	0.75	0.14	0.11	9	0.75	0.17	0.13
A	Matthew Sutherland, PhD Cognitive Neuroscience (Neuroimaging)	Assoc Prof	Tenure	Fall 21	9	0.75	0.15	0.11	9	0.75	0.15	0.11

	Total Person-Years (PY)						0.82				0.94
Faculty Code		Source of Funding	PY Workload by Budget Classification								
			Year 1		Year 5						
A	Existing faculty on a regular line	Current Education & General Revenue	0.82		0.94						
B	New faculty to be hired on a vacant line	Current Education & General Revenue	0.00		0.00						
C	New faculty to be hired on a new line	New Education & General Revenue	0.00		0.00						
D	Existing faculty hired on contracts/grants	Contracts/Grants	0.00		0.00						
E	New faculty to be hired on contracts/grants	Contracts/Grants	0.00		0.00						
Overall Totals for			Year 1	0.82		Year 5	0.94				

Faculty Code	Faculty	Rank	Contract Status	9 Month Salary	Fringe 2020	2019-34.01%	Total	% Effort for Prg. Year 1	Total	% Effort for Prg. Year 5	Total	Current Grants
A	Timothy Allen, PhD Cognitive Neuroscience	Asst Prof	Tenure	86,176.00	29,309.00		115,485.00	0.03	3,465.00	0.20	23,097.00	
A	Anthony Dick, PhD Cognitive Neuroscience	Assoc Prof	Tenure	107,641.00	36,609.00		144,250.00	0.17	24,523.00	0.09	12,983.00	
A	Raul Gonzalez, PhD Cognitive Neuroscience	Professor	Tenure	145,643.00	49,534.00		195,177.00	0.03	5,856.00	0.03	5,856.00	
A	Angela Laird, PhD*** Cognitive Neuroscience	Professor	Tenure	155,140.00	52,764.00		207,904.00	0.12	24,949.00	0.12	24,949.00	
A	Robert Lickliter, PhD Cognitive Neuroscience	Professor	Tenure	146,578.00	49,852.00		196,430.00	0.06	11,786.00	0.00	0.00	
A	Aaron Mattfeld, PhD Cognitive Neuroscience	Asst Prof	Tenure	82,343.00	28,005.00		110,348.00	0.20	22,070.00	0.09	9,932.00	
A	Dana McMakin, PhD Cognitive Neuroscience	Assoc Prof	Tenure	106,704.00	36,291.00		142,995.00	0.03	4,290.00	0.03	4,290.00	
A	Eliza Eccles (Nelson), PhD Cognitive Neuroscience	Assoc Prof	Tenure	97,316.00	33,098.00		130,414.00	0.11	14,346.00	0.14	18,258.00	
A	Bethany Reeb-Sutherland, PhD Cognitive Neuroscience	Assoc Prof	Tenure	97,735.00	33,240.00		130,975.00	0.03	3,930.00	0.03	3,930.00	
A	Bennett Schwartz, PhD Cognitive Neuroscience	Professor	Tenure	95,474.00	32,471.00		127,945.00	0.03	3,839.00	0.03	3,839.00	
A	Fabian Soto, PhD Cognitive Neuroscience	Asst Prof	Tenure	84,075.00	28,594.00		112,669.00	0.14	15,774.00	0.17	19,154.00	
A	Matthew Sutherland, PhD Cognitive Neuroscience	Assoc Prof	Tenure	99,458.00	33,826.00		133,284.00	0.15	19,993.00	0.15	19,993.00	
A	George A. Buzzell, PhD Cognitive Neuroscience	Asst Prof	Tenure	85,000.00	28,909.00		113,909.00	0.00	0.00	0.17	19,365.00	
								1.10	154,821.00	1.25	165,646.00	1.07

Faculty Code	
A	Existing faculty on a regular line
B	New faculty to be hired on a vacant line
C	New faculty to be hired on a new line
D	Existing faculty hired on contracts/grants
E	New faculty to be hired on contracts/grants

\*\*\*Will contribute as research mentor

			F Y1	Sp Y1	sum*	F Y5	Sp Y5	sum*
Timothy Allen, PhD	Asst Prof	Tenure	0.00	0.03	0.03	0.11	0.09	0.20
Cognitive Neuroscience								
Anthony Dick, PhD	Assoc Prof	Tenure	0.11	0.06	0.17	0.00	0.09	0.09
Cognitive Neuroscience								
Raul Gonzalez, PhD	Professor	Tenure	0.00	0.03	0.03	0.00	0.03	0.03
Cognitive Neuroscience								
Angela Laird, PhD***	Professor	Tenure	0.00	0.12	0.12	0.00	0.12	0.12
Cognitive Neuroscience								
Robert Lickliter, PhD	Professor	Tenure	0.00	0.06	0.06	0.00	0.00	0.00
Cognitive Neuroscience								
Aaron Mattfeld, PhD	Asst Prof	Tenure	0.11	0.09	0.20	0.00	0.09	0.09
Cognitive Neuroscience								
Dana McMakin, PhD	Assoc Prof	Tenure	0.00	0.03	0.03	0.00	0.03	0.03
Cognitive Neuroscience								
Eliza Eccles (Nelson), PhD	Assoc Prof	Tenure	0.11	0.00	0.11	0.11	0.03	0.14
Cognitive Neuroscience								
Bethany Reeb-Sutherland, PhD	Assoc Prof	Tenure	0.00	0.03	0.03	0.00	0.03	0.03
Cognitive Neuroscience								
Bennett Schwartz, PhD	Professor	Tenure	0.00	0.03	0.03	0.00	0.03	0.03
Cognitive Neuroscience								
Fabian Soto, PhD	Asst Prof	Tenure	0.11	0.03	0.14	0.11	0.06	0.17
Cognitive Neuroscience								
Matthew Sutherland, PhD	Assoc Prof	Tenure	0.00	0.15	0.15	0.00	0.15	0.15
Cognitive Neuroscience								
George A. Buzzell, PhD	Asst Prof	Tenure	0.00	0.00	0.00	0.11	0.06	0.17
Cognitive Neuroscience								
			0.44	0.66	1.10	0.44	0.81	1.25
			4	22		4	27	

\*\*\* Independent Research professors are Principal Investigators of a laboratory, and are given 3% effort for every graduate student mentored in research and being on their dissertation committee

sections being offered																								
Term	Code	Course*	Caps	# CN Students Y1	# CN Students Y5	% effort	Credits	# sections being offered		# students					Y5 Fall	Instructor	Y5 Spring	Instructor	# students					
								Y1 Fall	Y1 Spring	Instructor	teaching sum	mentoring	mentoring sum	total sum					sum %	sum	mentoring	entoring sum	total sum %	
F - Y1 & Every Year After	PSY 5939	Quantitative Methods I	25	5	5		3	Raliker			0							Raliker						
S - Y1 & Every Year After	PSY 5939	Quantitative Methods II	25	5	5		3	Parent			0							Parent						
F - Y2 & Every Year After	PSY 5246	Multivariate Analysis	25		5		3	Cove			0							Cove						
CN Content Courses																								
Class Size																								
F - Y5	DEP 5058	Biological Basis of Behavior Development	15		5		3	Lickliter		Lickliter	0	2	0.06	<b>0.06</b>			Lickliter		Lickliter	0	0	0	0	
F - Y1	EXP 5667	Cognitive Neuroscience	15	10			3	0.11	Mattfield		Mattfield	0.11	3	0.09	<b>0.2</b>			Mattfield		Mattfield	0	3	0.09	<b>0.09</b>
	EXP 5508	Applied Cognitive Psychology	15				3		Buzzeil		Buzzeil	0	0	0	<b>0</b>			Buzzeil	0.11	Buzzeil	0.11	2	0.06	<b>0.17</b>
	EXP 5527	Memory and Consciousness	15				3		Schwartz		Schwartz	0	1	0.03	<b>0.03</b>			Schwartz		Schwartz	0	1	0.03	<b>0.03</b>
F - Y5	PSB 6247	Biological Basis of Behavior	15		10		3		Eckles		Eckles	0	0	0	<b>0</b>		0.11	Eckles		Eckles	0.11	1	0.03	<b>0.14</b>
S - Y1	PSB 6215	Human Neuroanatomy	15				3		Dick	0.11	Dick	0.11	2	0.06	<b>0.17</b>			Dick		Dick	0	3	0.09	<b>0.09</b>
	CBA 1206	Animal Cognition	15				3		Eckles		Eckles	0	0	0	<b>0</b>			Eckles		Eckles	0	0	0	<b>0</b>
S - Y1	CLP 6462	Neuropsychology	15	5			3		Gonzalez		Gonzalez/McM	0	1	0.03	<b>0.03</b>			Gonzalez/McM		Gonzalez/McM	0	1	0.03	<b>0.03</b>
S - Y5	PSB 6350	Cognitive Neuroimaging Methods I	15		5		3		Sutherland		Sutherland	0	5	0.15	<b>0.15</b>			Sutherland		Sutherland	0	5	0.15	<b>0.15</b>
	PSB 6351	Cognitive Neuroimaging Methods II	15				3		Laird		Laird	0	4	0.12	<b>0.12</b>			Laird		Laird	0	4	0.12	<b>0.12</b>
	PSB 5115	Introduction to Psychophysiology: Basics of EEG & ERPs	15				3		Reeb-Sutherland		Reeb-Sutherland	0	1	0.03	<b>0.03</b>			Reeb-Sutherland		Reeb-Sutherland	0	1	0.03	<b>0.03</b>
S - Y5	PSB 6035	Introduction to Computational Cognitive Neuroscience	15		10		3		Soto	0.11	Soto	0.11	1	0.03	<b>0.14</b>			Soto	0.11	Soto	0.11	2	0.06	<b>0.17</b>
S - Y5	PSB 5247	Neurobiology of Learning & Memory	15		5		3		Allen		Allen	0	1	0.03	<b>0.03</b>		0.11	Allen		Allen	0.11	3	0.09	<b>0.2</b>
									McMakin				1	0.03	<b>0.03</b>			McMakin		McMakin	1	0.03	<b>0.03</b>	
<b>*Bold denotes a Core course; non-bold denotes an elective</b>													22											
<b>** Independent Research Projects are Professional Investigators of a laboratory, and are given 3% effort for one graduate student mentored in research and for being a member (not chair) of a student's dissertation committee</b>																								

\*Bold denotes a Core course; non-bold courses are electives

\*\* Independent Research professors are Principal Investigators of a laboratory, and are given 3% effort for one graduate student mentored in research and for being a member (not chair) of a student's dissertation committee

REG = not teaching

#### Assumptions:

There are ten students from the current program transferring into the new degree in year 1. Of those ten, five are in the second year of the program and will be taking courses along with newly matriculated students.

In year 5, enrollments reflect newly admitted and second year students enrolled in two of the five courses listed.

The other three courses reflect students in their second year of the program, admitted in year 4.

Year 1: Research supervision effort is .03 CY per student, for 10 students.

Year 5: Research supervision effort is .03 CY per student, for 20 students.

## Appendix B

### Supporting Signatures

## APPENDIX B-1

Please include the signature of the Library Director.



**Signature of Library Director**

**January 10, 2020**


**Date**

This appendix was created to facilitate the collection of signatures in support of the proposal. Signatures in this section illustrate that the Library Director has reviewed sections X.A and X.B.



## APPENDIX B-2

Please include the signature of the Equal Opportunity Officer.

  
Signature of Equal Opportunity Officer

January 16, 2020  
Date

This appendix was created to facilitate the collection of signatures in support of the proposal. A signature in this section illustrates that the Equal Opportunity Officer has reviewed section II.E of the proposal.

## Appendix C Faculty Curriculum Vitae

TIMOTHY ALLEN .....	42
ANTHONY DICK .....	57
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ROBERT LICKLITER .....	168
AARON MATTFELD.....	196
DANA McMAKIN .....	203
ELIZA NELSON .....	226
BETHANY REEB-SUTHERLAND.....	252
BENNETT SCHWARTZ .....	272
FABIAN SOTO .....	300
MATTHEW SUTHERLAND .....	311

## TIMOTHY A. ALLEN, Ph.D.

### CURRENT APPOINTMENT

---

Assistant Professor  
Cognitive Neuroscience Program  
Department of Psychology (primary)  
Department of Environmental Health Sciences (affiliate)

office: AHC4 314  
cell phone: (203) 464-3194  
office phone: (305) 348-8425  
email: [tallen@fiu.edu](mailto:tallen@fiu.edu)

11200 SW 8<sup>th</sup> Street  
Florida International University (FIU)  
Miami, FL 33199

### BRIEF RESEARCH STATEMENT (lab website: <http://allenlab.fiu.edu>)

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I study the neurobiological basis of learning and memory. My emphasis is on the circuitry of agranular medial prefrontal cortex (mPFC), the hippocampus (HC), and mPFC-HC interactions involving the nucleus reuniens of the thalamus (RE) and perirhinal cortex (PER). Dysfunction in this system has been linked to cognitive symptoms in several disorders including but not limited to dementia, schizophrenia, and epilepsy. My research goals are: (1) to detail basic anatomical, physiological, and functional properties of mPFC-HC circuits in memory and memory-based behavior in multiple species, and (2) study and manipulate these circuits in preclinical models (e.g., an early-life environmental Pb<sup>2+</sup> exposure model of schizophrenia) to help identify potential biomarkers and therapeutic avenues.

### EDUCATION

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2009-2013	Postdoctoral Training, University of California, Irvine (UC Irvine), Department of Neurobiology & Behavior, Center for the Neurobiology of Learning and Memory (CNLM)
2003-2008	Graduate Program in Behavioral Neuroscience, Yale University, New Haven, CT
Dec. 2008	Ph.D. Behavioral Neuroscience
Dec. 2006	M. Phil. Behavioral Neuroscience
Dec. 2005	M.S. Behavioral Neuroscience
2000-2003	California State University, Long Beach (CSULB), Long Beach, CA
May 2003	B.A. Psychology, <i>summa cum laude</i>

### RESEARCH POSITIONS

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2015-present	<b>Principal Investigator</b> , Allen Neurocircuitry and Cognition Lab, Department of Psychology, FIU Research Area: The anatomy, physiology, and cognitive functions of direct and indirect projection pathways that connect the HC and mPFC, especially those that involve RE, PER, and lateral entorhinal cortex.
2013-2015	<b>Associate Project Scientist</b> , Department of Neurobiology and Behavior, UC Irvine Supervisors: Craig E.L. Stark, Ph.D., Norbert J. Fortin, Ph.D. Research Area: The neurophysiology of sequence memory in the HC and PFC.
2009-2012	<b>Postdoctoral Scholar</b> , Department of Neurobiology and Behavior, UC Irvine PI: Norbert J. Fortin, Ph.D. Research Area: The neurobiology of memory for sequences of events and elapsed time in the HC.
2003-2008	<b>Graduate Student</b> , Department of Psychology, Yale University Mentor: Thomas H. Brown, Ph.D. Research Area: Cortical contributions to fear memory, especially those involving PER and the lateral nucleus of the amygdala.
2002-2003	<b>Undergraduate Research Assistant</b> , Behavioral Neuroscience Laboratory, CSULB Advisor: Diane W. Lee, Ph.D.

Research Area: The role of sex, estrogen, and season on neurogenesis in the avian hippocampal formation and septum.

## AWARDS & HONORS

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2020-present	Executive Committee, Winter Conference on the Neurobiology of Learning and Memory, Park City, UT
2019-present	President, Florida Consortium on the Neurobiology of Learning and Memory (FCNC)
2019	Top Scholar Award, Junior Faculty with Significant Funding, Florida International University
2019	Top Scholar Award, Notable External Appointments, Florida International University
2019-present	Appointed Affiliate Faculty for the Center for Complex Systems and Brain Sciences, Boca Raton, FL
2018	Faculty Award for Research, College of Arts, Sciences, and Education (CASE), Florida International University
2017-2019	Vice President, Florida Consortium on the Neurobiology of Learning and Memory (FCNC)
2017	Elected External Fellow of the Center for the Neurobiology of Learning and Memory, Irvine, CA
2015	Featured Speaker, Annual Undergraduate Psychology Conference, Florida International University
2012	Roger W. Russell Scholar's Award (for scholarship in research, integrity and collegiality), Center for the Neurobiology of Learning and Memory, UC Irvine
2011	Dean's Award for Postdoctoral Excellence, School of Biological Sciences, UC Irvine
2011	Postdoctoral Travel Award, Society for Neuroscience (SfN)
2009	Keynote Speaker, Department of Psychology Awards, CSULB
2009	Jane Olejarczyk Award, Department of Psychology, Yale University
2008	Graduate Student Travel Award, Society for Neuroscience (SfN)
2004	Poster Award, Cellular and Molecular Physiology Retreat, Yale University
2003	Outstanding Senior in the Department of Psychology, CSULB
2003	Lucio Morales Award (for outstanding scholarship), CSULB
2002-2003	Distinguished Student in the College of Liberal Arts, CSULB
2001-2003	President's List, CSULB

## GRANTS

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### *Current Grants (funded):*

"The role of the nucleus reuniens in the temporal organization of memory and behavior"

Sponsor: **National Institute of Mental Health (NIMH)**

Research Grant: **1 R01 MH113626**

Funding Period: 05/10/2018-02/28/2023

5yr funding: \$1,490,075 (direct), \$1,825,848 (total cost)

Role: PI

### *Research Supplement to Promote Diversity in Health-Related Research*

"The role of the nucleus reuniens in the temporal organization of memory and behavior"

Sponsor: **National Institute of Mental Health (NIMH)**

Research Grant: **R01 MH113626 S1**

Funding Period: 03/01/2020-02/28/2022

2yr additional funding: \$148,031 (direct), \$216,866 (total cost)

Role: PI

"Functional mapping of hippocampal and prefrontal circuits in rats, pigs, and humans"

Sponsor: **Feinberg Foundation**

Funding Period: 09/01/2012 – present

Funding: \$139,500 to date (\$25K/year, renewable annually)

Role: PI

"NMDA receptor function in lead neurotoxicity"

Sponsor: **National Institute of Environmental Health Sciences (NIEHS)**

Research Grant: **R01 ES006189**

Funding Period: 08/01/2015 – 07/31/2020

Annual Direct: \$2,496,652 (direct), \$3,244,801 (total)

Role: Aim2 (~\$100K/year; PI: T. Guilarte)

**Submitted Grants** (currently under consideration)

“Early life lead exposure and schizophrenia”

Research Grant: **R01 ES032288**

Sponsor: **National Institute of Environmental Health Sciences (NIEHS)**

Proposed Funding Period: 08/01/2020 – 07/31/2025

Funding Requested: \$2,941,688

Role: MPI (T. Allen, T. Guilarte)

Impact Score: 42 (RFA, PO discussion positive, council pending)

“Mapping long-range connections using light sheet microscopy and diffusion-weighted techniques in the domestic pig”

Sponsor: **NIH Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative**

Research Grant: **R01 MH120038**

Proposed Funding Period: 8/1/2019-7/31/2022

Funding Requested: \$1,567,185 (direct), \$1,969,526 (total)

Role: MPI (T. Allen, S. Gandhi, C. Stark)

Impact Score: 42 (responses to summary statement requested and submitted to PO)

**Submitted Grants** (not funded)

“Expansion of biobehavioral core facility”

Research Grant: **C06**

Sponsor: **National Institute of Health (NIH)**

Proposed Funding Period: 09/01/2019-08/31/2024

Role: Lead Author (PI: VP Research, Dr. Andres Gil)

Funding Requested: \$7,949,149

“Prefrontal cortex to hippocampus pathways in temporal reward discounting and sequence memory”

Research Grant: **R21 MH112071**

Sponsor: **National Institute of Mental Health (NIMH)**

Proposed Funding Period: 09/01/2016-08/31/2018

Role: MPI (T. Allen, A., Mattfeld)

“The role of the medial prefrontal cortex in the memory for sequences of events”

Research Grant: **F99 NS119001**

Sponsor: **National Institute of Neurological Disorders and Stroke (NINDS)**

Proposed Funding Period: 07/01/2020-06/30/2023

PI: M. Jayachandran

Role: Sponsor

Impact Score: 48 (Resubmitted on 05/01/2020 based on Summary Statement and PO advice)

**Completed Grants/Fellowships:**

“Neural mechanisms of functional network connectivity in the domestic pig”

CCF Intramural Research Award

Sponsor: **Center for Children and Families**, Florida International University

Funding Period: 01/01/2017 – 12/31/2017

Funding: \$5,000

Role: PI

University Fellowship

Sponsor: **Yale University**

Funding Period: 09/01/2003-12/31/2008

Funding: Full tuition and stipend for 5 years

Awarded to: T. Allen

**PEER-REVIEWED PUBLICATIONS** (h-index: 13; i10-index: 14)

---

21. Schultheiss, N.W., Schlecht, M., Jayachandran, M., Brooks, D.R., McGlothlan, J.L., Guilarte, T.R. & **Allen, T.A.**  
(acceptable with minor revisions). ‘Awake delta’ and theta-rhythmic hippocampal network modes during

intermittent locomotion behaviors in the rat. *Behavioral Neuroscience*. (see linked bioRxiv version in Preprints below)

20. Allen, L.M.\*, Jayachandran, M.\*, Viena, T.D., Su, M., McNaughton, B. & **Allen, T.A.** (2020). RatHat: A self-targeting printable brain implant system. *eNeuro*. <https://doi.org/10.1523/ENEURO.0538-19.2020>

\*These authors contributed equally to the work.

19. Allen, L.M., Lesyshyn, R.A., O'Dell, S.J., **Allen, T.A.**, & Fortin, N.J. (2020). The hippocampus, prefrontal cortex, and perirhinal cortex are critical to incidental order memory. *Behavioural Brain Research*, 379, 112215. <https://www.sciencedirect.com/science/article/pii/S0166432819311441>
18. Jayachandran, M., Linley, S., Schlecht, M., Mahler, S.V., Vertes, R.P. & **Allen, T.A.** (2019). Prefrontal pathways provide top down control of memory for sequence of events. *Cell Reports*, 28, 1-15. [https://www.cell.com/cell-reports/fulltext/S2211-1247\(19\)30826-5](https://www.cell.com/cell-reports/fulltext/S2211-1247(19)30826-5)
17. Dolleman-van der Weel, M., Griffin, A.L., Ito, H.T., Shapiro, M.L., Witter, M.P., Vertes, R.P. & **Allen, T.A.** (2019). The nucleus reuniens of the thalamus sits at the nexus of a hippocampus and medial prefrontal cortex circuit enabling memory and behavior. *Learning & Memory*, 26, 191-205. <http://learnmem.cshlp.org/content/26/7/191>
- \*Cover Art feature of the July 2019 issue of *Learning & Memory* <http://learnmem.cshlp.org/content/26/7.cover-expansion>
16. Ng, C., Elias, G.A., Asem, J.A.S., **Allen, T.A.** & Fortin, N.J. (2018). Nonspatial sequence coding varies along the CA1 transverse axis. *Behavioural Brain Research*, 15, 39-47. <http://dx.doi.org/10.1016/j.bbr.2017.10.015>
15. **Allen, T.A.**, Salz, D.M., McKenzie, S.A. & Fortin, N.J. (2016). Non-spatial sequence coding in CA1 neurons. *The Journal of Neuroscience*, 36(5), 1547-1563. <http://www.jneurosci.org/content/36/5/1547>
- \*This Week in the Journal featured article of *The Journal of Neuroscience* <http://www.jneurosci.org/content/36/5/i.short>
14. **Allen, T.A.**, Morris, A., & Fortin, N.J. & Stark, C.E.L. (2015). Memory for sequences of events impaired in typical aging. *Learning & Memory*, 22, 138-148. <http://www.learnmem.org/cgi/doi/10.1101/lm.036301.114>
- \*Cover art feature of the April 2015 issue of *Learning & Memory* <http://learnmem.cshlp.org/content/22/4/.cover-expansion>
13. **Allen, T.A.**, Morris, A.M., Mattfeld, A.T., Stark, C.E.L. & Fortin, N.J. (2014). A sequence of events model of episodic memory shows parallels in rats and humans. *Hippocampus*, 24, 1178-1188. <http://dx.doi.org/10.1002/hipo.22301>
12. Jacobs, N.S., **Allen, T.A.**, Nguyen, N. & Fortin, N.J. (2013). Critical role of the hippocampus in memory for elapsed time. *The Journal of Neuroscience*, 33(34), 13888-13893. <http://dx.doi.org/10.1523/JNEUROSCI.1733-13.2013>
- \*Featured in *Scientific American* article titled "Your brain has two clocks" <http://www.scientificamerican.com/article.cfm?id=your-brain-has-two-clocks>
11. **Allen, T.A.** & Fortin, N.J. (2013). The evolution of episodic memory. *Proceedings of the National Academy of Sciences USA*, 110 (Suppl 2), 10379-10386. <http://dx.doi.org/10.1073/pnas.1301199110>
10. **Allen, T.A.** & Fortin, N.J. (2013). Reply to Rattenborg and Martinez-Gonzalez: Fundamental and divergent aspects of the neurobiology of episodic memory. *Proceedings of the National Academy of Sciences USA*, 110(40), E3742. <http://dx.doi.org/10.1073/pnas.1313502110>
9. Feinberg, L.M., **Allen, T.A.**, Ly, D. & Fortin, N.J. (2012). Recognition memory for social and non-social odors: Differential effects of neurotoxic lesions to the hippocampus and perirhinal cortex. *Neurobiology of Learning and Memory*, 97(1), 7 -16. <http://dx.doi.org/10.1016/j.nlm.2011.08.008>
8. Law, L.M., Gardner, R.D., **Allen, T.A.** & Lee, D.W. (2010). Species-specific injury-induced cell proliferation in the hippocampus and subventricular zone of food-storing and non-storing wild birds. *Developmental Neurobiology*, 70(1). <http://dx.doi.org/10.1002/dneu.20748>

7. **Allen, T.A.**, Narayanan, N.S., Kholodar-Smith, D.B., Zhao, Y., Laubach, M. & Brown, T.H. (2008). Imaging the spread of reversible brain inactivations using fluorescent muscimol. *Journal of Neuroscience Methods*, 171(1), 30-38. <http://dx.doi.org/10.1016/j.jneumeth.2008.01.033>

\*Top Most Cited Articles by the *Journal of Neuroscience Methods* for five-year period from 2008-2013.

6. Kholodar-Smith, D.B., **Allen, T.A.** & Brown, T.H. (2008). Fear conditioning to discontinuous auditory cues requires perirhinal cortical function. *Behavioral Neuroscience*, 122(5), 1178-1185. <http://dx.doi.org/10.1037/a0012902>
5. Bang, S.J., **Allen, T.A.**, Jones, L.K., Boguszewski, P. & Brown, T.H. (2008). Asymmetrical stimulus generalization following differential fear conditioning. *Neurobiology of Learning and Memory*, 90(1), 200-216. <http://dx.doi.org/10.1016/j.nlm.2008.02.009>
4. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2007). Single-unit firing in rat perirhinal cortex caused by fear conditioning to arbitrary and ethological stimuli. *The Journal of Neuroscience*, 27(45), 12277-12291. <http://dx.doi.org/10.1523/JNEUROSCI.1653-07.2007>
3. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2007). Single-unit responses to 22 kHz ultrasonic vocalizations in rat perirhinal cortex. *Behavioural Brain Research*, 182, 327-336. <http://dx.doi.org/10.1016/j.bbr.2007.03.009>
2. Peterson, R.S., Fernando, G., Day, L., **Allen, T.A.**, Chapleau, J.D., Menjivar, J., Schlinger, B.A. & Lee, D.W. (2007). Aromatase expression and cell proliferation following injury of the adult zebra finch hippocampus. *Developmental Neurobiology*, 67(14), 1867-1878. <http://dx.doi.org/10.1002/dneu.20548>
1. Lee, D.W., Fernando, G., Peterson, R.S., **Allen, T.A.** & Schlinger, B.A. (2007). Estrogen mediation of injury-induced cell birth in neuroproliferative regions of the adult zebra finch brain. *Developmental Neurobiology*, 67(8), 1107-1117. <http://dx.doi.org/10.1002/dneu.20399>

#### U.S. PATENTS (issued)

3. **Allen, T.A.**, McNaughton, B., Su, M., Allen, L.M. (2019). Stereotaxic device for implantation of permanent implants into the rodent brain (additional claims). US Patent 10,492,882. [Link](#)
2. **Allen, T.A.**, Mattfeld, A.T., Draper, A. (2019). Stereotaxic brain implant system for large animals. US Patent 10,251,722. [Link](#)
1. **Allen, T.A.**, McNaughton, B., Su, M., Allen, L.M. (2017). Stereotaxic device for implantation of permanent implants into the rodent brain. US Patent 9,707,049. [Link](#)

#### MANUSCRIPTS (under revision or review included; in prep manuscripts not included)

2. Reeders, P.C., Hamm, A., **Allen, T.A.** & Mattfeld, A.T. (under revision). Hippocampal activation reflects the temporal context while medial prefrontal cortex activation reflects ordinal position during sequence memory in humans. *J Neurosci* (see linked bioRxiv version in Preprints below)
1. Boucquey, V.K., **Allen, T.A.**, Huffman, D., Fortin, N.J. & Stark, C.E.L. (under revision). Memory for sequences of events shows hippocampal and medial prefrontal cortical BOLD activation and functional connectivity in humans.

#### PREPRINTS

4. Schultheiss, N.W., Schlecht, M., Jayachandran, M., Brooks, D.R., McGlothan, J.L., Guilarte, T.R. & **Allen, T.A.** (2019). 'Awake delta' and theta-rhythmic hippocampal network modes during intermittent locomotion behaviors in the rat. bioRxiv, 866962. [Link](#)
3. Allen, L.M.\*, Jayachandran, M.\*, Viena, T.D., Su, M. & **Allen, T.A.** (2019). RatHat: A self-targeting printable brain implant system. bioRxiv, 868422. [Link](#)

\*These authors contributed equally to the work.

2. Jayachandran, M., Linley, S., Schlecht, M., Mahler, S.V., Vertes, R.P. & **Allen, T.A.** (2018). Prefrontal pathways provide top down control of memory for sequence of events. bioRxiv, 508501. [Link](#)
1. Reeders, P.C., **Allen, T.A.** & Mattfeld, A.T. (2018). Hippocampus activations reflect temporal contexts while medial prefrontal activations reflect ordinal positions during sequence memory in humans. bioRxiv, 501122. [Link](#)

## EDITED WORKS, BOOKS, AND CHAPTERS

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3. Furtak, S.C. & **Allen, T.A.** (release date December 2020). Special Issue: Extrahippocampal Contributions to Hippocampal-Dependent Behavior. *Hippocampus*
2. Vertes, R.P. & **Allen, T.A.** (co-editor; release date November 2020). *Electrophysiological Recording Techniques (2nd Ed.)*. Springer, New York, NY.
1. **Allen, T.A.** (author; under revision). Candidate temporally-structured and time-varying neural activity for encoding temporal content. In, *Electrophysiological Recording Techniques (2nd Ed.)*. New York, NY: Springer

## PUBLICATIONS (editorial)

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5. Bieszczad, K. M., **Allen T.A.** & Stark, C.E.L. August 15, 2013. *F1000 Prime* evaluation of: Znamenskiy P. & Zador A.M. (2013). Corticostriatal neurons in auditory cortex drive decisions during auditory discrimination. *Nature*, 497(7450), 482-485.
4. **Allen, T.A.**, Bieszczad, K. M. & Stark, C.E.L. April 16, 2013. *F1000 Prime* evaluation of: Xu, W. & Südhof, T.C. (2013). A Neural circuit for memory specificity and generalization. *Science* 339, 1290-1295.
3. **Allen, T.A.** & Stark, C.E.L., Feb 5, 2013. *F1000 Prime* evaluation of: Mankin E.A., Sparks, F.T., Slayyeh, B., Sutherland, R.J., Leutgeb, S., Leutgeb, J.K. (2012). Neuronal code for extended time in the hippocampus. *Proceedings of the National Academy of Sciences USA*, 109(47):19462-19467.
2. Mattfeld A., **Allen, T.A.** & Stark, C.E.L., Oct. 28, 2011. *Faculty of 1000* evaluation of: MacDonald, C.J., Lepage, K.Q., Eden, U.T., Eichenbaum, H. (2011). Hippocampal "time cells" bridge the gap in memory for discontinuous events. *Neuron*, 71(4): 727 - 749.
1. **Allen, T.A.** & Stark, C.E.L., June 10, 2011. *Faculty of 1000* evaluation of: Dragoi, G. & Tonegawa, S. (2011). Preplay of future place cell sequences by hippocampal cellular assemblies. *Nature*, 469(7330), 397 - 401.

## INVITED LECTURES

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22. Jan. 10, 2020 "The role of the nucleus reuniens in hippocampal-dependent temporal memories," Winter Conference on the Neurobiology of Learning and Memory, Park City, UT
21. Nov. 14, 2019 "Mechanisms of prefrontal cortex control over hippocampal memory," University of Florida, Department of Neuroscience, McKnight Brain Institute, Gainesville, FL
20. April 4, 2019 "Pigs as an ideal model for translational behavioral neuroscience," University of Miami, Miller School of Medicine, Miami, FL
19. Jan. 30, 2019 "Pigs as the ideal neurobehavioral model for translational research," Virginia Tech University, Blacksburg, VA
18. Oct. 18, 2018 "Pig memory," Environmental Health Sciences, Florida International University, Miami, FL
17. Sept. 20, 2018 "A domestic pig model (*Sus scrofa domesticus*) for large scale electrophysiological recordings during spatial and nonspatial memory tasks," University of Arizona, Tucson, AZ
16. April 18, 2018 "Conceptualizing the role of the nucleus reuniens for odor sequence memory," Nucleus reuniens of the thalamus: Behavioral relevance and physiology at the nexus of a hippocampus and medial prefrontal cortex memory circuit, Session Chair, The International Conference on Learning and Memory, Huntington Beach, CA
15. May 1, 2018 "Lessons from Neuroscience for Leadership," Chapmanville Leadership Development Program, Florida International University, Miami, FL, Organizer: Dr. Modesto Maidique, Miami, FL
14. Jan. 7, 2017 "The role of the nucleus reuniens in the temporal organization of memories," Critical role of the nucleus reuniens in hippocampus and medial prefrontal cortex dependent memory systems, Session Chair and Organizer, Winter Conference on the Neurobiology of Learning and Memory, Park City, UT
13. Jan. 26, 2016 "Non-spatial sequence memory: cells, systems, and aging," *Neuroscience Seminar Series*, Florida Atlantic University, Boca Raton, FL



12. Aug. 14, 2013 *"Neurobiology of episodic memory: circuits, systems, and aging," Nu Rho Psi: The National Honor Society in Neuroscience, Irvine, CA*
11. Jan. 5, 2013 *"Temporal contexts of memory," The Cognitive Timeline, Session Chair, Winter Conference on the Neurobiology of Learning and Memory, Park City, UT*
10. Dec. 14, 2012 *"The future of research on the neurobiology of learning and memory: Finding a balance between science and technology," Panel Member and Co-chair, How Episodic are Old Episodic Memories? Annual Conference on the Neurobiology of Learning and Memory, Irvine, CA*
9. Mar. 23, 2012 *"Keeping the memories of your life in order: Dynamic neural coding of sequence memory in the hippocampus and prefrontal cortex," Cognitive and Brain Seminar Series, University of California San Diego, San Diego, CA*
8. Jan. 7, 2012 *"A hippocampal-prefrontal cortical system underlies non-spatial sequence memory," Exploring Interregional Dynamics of Memory Systems across Species and Levels, Panel Speaker and Co-chair, Winter Conference on the Neurobiology of Learning and Memory, Park City, UT*
7. Nov. 21, 2011 *"Neural correlates of sequence memory," Department of Psychology Seminar Series, University of Delaware, Newark, DE*
6. Nov. 18, 2011 *"A hippocampal-prefrontal cortical system underlies non-spatial sequence memory," Behavioral Neuroscience Seminar Series, Yale University, New Haven, CT*
5. Oct. 26, 2011 *"Exploring the neural basis of episodic memory: The physiology of sequence memory," Department of Psychology Colloquium Series, California State University Long Beach, Long Beach, CA*
4. Feb. 15, 2011 *"Coding thought: Neural representations of cognition," Brain Athlete Club, University High School, Irvine, CA*
3. Dec. 10, 2010 *"Cell Assemblies: A basic unit of cognitive processing from a single-unit recording viewpoint," Fall Meeting, Center for the Neurobiology of Learning and Memory, University of California Irvine, Irvine, CA*
2. Oct. 15, 2008 *"Cortically-mediated acquired emotion: Role of perirhinal cortex in fear conditioning," Department of Psychology Colloquium Series, California State University Long Beach, Long Beach, CA*
1. Dec. 6, 2007 *"Physiology and behavioral relevance of perirhinal cortex in ethological fear conditioning," Behavioral Neuroscience Seminar Series, University of Connecticut, Storrs, CT*

## CONFERENCE PRESENTATIONS

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63. **Allen T.A.**, Allen L.M., Hamm, A. & Mattfeld A.M. (2020). Touchscreen cognition in pigs: A conditional associative memory task adapted from human studies. *Touchscreen Cognition Symposium*, [touchscreencognition.org](http://touchscreencognition.org).
62. **Allen, T.A.**, Schultheiss, N.W., Brooks, D.R., McGlothan, J.L. & Guilarte, T.R. (2020). Altered prefrontal-hippocampal network activity following chronic early life lead exposure in rats. *Society of Toxicology*. Abstract #2999.
61. Schultheiss, N.W., McGlothan, J.L., Brooks, D.R., Guilarte, T.R. & **Allen, T.A.** (2019). Behavior-related spectral modes of hippocampal activity comprise distinct delta- and theta-dominated network states, including temporally-evolving 'absence' seizures in rats chronically exposed to lead (Pb2+). *Society for Neuroscience Abstracts*, 45, 242.22.
60. Viena, T.D., Schultheiss, N.W., McGlothan, J.L., Guilarte, T.R. & **Allen, T.A.** (2019). Delta and theta dynamics in medial prefrontal cortex and the hippocampus of behaving rats. *Society for Neuroscience Abstracts*, 45, 242.29.
59. Schlecht, M., Jayachandran, M., Linley, S.B., Mahler, S.V., Vertes, R.P. & **Allen, T.A.** (2019). Two separate populations of medial prefrontal cortex cells project to nucleus reuniens and perirhinal cortex in support of different memory retrieval strategies. *Society for Neuroscience Abstracts*, 45, 242.23.
58. Lamothe, K., Mondragon, V., Schreiber, M.E., Linley, S.B., Vertes, R.P. & **Allen, T.A.** (2019). Thalamocortical interactions in memory for elapsed time. *Society for Neuroscience Abstracts*, 45, 242.28.

57. Amanda, K.P., Schreiber, M.E., Athanason, A.C., **Allen, T.A.**, Linley, S.B. & Vertes, R.P. (2019). Dissociable effects of the thalamic nucleus reuniens and ventromedial prefrontal cortex in executive functioning in the rat. *Society for Neuroscience Abstracts*, 45, 242.25.
56. Schultheiss, N.W., Draper, A.I., Brooks, D.R., McGlothan, J.L., Guilarte, T.R. & **Allen, T.A.** (2018). Cortical-hippocampal circuit dysfunction bridging the cellular to cognitive-behavioral effects of chronic early-life lead exposure. *Society of Toxicology*, Abstract #1465.
55. Draper, A., Mattfeld, A. & **Allen, T.A.** (2018). A domestic pig model for large-scale electrophysiological recordings during conditional associative memory tasks. *Society for Neuroscience Abstracts*, 44, 244.16.
54. Jayachandran, M., Schlecht, M., Linley, S.B., Vertes, R.P. & **Allen, T.A.** (2017). Projection-specific inactivations of prelimbic cortex to the nucleus reuniens of the thalamus and perirhinal/lateral entorhinal cortex impairs memory for sequences of events in rats. *Society for Neuroscience Abstracts*, 43, 166.01.
53. Allen, L.M., Jayachandran, M. & **Allen, T.A.** (2017). NeuroCap: A 3D-printable stereotaxic system for fast, precise, and reliable chronic brain implants in rodents. *Society for Neuroscience Abstracts*, 43, 166.02.
52. Viena, T.D., Schreiber, M.E., Harris, K.J., **Allen, T.A.**, Linley, S.B. & Vertes, R.P. (2017). The effect of chemogenetic inactivation of the nucleus reuniens (RE) or selective RE terminals to the hippocampus or medial prefrontal cortex on spatial working memory in a delayed non-match to sample T-maze task in rats. *Society for Neuroscience Abstracts*, 43, 166.03.
51. Draper, A., Schultheiss, N.W., Linley, S., Jayachandran, M., Vertes, R.P. & **Allen, T.A.** (2017). Inactivation of the nucleus reuniens of the thalamus through hM4Di DREADDs improves interval timing performance. *Society for Neuroscience Abstracts*, 43, 166.04.
50. Reagh, Z., Mattfeld, A., **Allen T.A.**, Montchal M. & Yassa, M. (2017). Structural and functional evidence for thalamic nucleus reuniens in the human brain. *Cognitive Neuroscience Society*, March 25-28, San Francisco, CA.
49. Jayachandran, M., Schlecht, M., Linley, S., Vertes, R.P. & **Allen, T.A.** (2017). Role for medial prefrontal cortex to nucleus reuniens pathway in sequence memory revealed by projection-specific DREADDs. *Winter Conference on the Neurobiology of Learning and Memory*, 41st Annual, Data Blitz Session.
48. Allen, L.M., Su, M., Jayachandran, M., McNaughton, B. & **Allen, T.A.** (2017). NeuroCap: A 3D printed System for precise intracranial implants. *Winter Conference on the Neurobiology of Learning and Memory*, 41st Annual, Data Blitz Session.
47. Reagh, Z., Mattfeld, A., **Allen, T.A.**, Montchal, M. & Yassa, M. (2016). Structural and functional evidence for thalamic nucleus reuniens in the human brain. *Cognitive Neuroscience Society*, San Francisco, CA.
46. **Allen, T.A.**, Reeders, P.C., Vertes, R.P. & Mattfeld, A.T. (2016). Identification of nucleus reuniens in humans using probabilistic tractography. *Society for Neuroscience Abstracts*, 42, 361.12.
45. Reeders, P.C., **Allen, T.A.** & Mattfeld, A.T. (2016). Sequence memory predicts temporal reward discounting and both activate medial prefrontal cortex and medial temporal lobe regions. *Society for Neuroscience Abstracts*, 42, 361.13.
44. Asem, J.A., Kassir, M.H., Mirza, N.B., Chmielewski, N.N., Elias, G.A., Ng, C.-W., **Allen, T.A.** & Fortin, N.J. (2016). Using DREADDs to compare the effects of inactivating CA3 versus the CA3-CA1 projection on the memory for sequences of events. *Society for Neuroscience Abstracts*, 42, 643.03.
43. Ng, C.-W., Elias, G.A., Asem, J.A., **Allen, T.A.** & Fortin, N.J. (2016). Nonspatial sequence coding varies along the CA1 transverse axis. *Society for Neuroscience Abstracts*, 42, 643.04.
42. Fortin, N.J., Asem, J.A., Ng, C.-W., Quirk, C.R., **Allen, T.A.**, & Elias, G.A. (2016). Distinct contributions of hippocampal, prefrontal, perirhinal and nucleus reuniens regions to the memory for sequences of events. *Society for Neuroscience Abstracts*, 42, 643.06.
41. Elias, G.A., Ng, C.-W., Asem, J.A., **Allen, T.A.** & Fortin, N.J. (2016). Prefrontal neurons track ordinal position within a sequence of events. *Society for Neuroscience Abstracts*, 42, 643.07.

40. Mattfeld, A.T., Reeders, P. & **Allen, T.A.** (2016). Identification of the nucleus reuniens in humans with probabilistic tractography. *Winter Conference on the Neurobiology of Learning and Memory*, 40th Annual, Data Blitz Session.
39. Boucquey, V., **Allen, T.A.**, Huffman, D., Fortin, N.J. & Stark, C.E.L. (2015). Hippocampus and medial prefrontal cortex show activity and functional connectivity during memory for sequences of events. *Society for Neuroscience Abstracts*, 41.
38. **Allen, T.A.**, Boucquey, V., Quirk, C.R., Huffman, D., Fortin, N.J. & Stark, C.E.L. (2015). A hippocampal-prefrontal system underlies memory for sequences of events in rats and humans. *Winter Conference on the Neurobiology of Learning and Memory*, 39th Annual, Data Blitz Session.
37. Quirk, C.R., **Allen, T.A.** & Fortin N.J. (2014). The nucleus reuniens and perirhinal cortex are critical to memory for sequences of events. *Society for Neuroscience Abstracts*, 40, 91.14.
36. Boucquey, V.K., **Allen, T.A.**, Huffman, D., Fortin N.J. & Stark, C.E.L. (2014). Memory for sequences of events shows bilateral hippocampal and medial prefrontal cortical activity in humans. *Society for Neuroscience Abstracts*, 40, 646.04.
35. **Allen, T.A.**, Kraus, B.J., McKenzie, S.A., Hasselmo, M.E., Eichenbaum, H.B. & Fortin N.J. (2013). Neural representations of sequences of events in the hippocampus parallel behavioral performance. *Society for Neuroscience Abstracts*, 39, program number 578.28.
34. Morris, A.M., **Allen, T.A.**, Mattfeld, A.T., Stark, C.E.L. & Fortin N.J. (2013). A cross-species approach to investigating memory for a sequence of events. *Society for Neuroscience Abstracts*, 39, program number 578.12.
33. Quirk, C.R., **Allen, T.A.** & Fortin N.J. (2013). Temporary inactivations of the hippocampus and prefrontal cortex impair memory for sequences of events. *Society for Neuroscience Abstracts*, 39, program number 578.04.
32. **Allen, T.A.**, Mattfeld, A., Fortin, N.J. & Stark, C.E.L. (2011). Non-spatial sequence memory in humans and rats. *Pavlovian Society Annual Meeting*, Milwaukee, WI.
31. **Allen, T.A.**, Jacobs, N., Feinberg, L.M., Bharadwaj, K.R., Wang, M-X. & Fortin N. (2011). Prefrontal cortex neurons code for sequences of events. *Society for Neuroscience Abstracts*, 37, program number 97.19.
30. Jacobs, N., **Allen, T.A.**, Turk, A.A., Vogel-Ciernia, A. & Fortin N.J. (2011). Fluorophore-conjugated muscimol inhibits behaviorally-induced activity-regulated cytoskeleton-associated protein in the hippocampus. *Society for Neuroscience Abstracts*, 37, program number 519.03.
29. **Allen, T.A.** & Fortin, N.J. (2011). Hippocampal neurons code for sequences of non-spatial events. *Winter Conference on the Neurobiology of Learning and Memory*, 35th Annual, Data Blitz Session.
28. Fortin, N.J., Salz, D.M., **Allen, T.A.**, Kim, J.C., McKenzie, S.A., Kraus, B.J., Hasselmo, M.E. & Eichenbaum, H.B. (2010). Hippocampal neurons code for sequences of non-spatial events. *Society for Neuroscience Abstracts*, 36, program number 100.18.
27. Jacobs, N., **Allen, T.A.** & Fortin, N.J. (2010). Memory for when events occur: Critical role of the hippocampus in memory for "how long ago". *Society for Neuroscience Abstracts*, 36, program number 606.1.
26. Feinberg, L.M., **Allen, T.A.**, Black, Y.D., Ly, D. & Fortin, N.J. (2010). Differential effects of hippocampal and perirhinal cortex excitotoxic lesions on recognition memory for social and non-social odors. *Society for Neuroscience Abstracts*, 366, program number 606.4.
25. **Allen, T.A.** & Brown, T.H. (2008). Simultaneous single-unit recordings from rat perirhinal cortex and dorsomedial prefrontal cortex during trace fear conditioning. *Society for Neuroscience Abstracts*, 34, program number 686.13.
24. Boguszewski, P., **Allen, T.A.** & Brown, T.H. (2008). CS-offset encoding in auditory fear conditioning. *Society for Neuroscience Abstracts*, 34, program number 93.5.
23. Tankhiwale, A.A., Bang, S., **Allen, T.A.**, Boguszewski, P. & Brown, T.H. (2008). Role of experience in eliciting fear responses to rat auditory social signals. *Society for Neuroscience Abstracts*, 34, program number 93.5.

22. **Allen, T.A.**, Narayanan, N.S., Kholodar-Smith, D.B., Zhao, Y.J., Laubach, M. & Brown, T.H. (2007). Imaging the spread of reversible inactivation using a fluorescent GABA<sub>A</sub> agonist. *Society for Neuroscience Abstracts*, 33, program number 533.29.
21. Bang, S., **Allen, T.A.**, Jones, L.K., Boguszewski, P. & Brown, T.H. (2007). Asymmetrical stimulus generalization in differential fear conditioning to ultrasonic social signals and simpler acoustic stimuli: large variations in stimulus specificity. *Pavlovian Society Annual Meeting* Austin, TX.
20. Tankhiwale, A. A., Bang, S., **Allen, T.A.**, Boguszewski, P. & Brown, T.H. (2007). Video analysis of unconditional and conditional freezing elicited by rat ultrasonic vocalizations. *Pavlovian Society Annual Meeting*, Austin, TX.
19. **Allen, T.A.**, Narayanan, N.S., Kholodar-Smith, D.B., Zhao, Y.J., Laubach, M. & Brown, T.H. (2007). Visualizing reversible brain inactivations using fluorescently-labeled muscimol: physiological, behavioral and histological analyses. *Pavlovian Society Annual Meeting*, Austin, TX.
18. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2006). Rat perirhinal single-unit responses encode the CS-US interstimulus interval in delay fear conditioning. *Society for Neuroscience Abstracts*, 32, program number 67.16.
17. Padlubnaya, D.B., **Allen, T.A.** & Brown, T.H. (2006). Perirhinal lesions effects on delay fear conditioning depend on stimulus features of the conditional stimulus. *Society for Neuroscience Abstracts*, 32, program number 67.14.
16. Bang, S., **Allen, T.A.**, Jones, L.K., Boguszewski, P. & Brown, T.H. (2006). Asymmetrical generalization gradients toward social alarm calls in rats given differential fear conditioning. *Society for Neuroscience Abstracts*, 32, program number 67.15.
15. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2006). Unconditional and conditional single-unit responses in rat perirhinal cortex to auditory and somatosensory stimuli. *Society for Neuroscience Abstracts*, 32, program number 215.5.
14. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2006). CS- and US-elicited single-unit responses in rat perirhinal cortex. *Pavlovian Society Annual Meeting*, Philadelphia, PA.
13. Kholodar-Smith, D.B., **Allen, T.A.** & Brown, T.H. (2006). Perirhinal lesions effects on delay fear conditioning depend on stimulus features of the conditional stimulus. *Pavlovian Society Annual Meeting* Philadelphia, PA.
12. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2006). US-Anticipating responses in perirhinal cortex: Timing & extinction. *Winter Conference on the Neurobiology of Learning and Memory*, 30th Annual, Data Blitz Session.
11. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2006). Conditioning-produced changes in rat perirhinal single-unit responses. *Winter Conference on the Neurobiology of Learning and Memory*, 30th Annual, Data Blitz Session.
10. **Allen, T.A.**, Jones, L.K. & Brown, T.H. (2005). Differential fear conditioning to a 22 kHz ultrasonic vocalization and a temporally-matched tone. *Pavlovian Society Annual Meeting*, Anaheim, CA.
9. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2005). Conditioning-produced changes in perirhinal single-unit responses to an ultrasonic vocalization. *Pavlovian Society Annual Meeting*, Anaheim, CA.
8. Brown, T.H., Furtak, S.C. & **Allen, T.A.** (2005). Using rat ultrasonic vocalizations to explore the mnemonic functions of perirhinal cortex. *International Behavioral Neuroscience Conference*, 14, Satellite Session: Ultrasonic Vocalization in Rodents. Behavioral and Neural Determinates of Call Production.
7. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2005). Unconditional single-unit responses in perirhinal cortex. *Winter Conference on the Neurobiology of Learning and Memory*, 29, Data Blitz Session.
6. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2005). Method for accessing perirhinal cortex from the lateral surface and recording single-unit activity during fear conditioning. *Winter Conference on the Neurobiology of Learning and Memory*, 29th Annual, Data Blitz Session.
5. **Allen, T.A.**, Furtak, S.C. & Brown, T.H. (2004). Single-unit auditory responses in rat perirhinal cortex accessed from the lateral surface. *Society for Neuroscience Abstracts*, 30, program number 650.6.
4. Furtak, S.C., **Allen, T.A.** & Brown, T.H. (2004). Perirhinal single-unit responses to 4 and 22 kHz tones. *Pavlovian Society Annual Meeting*, Baltimore, MD.

3. Lee, D.W., Fernando, G. **Allen, T.A.**, Wilson, S., Dominguez, N., Menjivar, J. & Schlinger, B.A. (2004). Estrogen promotes cell proliferation in the injured zebra finch hippocampus. *Society for Neuroscience Abstracts*, 30, program number 757.18.
2. Peterson, R.S., Fernando, G., **Allen, T.A.**, Schlinger, B.A. & Lee, D.W. (2004). Evidence that glial aromatization promotes cellular proliferation in the injured zebra finch hippocampus. *Society for Neuroscience Abstracts*, 30, program number 887.5.
1. Maxfield, L. **Allen, T.A.**, Guerrero, M., Leiblic, N. & Sawatzky, M. (2003). A familiarity explanation of memory conjunction errors. *Western Psychological Association Convention*, poster 8-17.

#### **TEACHING** (student evaluation ratings >80% very good to excellent)

Spring 2020	Lecturer – <i>Sensation &amp; Perception</i> , 2 sections, Dept. of Psychology, FIU
Spring 2019	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Fall 2018	Guest Lecturer – <i>Lessons in Life and Leadership</i> , Dept. of International Business, FIU
Spring 2018	Lecturer – <i>Neuropsychology</i> , Dept. of Psychology, FIU
Spring 2018	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Fall 2017	Guest Lecturer – <i>Lessons in Life and Leadership</i> , Dept. of International Business, FIU
Fall 2017	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Spring 2017	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Fall 2016	Lecturer – <i>Biological Bases of Behavior (Graduate Level)</i> , Dept. of Psychology, FIU
Fall 2016	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Spring 2016	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Spring 2016	Guest Lecturer – <i>Intro to Biomedical Engineering</i> , Dept. of Biomedical Engineering, FIU
Fall 2015	Lecturer – <i>Sensation &amp; Perception</i> , Dept. of Psychology, FIU
Spring 2013	Guest Lecturer – <i>Mind, Memory and the Brain</i> , Dept. of Neurobiology and Behavior, UC Irvine
Fall 2012	Guest Lecturer – <i>Biological Psychology</i> , Dept. of Psychology, CSULB
Spring 2011	Guest Lecturer – <i>Statistics for Neurobiologists</i> , Dept. of Neurobiology and Behavior, UC Irvine
Summer 2010	Lecturer – <i>Neurobiology of Learning and Memory</i> , Dept. of Neurobiology and Behavior, UC Irvine
Spring 2010	Guest Lecturer – <i>Statistics for Neurobiologists</i> , Dept. of Neurobiology and Behavior, UC Irvine
Spring 2009	Lecturer – <i>Sensation and Perception</i> , 2 Sections, Dept. of Psychology, CSULB
Spring 2009	Guest Lecturer – <i>Psychology of Learning</i> , Dept. of Psychology, CSULB
Fall 2008	Guest Lecturer – <i>Graduate Seminar in Learning</i> , Dept. of Psychology, CSULB
Summer 2007	Lecturer - <i>Methods in Single Unit Physiology</i> , Dept. of Psychology, Yale University
Fall 2007	Guest Lecturer – <i>Basics of Learning and Memory</i> , Dept. of Psychology, Yale University
Spring 2006	Teaching Fellow – <i>Research Methods in Behavioral Neuroscience</i> , Dept. of Psychology, Yale University
Fall 2005	Teaching Fellow – <i>Basics of Learning and Memory</i> , Dept. of Psychology, Yale University
Fall 2004	Teaching Fellow – <i>Introductory Statistics</i> , Dept. of Psychology, Yale University
Spring 2003	Grading Assistant – <i>Psychobiology</i> , Dept. of Psychology, CSULB

#### **POSTDOCTORAL MENTEES**

2018-present	Tatiana Viena, Ph.D., Florida International University, Distinguished Postdoctoral Scholar Award, College of Arts and Sciences (CASE)
2017-present	Nathan W. Schultheiss, Ph.D., Florida International University
2016-present	Leila M. Allen, Ph.D., Florida International University

#### **DOCTORAL STUDENTS**

2015-present	Maanasa Jayachandran, M.S., Florida International University (advanced to candidacy; F99/K00 awaiting council meeting)
2015-present	Puck Reeders, B.S., Florida International University (advanced to candidacy)
2017-present	Maximillian Schlecht, B.S., Florida International University
2018-present	Amanda Hamm, M.S., Florida International University (secondary advisor; advanced to candidacy)

## DOCTORAL DISSERTATION COMMITTEES

---

2020-present,	Fredis Mapp, Department of Biological Sciences, Florida International University
2020-present	Anil Kumar Thota, Biomedical Engineering, Florida International University
2019-present	Amanda Hamm, Cognitive Neuroscience Program, Florida International University
2019-present	Sanjay Narasiwodeyar, Cognitive Neuroscience Program, Florida International University
2018-present	Maanasa Jayachandran, Cognitive Neuroscience Program, Florida International University
2018-present	Puck Reeders, Cognitive Neuroscience Program, Florida International University (CCF Seed Award Recipient)
2017-present	Moises Camacho, Department of Biological Sciences, Florida International University
2016-present	Jared Leichner, Biomedical Engineering, Florida International University
2016-present	Lakshmini Balachandar, Biomedical Engineering, Florida International University
2016-2018	Tatiana Viena, Center for Complex Systems, Florida Atlantic University

## MASTERS THESIS COMMITTEES

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2018-present	Jason Hays, Cognitive Neuroscience Program, Florida International University
2017-2019	Sanjay Narasiwodeyar, Cognitive Neuroscience Program, Florida International University
2017-2018	Amanda Hamm, Cognitive Neuroscience Program, Florida International University
2016-2018	Taylor Salo, Cognitive Neuroscience Program, Florida International University
2017-2018	Maanasa Jayachandran, Cognitive Neuroscience Program, Florida International University, Awarded CASE Annual Student Academic Achievement & Service Award for Best Thesis
2017-2018	Puck Reeders, Cognitive Neuroscience Program, Florida International University

## UNDERGRADUATE RESEARCH STUDENTS

---

2020-present	Felipe Regio, Department of Psychology, Florida International University
2019-present	Victoria Blanco, Department of Biological Sciences, Florida International University
2019-present	Sofia Levya, Department of Biological Sciences, Florida International University
2019-present	Daniela Silva, Department of Psychology, Florida International University
2019-present	Andy Garcia, Department of Psychology, Florida International University
2019-present	Gabriela Rasch, Departments of Biomedical Engineering, Florida International University
2019-present	Andy Delgado, Department of Psychology, Florida International University
2019-present	Aaron Barreto-Diaz, Department of Psychology, Florida International University
2019-present	Amanda Pacheco-Spiewak, Department of Psychology, Florida International University
2018-2020	Wanda Gonzalez, Department of Biological Sciences, Florida International University
2019-2020	Raul Diaz, Department of Chemistry, Florida International University
2018-2020	Maritza Aguiar, Department of Psychology, Florida International University
2018-2020	Chiara Pavon, Department of Psychology, Florida International University
2018-2019	Brittany Schwartz, Department of Psychology, Florida International University
2018-2019	Anais Iglesias, Department of Psychology, Florida International University
2017-2018	Bryan Dionicio, <i>Generations Ahead Scholarship</i> , Department of Psychology, Florida International University
2016-2017	Camila Sarcone Sorarrain, Department of Psychology, Florida International University
2016-2017	Arina Polyanskaya, Department of Psychology, Florida International University
2016-2018	Alex Cedeño, Department of Biological Sciences, Florida International University
2016-2017	Randee Viena, Department of Biological Sciences, Florida International University; Graduated FIU School of Nursing in 2020
2016-2018	John Perez, Department of Psychology, Florida International University; Currently Air Force officer candidate
2015-2017	Julio Castillo, Department of Biomedical Engineering, Florida International University; Currently at Case Western Reserve University, School of Medicine



2015-2016	Maximillian Schlecht, Department of Psychology, Florida International University; Currently a Cognitive Neuroscience Graduate Student at Florida International University
2016	Daniel Alvarez, Department of Biological Sciences, Florida International University
2015-2016	Vicannia Merisma, Department of Psychology, Florida International University
2011-2014	Clare Quirk, <i>Outstanding Undergraduate at Center for Neurobiology of Learning and Memory; Dean's Award for Excellence in Research</i> in the School of Biological Sciences, UC Irvine; Earned a Ph.D. in Neuroscience at UC San Diego with Dr. Stefan Leutgeb
2012-2014	Owen Cruz, <i>Bridge Award</i> for underrepresented populations in science; <i>Outstanding Undergraduate at Center for Neurobiology of Learning and Memory</i> , UC Irvine; Graduated dental school at Loma Linda University.
2012-2013	Kristina Le, <i>Excellence in Research</i> Honors in School of Biological Sciences, UC Irvine
2012-2013	Philip Yu, Undergraduate Research Opportunity Grant, UC Irvine
2012-2013	Colin Furman, Undergraduate Research Assistant, UC Irvine
2012-2013	Andrew Banuelos, Undergraduate Research Opportunity Grant, UC Irvine
2011-2013	Nathan Lo, Undergraduate Research Opportunity Grant, UC Irvine
2011-2012	Stephanie Yun, Undergraduate Research Opportunity Grant, UC Irvine; Graduated from the USC Regulatory and Health Management School
2010-2012	Anthony Turk, <i>Excellence in Research</i> Honors in School of Biological Sciences, UC Irvine; Earned M.D. at Oakland University William Beaumont School of Medicine
2009-2012	Karthik Bharadwaj, <i>Excellence in Research</i> Honors in School of Biological Sciences, UC Irvine; Earned M.D. at Keck School of Medicine of USC
2009-2011	Min-Xuan Wang, <i>Excellence in Research</i> Honors in School of Biological Sciences, UC Irvine
2009-2011	Denise Ly, <i>Excellence in Research</i> Honors in School of Biological Sciences, UC Irvine
2005-2006	Lauren Jones, Undergraduate Research Assistant at Yale University; Received Ph.D. at the University of Washington, Seattle with Dr. Jeansok Kim in 2012

## TRAINEE GRANTS

### **Submitted Grants** (currently under consideration)

"The role of the medial prefrontal cortex in the memory for sequences of events"

Research Grant: **F99 NS119001 A1**

Sponsor: **National Institute of Neurological Disorders and Stroke (NINDS)**

Proposed Funding Period: 07/01/2020-06/30/2023

Funding Requested: \$346,755 (total)

PI: M. Jayachandran

Role: Sponsor

"The role of the medial prefrontal cortex in the memory for sequences of events"

Research Grant: **F99 NS119001**

Sponsor: **National Institute of Neurological Disorders and Stroke (NINDS)**

Proposed Funding Period: 07/01/2020-06/30/2023

Funding Requested: \$346,755 (total)

PI: M. Jayachandran

Role: Sponsor

Impact Score: 48 (Resubmitted on 05/01/2020 based on Summary Statement and PO advice)

## ACADEMIC SERVICE

2020-present	<i>Mentor</i> , Mentoring Match Program, Women in Learning (WIL)
2019-present	<i>Chairperson</i> , Institutional Biosafety Committee (IBC), Florida International University
2018-2019	<i>Co-organizer</i> , 2019 Winter Conference on the Neurobiology of Learning and Memory, Park City, UT
2017-2019	<i>Member</i> , Cognitive Neuroscience Faculty Search Committee, Florida International University, Chair: Dr. Anthony Dick

2017-present	<i>Administrator</i> , FV1200 Confocal Imaging Core Facility, Florida International University, Supervisor: Dr. Andres Gil
2016-2019	<i>Full Member</i> , Institutional Biosafety Committee (IBC), Florida International University, Chair: Dr. Kathleen Rein
2016-2018	<i>Committee Member and Co-author</i> , NIH High-End Instrumentation (HEI) Grant Program (S10 grant application), 94 BioSpec 94/30 USR, Small Animal Imaging Facility (SAIF), \$2 Million requested, Impact Score: 31
2016-present	<i>Faculty Mentor</i> , MARC U*STAR Program, Florida International University, Director: Dr. Robert Lickliter
2016-present	<i>Faculty Mentor</i> , NIGMS-RISE Program, Florida International University, Director: Dr. Robert Lickliter
2015-present	<i>Full Member</i> , Institutional Animal Care and Use Committee (IACUC), Florida International University, Chair: Dr. Robert Lickliter
2015-present	<i>Member</i> , Department of Psychology Colloquium Committee, Florida International University, Chair: Dr. Stefany Coxé
2014-2015	<i>Vice President</i> of the <i>Nu Rho Psi</i> National Council (West Region), the National Honor Society in Neuroscience
2013-2015	<i>Faculty Mentor</i> , <i>Nu Rho Psi</i> , Advising and support for the UC Irvine chapter of the National Honor Society in Neuroscience, UC Irvine
2012- 2013	<i>Medial Temporal Lobe Journal Club Coordinator</i> , Regular meetings frequented by graduate students, postdocs and faculty with an emphasis on current literature on the role of the medial temporal lobe in learning and memory, UC Irvine
2009-2013	<i>Faculty Moderator</i> , Annual Undergraduate Research Symposium, UC Irvine
2009-2014	<i>Undergraduate Research Coordinator</i> , Responsible for the support of undergraduate research students in developing research projects and applying for grants, total funds awarded: \$15,800.00
2010-2012	<i>Volunteer Research Scientist</i> for “A Memorable Evening” & “Evenings to Remember” – Community-based science outreach and fundraising for the Center for the Neurobiology of Learning and Memory, UC Irvine Director: Dr. Craig E. L. Stark
2009-2015	<i>Neurophysiology Journal Club</i> , “Spike Club UC Irvine” founder. Regular meetings frequented by graduate students, postdocs and faculty regarding cutting-edge neurophysiology techniques and analytics, with an emphasis on future research applications, UC Irvine
2009	<i>Curriculum Committee</i> for a <i>B.S. in Neuroscience</i> , Designed and organized the curriculum for a proposed B.S. in Neuroscience, Chair: Kenneth Green, Department of Psychology, CSULB
2006-2008	<i>Neal E. Miller Memorial Lecture Series</i> , Founding Graduate Student Organizer, Department of Psychology, Yale University. Faculty coordinator: Dr. Allan R. Wagner
2005-2008	<i>Current Works in Behavior Neuroscience Seminar Series</i> – Graduate student assistant to Dr. Allan R. Wagner to aid with inviting and hosting outside speakers
2004-2005	<i>Colloquium Committee</i> , Graduate Student Representative for Behavioral Neuroscience, Department of Psychology, Yale University

## PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

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American Chemical Society (ACS)  
 American Psychological Association (APA)  
 Association for Psychological Science (APS)  
 Center for Children and Families (CCF at FIU)  
 Center for Complex Systems and Brain Sciences (Affiliate Assistant Professor, CCS at FAU)  
 Center for the Neurobiology of Learning and Memory (CNLM at UCI)  
 Faculty of 1000  
 Florida Consortium on the Neurobiology of Cognition (FCNC)  
 International Behavioral Neuroscience Society (IBNS)  
 Nu Rho Psi, National Neuroscience Honor Society  
 Pavlovian Society  
 Psi Chi, National Psychology Honor Society



Phi Kappa Phi, International Honor Society  
Society for Behavioral Neuroscience and Comparative Psychology (APA Division 6)  
Society for Neuroscience (SfN)  
Society of Toxicology (SOT)  
Women in Learning (WIL)

#### **EDITORIAL BOARD SERVICE**

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*Hippocampus*, Special Issue Editor  
*Behavioral Neuroscience*, Editorial Board  
*Frontiers in Behavioral Neuroscience*, Editorial Board  
*Frontiers in Systems Neuroscience*, Editorial Board  
*The New School Psychology Bulletin*, Editorial Board

#### **PEER-REVIEW SERVICE** (98<sup>th</sup> percentile for number of verified reviews, [Publons](#))

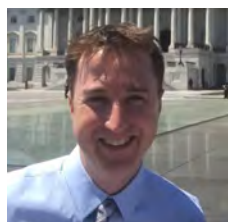
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*Nature Communications*, Reviewer  
*Current Biology*, Reviewer  
*Proceedings of the National Academy of Sciences (PNAS)*, Reviewer  
*The Journal of Neuroscience*, Reviewer  
*Progress in Neurobiology*, Reviewer  
*UKRI Medical Research Council (MRC)*, Peer Reviewer  
*eLife*, Reviewer  
*The Journal of Neurophysiology*, Reviewer  
*Brain Structure & Function*, Reviewer  
*Hippocampus*, Reviewer  
*Neuroscience*, Reviewer  
*Neurobiology of Learning and Memory*, Reviewer  
*Behavioural Brain Research*, Reviewer  
*Behavioral Neuroscience*, Reviewer  
*Learning & Memory*, Reviewer  
*Neurobiology of Aging*, Reviewer  
*The Journal of Neuroscience Methods*, Reviewer  
*Frontiers in Human Neuroscience*, Reviewer  
*Alzheimer's Disease Center (UC Davis)*, Grant Reviewer  
*Oxford University Press*, Reviewer  
*Wellcome Trust*, Grant Reviewer

#### **REFERENCES**

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Available upon request



CURRICULUM VITAE OF  
**ANTHONY STEVEN DICK**  
**PSYCHOLOGY DEPARTMENT**  
**FLORIDA INTERNATIONAL UNIVERSITY**

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**CONTACT INFORMATION**

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Miami, FL 33199

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Fax: (305) 348-3879  
Email: [adick@fiu.edu](mailto:adick@fiu.edu)  
Lab Webpage: <http://dcn.fiu.edu>

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**EDUCATION**

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Ph.D. <i>Temple University</i> , <b>Developmental Psychology</b> (Advisor: Willis Overton, Ph.D.)	2000-2006
B.S. <i>The Ohio State University</i> , <b>Psychology</b> (Advisor: Gerald Winer, Ph.D.)	
B.A. <i>The Ohio State University</i> , <b>Music</b> (Advisors: Paul Robinson, Ph.D.; Roger Hines, M.A.)	1996-2000
	1996-2000

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**FULL-TIME ACADEMIC EXPERIENCE**

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<i>Florida International University</i> , Associate Professor, Psychology, Developmental Science/Cognitive Neuroscience	June 2016 - present
Assistant Professor, Psychology, Developmental Science/Cognitive Neuroscience	Aug. 2010 – June 2016
<i>The University of Chicago</i> , NIDCD NRSA Postdoctoral Fellow Department of Neurology (Advisor: Steven Small, Ph.D., M.D.)	Sep. 2007 – Jul. 2010
<i>The University of Chicago</i> , Postdoctoral Scholar Department of Neurology (Advisor: Steven Small, Ph.D., M.D.)	Feb. 2006 – Aug. 2007

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**PART-TIME ACADEMIC EXPERIENCE**

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<i>Temple University</i> , Graduate Research Assistant Developmental Psychology (Department of Psychology)	Sep. 2000-Dec. 2005
<i>The Ohio State University</i> , Undergraduate Research Assistant Department of Psychology	Sep. 1998-Jun.2000

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**NON-ACADEMIC EXPERIENCE**

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N/A

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**EMPLOYMENT RECORD AT FIU**

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Associate Professor, Psychology, Developmental Science/Cognitive Neuroscience	June 2016-present
Assistant Professor, Developmental Science and Cognitive Neuroscience	Aug. 2010 – 2016
Founding Director, Cognitive Neuroscience Program	2014 - present
Director, Developmental Science Program	2012 - 2014
Founding Director, Cognitive Neuroscience Graduate Certificate	2012 - present

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**BIOSKETCH**

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Anthony Dick, Ph.D.: 2020-03-22

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Anthony Dick is Associate Professor of Psychology at Florida International University. Anthony grew up in Cincinnati, Ohio and graduated from Archbishop McNicholas High School in 1996. He received his B.S. in Psychology and B.A. in Music (Jazz Studies) from The Ohio State University, Columbus, OH in 2000. He received his Ph.D. in Developmental Psychology from Temple University, Philadelphia, PA in 2006. There he studied executive function development with Dr. Willis Overton. Following that he completed a postdoctoral fellowship in the Department of Neurology at the University of Chicago, where he studied gesture and language neurobiology with Drs. Steven Small and Susan Goldin-Meadow. He moved to Miami in 2010 to a faculty position at Florida International University, where he was tenured in 2016. **Anthony is a developmental cognitive neuroscientist who studies, using diffusion-weighted and functional imaging, the neurobiology of language and executive function. He is specifically interested in how these cognitive processes are mutually supported by developing structural and functional neural networks.** He primarily uses functional and structural neuroimaging in typical and atypical child populations to address his research questions. In 2018 he edited *Advancing Developmental Science*, a graduate developmental science text. He has been funded by the NIDCD, NICHD, NIMH, NIDA, NIDDK and NSF to conduct his work.

Outside of work, Anthony enjoys a number of hobbies. He plays double bass and electric bass in local bands. He enjoys carpentry (mainly building furniture and guitars), and he snorkels and scuba dives. He is married and has a son.

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## **PUBLICATIONS IN DISCIPLINE**

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**H-index: 21; i-10 index: 25**

[https://scholar.google.com/citations?hl=en&user=c-M4IOcAAAAJ&view\\_op=list\\_works](https://scholar.google.com/citations?hl=en&user=c-M4IOcAAAAJ&view_op=list_works)

Roles: \* Undergraduate student; \*\* Graduate student; ^ Post-Bac

### **Books**

56. **Dick, A. S.**, & Müller, U. Eds. (2018). *Advancing developmental science: Philosophy, theory, and method*. New York and London: Routledge, Taylor and Francis Group.

### **BioRxiv/PsyArXiv Preprints/Under Review**

55. Silverman, M. R., Bennett, R., Feuerstahler, L., Stadterman, J., Dick, A., Graziano, P., & Roy, A. K. (2020). *Measuring emotion dysregulation in children with externalizing disorders: Exploratory and confirmatory factor analysis of the Emotion Regulation Checklist (ERC)*.

54. Garcia, A., **Dick, A. S.**, & Graziano, P. (2020). *A multimodal assessment of emotion dysregulation in young children with and without ADHD*. [10.31234/osf.io/z9emy](https://doi.org/10.31234/osf.io/z9emy)

53. Herting, M. M.,...**Dick, A.S.**, et al., (2020). *Mapping the early stages of pubertal development: correspondence between physical development and hormone levels in 9-10-year-olds from the Adolescent Brain Cognitive Development study*.

52. Garcia, A., **Dick, A. S.**, & Graziano, P. (2019). *Examining emotion dysregulation in young children with and without ADHD: A transdiagnostic approach*.

51. Hermanson, S., Garcia, C., & **Dick, A. S.** (2019). *Development of eye morphology relevant to gaze-cuing in the human infant*.

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### **Published Peer Reviewed Articles, Chapters, and Other Formats**

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50. Hawes, S. W., Waller, R., Byrd, A. L., Bjork, J. M., **Dick, A. S.**, Sutherland, M. T., Riedel, M. C., Tobia, M. J., Thomson, N., Laird, A. R., & Gonzalez, R. (2020). Reward processing among children with Disruptive Behavior Disorders and Callous-Unemotional Traits in the ABCD Study. *American Journal of Psychiatry*.

49. †Waller, R., †Hawes, S.W., Byrd, A.L., **Dick, A.S.**, Sutherland, M.T., Riedel, M.C., Tobia, M.J., Bottenhorn, K.L., Laird, A.R., & Gonzalez, R. (2020). Disruptive Behavior Problems, Callous-Unemotional Traits, and Regional Gray Matter Volume in the ABCD Study. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 5, 481-489.

†authors contributed equally to this manuscript

48. Dajani, D. R., Odriozola, P., Winters, M., Voorhies, W., Marcano, S., Baez, A., Gates, K. M., **Dick, A. S.**, & Uddin, L. Q. (2020). Measuring cognitive flexibility with the Flexible Item Selection Task: From fMRI adaptation to individual connectome mapping. *Journal of Cognitive Neuroscience*, 6, 1026-1045.

47. Lee, J. C., **Dick, A. S.**, & Tomblin, J. B. (2020). Altered brain structures in the dorsal and ventral language pathways in individuals with and without Developmental Language Disorder (DLD). *Brain Imaging and Behavior*. doi: 10.1007/s11682-019-00209-1 [IF: 3.42]

46. Hagler, D., Hatton, S. N., Makowski, C., Cornejo, D., Fair, D. A., **Dick, A. S.**, Sutherland, M. T., Casey, B. J., Barch, D. M. et al., (2019). Image processing and analysis methods for the Adolescent Brain and Cognitive Development (ABCD) Study. *NeuroImage*, 202, 116091. [IF: 5.43; Cited: 5]

45. Sibley, M., Ortiz, M., Graziano, P., **Dick, A. S.**, & Estrada, E. (2020). Metacognitive and motivation deficits, exposure to trauma, and high parental demands characterize adolescents with late-onset ADHD. *European Child and Adolescent Psychiatry*, 4, 537-548.

44. **Dick, A. S.**, Garcia, N. L.\*\*\*, Pruden, S. M., Thompson, W. K., Hawes, S. W., Sutherland, M., Riedel, M., Laird, A., & Gonzalez, R. (2019). No evidence for a bilingual executive function advantage in the ABCD study. *Nature Human Behavior*, 3, 692-701. [IF: NA; Cited: 1] <https://www.nature.com/articles/s41562-019-0609-3> <https://psyarxiv.com/gjh95>

43. Nomi, J. S., Marshall, E., Zaidel, E., Biswal, B., Castellanos, F. X., **Dick, A. S.**, Uddin, L. Q., & Mooshagian, E. (2019). Diffusion-weighted imaging evidence of extra-callosal pathways for interhemispheric communication after complete commissurotomy. *Brain Structure and Function*, 224, 1897-1909. [IF: 4.23]

42. Broce, I.\*\*\*, Bernal, B., Altman, N., Bradley, C., Baez, N., Cabrera, L., Hernandez, G., De Fera, A., & **Dick, A. S.** (2019). Fiber pathways supporting early literacy development in 5-8-year-old children. *Brain and Cognition*, 134, 80-89. [IF: 2.43; Cited: 2]

41. **Dick, A.S.**, Garic, D.\*\*\*, Graziano, P., & Tremblay, P. (2019). The frontal aslant tract (FAT) and its role in speech, language, and executive function. *Cortex*, 111, 148-163. [IF: 4.31; Cited: 8] <https://www.biorxiv.org/content/early/2018/01/22/249912> and <https://doi.org/10.1016/j.cortex.2018.10.015>

40. Garic, D.\*\*\*, Broce, I.\*\*\*, Graziano, P., Mattfeld, A. & **Dick, A. S.** (2019). Laterality of the frontal aslant tract (FAT) explains externalizing behaviors through its association with executive function. *Developmental Science*, 22, e12744. [IF: 4.08; Cited: 1]

39. Tremblay, P. T., Perron, M., Deschamps, I., Kennedy-Higgins, D., Houde, J-C., **Dick, A. S.**, & Descoteaux, M. (2019). A diffusion MRI study on the role of the arcuate and middle longitudinal fasciculi in the aging of speech perception in noise. *Human Brain Mapping*. [IF: 4.93]

- 
38. Comer, J. S., del Busto, C., **Dick, A. S.**, Furr, J. M., & Puliafico, A. C. (2019). Adapting PCIT to treat anxiety problems in young children: The CALM Program. In L. Niec (Ed.), *Handbook of Parent-Child Interaction Therapy: Innovations and applications for research and practice*. New York: Springer.
37. Tremblay, P., Deschamps, I., & **Dick, A. S.** (2019). Neurocognitive organization of articulatory and motor processes in speech. In M. Miozzo, G. de Zubicaray, & S. Schiller (Eds.). *Oxford handbook of neurolinguistics*. Oxford University Press.
36. Nazareth, A.\*\* , **Dick, A. S.**, Killick, R., & Pruden, S. (2018). Strategy selection versus flexibility: Using eye-trackers to investigate strategy use during mental rotation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 45, 232-245. [IF: 2.32; Cited: 2]
35. Casey, B.J., Cannonier, T., Conley, M., Cohen, A. O., Barch, D., Heitzig, M., Soules, M., Teslovich, T., Dellarco, D., Garavan, H., Orr, C., Wager, T., Banich, M., Speer, N., Sutherland, M., Riedel, M. C., **Dick, A. S.**, Bjork, J., Burgess, G. C., Thomas, K. M., Charaani, B., Mejia, M. H., Hagler, D., Scat, C. S., Harms, M., Dosenbach, N., Earl, E., Bartsch, H., Watts, R., Polimeni, J., Kuperman, J., Fair, D., & Dale, A. and the ABCD Imaging Acquisition Workgroup (2018). The Adolescent Brain Cognitive Development (ABCD) study: Functional imaging acquisition across sites. *Developmental Cognitive Neuroscience*, 32, 43-54. [IF: 2.39; Cited: 56]
34. Nomi, J.S., Schettini, E., Broce, I.\*\* , **Dick, A. S.**, Uddin, L. Q. (2018). Structural connections of functionally-defined human insular subdivisions. *Cerebral Cortex*, 28, 3445-3456. [IF: 6.31; Cited: 11]
33. **Dick, A. S.**, & Tremblay, P. (2018). Broca and Wernicke are dead: The new neurobiology of language. *Psychology Review*, 23, 18-21.
32. **Dick, A. S.** (2018). The ontogenesis of neural networks from a network science perspective. In A. S. Dick & U. Müller (Eds.) *Advancing developmental science: Philosophy, theory, and method* (pp. 65-78). New York and London: Routledge, Taylor and Francis Group.
31. **Dick, A. S.**, & Müller, U. (2018). Introduction: Advancing developmental science: Philosophy, theory, and Method. In A. S. Dick & U. Müller (Eds.) *Advancing developmental science: Philosophy, theory, and method* (pp. 1-12). New York and London: Routledge, Taylor and Francis Group.
30. Tremblay, P. & **Dick, A.S.** (2017) Language and the brain: what we have learned from 30 years of brain imaging. *Contact Magazine, the official newsletter of the Teachers of English as a Second Language of Ontario*, 43, 30-36.
29. Vias, C.\*\* , & **Dick, A. S.**, (2017). Cerebellar contributions to language development: A review. *Developmental Neuropsychology*, 42, 404-421. [IF: 2.33; Cited: 10]
28. Tremblay, P., & **Dick, A. S.** (2016). Broca and Wernicke are dead: Or, moving past the Classic Model of language neurobiology. *Brain and Language*, 162, 60-71. [IF: 2.85; Cited: 90]
27. **Dick, A. S.**, & \*\*Broce, I. (2016). The neurobiology of gesture and its development. In G. Hickok and S. L. Small (Eds.) *Neurobiology of language* (pp. 389-398). San Diego, CA: Elsevier. [Cited: 1]
26. **Dick, A. S.**, & Small, S. L. (2015). Structural and functional components of brain networks for language. In A. Toga (Ed.) *Brain mapping: An encyclopedic reference* (pp. 653-659). San Diego, CA: Elsevier. [Cited: 1]
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25. Broce, I.\*\*, Bernal, B., Altman, N., Tremblay, P., & **Dick, A. S.** (2015). Fiber tracking of the frontal aslant tract and subcomponents of the arcuate fasciculus in 5-8-year-olds. *Brain and Language*, 149, 66-76. [IF: 2.85; Cited: 27]
24. Riedel, M., Ray, K. L., **Dick, A. S.**, Sutherland, M. T., Hernandez, Z., Fox, P. M., Eickhoff, S. B., Fox, P. T., & Laird, A. R. (2015). Meta-analytic connectivity and behavioral parcellation of the human cerebellum. *NeuroImage*, 117, 327-342. [IF: 5.43; Cited: 35]
23. Hasson, U., Llano, D., Miceli, G., & **Dick, A. S.** (2015). Does it talk the talk? On the role of basal ganglia in emotive speech processing (Commentary). *Behavioral and Brain Sciences*, 37, 556-557. [IF: 15.07; Cited: 2]
22. **Dick, A. S.**, Bernal, B., & Tremblay, P. (2014). The language connectome: New pathways, new concepts. *The Neuroscientist*, 20, 453-467. [IF: 6.84; Cited: 123]
21. **Dick, A. S.** (2014). The development of cognitive flexibility beyond the preschool period: An investigation using a modified Flexible Item Selection Task (FIST). *Journal of Experimental Child Psychology*, 125, 13-34. [IF: 2.42; Cited: 26]
20. **Dick, A. S.**, Mok, E., Raja Beharelle, A., Goldin-Meadow, S., & Small, S. L. (2014). Frontal and temporal contributions to understanding the iconic co-speech gestures that accompany speech. *Human Brain Mapping*, 35, 900-917. doi: 10.1002/hbm.22222. [IF: 4.93; Cited: 47]
19. Garcia, C.\*, & **Dick, A. S.** (2013). Stuck in the moment: Cognitive inflexibility in preschoolers following an extended time period. *Frontiers in Psychology: Developmental Psychology*, 4:959. doi: 10.3389/fpsyg.2013.00959 [IF: 2.09; Cited: 4]
18. Tremblay, P., **Dick, A. S.**, & Small, S. L. (2013). Functional and structural aging of the speech sensorimotor neural system: fMRI evidence. *Neurobiology of Aging*, 34, 1935-1951. [IF: 5.15; Cited: 23]
17. **Dick, A. S.**, & Andric, M. (2013). The neurobiology of receptive-expressive language interdependence (Commentary). *Behavioral and Brain Sciences*, 36, 352-353. [IF: 15.07; Cited: 1]
16. **Dick, A. S.**, Raja Beharelle, A., Solodkin, A., & Small, S. (2013). Interhemispheric functional connectivity following pre- or perinatal brain injury predicts receptive language outcome. *The Journal of Neuroscience*, 33, 5612-25. [IF: 5.97; Cited: 20]
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Nominated for F1000Prime: Vitali P and Caverzasi E: F1000Prime Recommendation of [Dick AS and Tremblay P, Brain 2012, 135(Pt 12):3529-50]. In F1000Prime, 18 Feb 2013; DOI: 10.3410/f.717977252.793470799. F1000Prime.com/717977252#eval793470799
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10. **Dick, A. S.**, Solodkin, A., & Small, S. L. (2010). Neural development of networks for audiovisual speech comprehension. *Brain and Language: Special Issue on Language Development*, 114, 101-114. [IF: 2.85; Cited: 113]
9. **Dick, A. S.**, & Hasson, U. (2010). Outsourcing neuroimaging data analysis: Implications for scientific accountability and issues in the public interest. *Trends in Cognitive Sciences*, 14, 2-4. [IF: 15.40; Cited: 1]
8. Raja Beharelle, A., **Dick, A. S.**, Josse, G., Solodkin, A., Huttenlocher, P. R., Levine, S. C., & Small, S. L. (2010). Left hemisphere regions are critical in supporting language function following early focal left brain injury. *Brain*, 133, 1707-1716. [IF: 10.85; Cited: 67]
7. **Dick, A. S.**, & Overton, W. F. (2010). Executive function: Description and explanation. In J. Carpendale, G. Iarocci, U. Müller, B. Sokol, & A. Young (Eds.), *Self and social regulation: Social interaction and the development of social understanding and executive functions* (pp. 7-34). New York: Oxford University Press. [Cited: 21]
6. **Dick, A. S.**, Goldin-Meadow, S., Hasson, U., Skipper, J. I., & Small, S. L. (2009). Co-speech gestures influence neural activity in brain regions associated with processing semantic information. *Human Brain Mapping*, 30, 3509-3526. [IF: 4.93; Cited: 164]
5. Overton, W. F., & **Dick, A. S.** (2007). A competence-procedural approach to logical reasoning. In M. J. Roberts (Ed.), *Integrating the mind* (pp. 233-256). Hove, UK: Psychology Press. [Cited: 19]
4. Müller, U., **Dick, A. S.**, Gela, K., Overton, W. F., & Zelazo, P. D. (2006). The role of negative priming in preschoolers' flexible rule use on the Dimensional Change Card Sort Task. *Child Development*, 77, 395-412. [IF: 3.78; Cited: 117]
3. **Dick, A. S.**, Overton, W. F., & Kovacs, S. L. (2005). The development of symbolic coordination: Representation of imagined objects, executive function, and theory of mind. *Journal of Cognition and Development*, 6, 133-161. [IF: 1.87; Cited: 52]
2. Weisberg, R. W., Brinkman, A. R., **Dick, A. S.**, Fleck, J. I., Niederberger, B., Folio, C. J., & Barrett, F. (2004). A quantitative analysis of musical creativity: Improvisation in jazz. *Revista di Analisi e Teoria Musicale*, 2, 35-57. [Cited: 3]
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## FUNDED RESEARCH

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### Active Grants

Title/Funding Agency/Grant Number	Role	Amount	Dates
Anthony Dick, Ph.D.: 2020-03-22	6		

NSF RAPID 2028680: Impact of the COVID-19 Pandemic On Child Development in the ABCD Cohort.	Co-I	\$200,000.00	4/6/2020-4/5/2021
Tapert, Susan (PI) and <b>Dick, A. S.</b> (Co-I)			
2U01DA041156 <i>ABCD-USA Consortium: Research project site at FIU.</i> Gonzalez, R., & Laird, A. (Co-PIs); <b>Dick, A.S.</b> , Sutherland, M. (Co-Is)	Co-I	\$13,940,663	4/15/2020-3/31/2027
<i>Administrative Supplement to R01MH11258 Biosignatures of executive function and emotion regulation in young children with ADHD.</i> Öztekin, I., Graziano, P., & <b>Dick, A.S.</b> (Co-PIs)	Co-PI	\$147,500	9/1/2019-8/31/2020
R01HD098152 <i>Individual Differences in the Development of Spatial Skills: Role of Hippocampal Function and Structure.</i> Pruden, S., and Reeb-Sutherland, B. (Co-PIs); Mattfeld, A., <b>Dick, A.S.</b> , Hayes, T., (Co-Is), Newcombe, N., Shusterman, A. (Consultants) National Institute for Child Health and Development (NICHD)	Co-I	\$1,975,458	8/1/2019-7/31/2023
R01DK119814 <i>Early childhood behavioral and neurobiological profiles in the prediction of obesity: The role of self-regulation and the caregiving environment.</i> Graziano, P., and <b>Dick, A. S.</b> (Co-PIs); Coccia, C., and Coxe, S. (Co-Is) National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	Co-PI	\$2,735,305	9/1/2018 – 8/30/2023
NSF BCS1805645: RAPID: <i>Leveraging the ABCD study to examine the effects of Hurricane Irma exposure: The Disaster and Youth, Neural, and Affective Maturation in Context (DYNAMIC) Study.</i> <b>Dick, A. S.</b> & Comer, J. (Co-PIs), & Gonzalez, R., A. Laird, M. Sutherland, S. Coxe (Co-Is) National Science Foundation	Co-PI	\$180,000	1/15/18 – 8/31/2019
R01MH112588 <i>Biosignatures of executive function and emotion regulation in young children with ADHD.</i> Graziano, P. A. and <b>Dick, A. S.</b> (Co-PIs); Pelham, W., Laird, A., Musser, E., and Coxe, S. (Co-Is) National Institute of Mental Health (NIMH)	Co-PI	\$2,626,213	9/1/2017-8/31/2021

### **Inactive Grants**



Title/Funding Agency/Grant Number	Role	Amount	Dates
1U01DA041156 <i>ABCD-FIU: Pathways and mechanisms to addiction in Latino youth of South Florida.</i> Gonzalez, R., & Laird, A. (Co-PIs); <b>Dick, A.S.</b> , Sutherland, M. (Co-Is)	Co-I	\$12,689,357	9/1/2015-8/31/2020
NSF BCS1805645: <i>RAPID: Leveraging the ABCD study to examine the effects of Hurricane Irma exposure: The Disaster and Youth, Neural, and Affective Maturation in Context (DYNAMIC) Study.</i> <b>Dick, A. S.</b> & Comer, J. (Co-PIs), & Gonzalez, R., A. Laird, M. Sutherland, S. Coxe (Co-Is) National Science Foundation	Co-PI	\$180,000	1/15/18 – 8/31/2019
R000 <i>The teenage brain at the transition to high school.</i> Sibley, M., Graziano, P. A., & <b>Dick, A. S.</b> (Co-PIs) Private Philanthropic Donation	Co-PI	\$100,000	2017
R56MH108616 <i>Biosignatures of executive function and emotion regulation in young children with ADHD.</i> Graziano, P. A. and <b>Dick, A. S.</b> (Co-PIs); Pelham, W., Laird, A., Musser, E., and Coxe, S. (Co-Is) National Institute of Mental Health (NIMH)	Co-PI	\$713,466	9/1/2016-8/31/2017
R000 <i>My mind and my money.</i> Parra, C., Sutherland, M., <b>Dick, A. S.</b> , & Laird, A. (Co-PIs) Catalyst Miami Foundation	Co-PI	\$50,000	2015-2017
Center for Children and Families (CCF) Intramural Research Award <b>Dick, A. S.</b> (PI)	PI	\$5,000	2015
<i>Functional and structural brain aging and its effect on speech production</i> (5886) Tremblay, P. (PI); <b>Dick, A. S.</b> (Co-I) Québec Bioimaging Network	Co-I	\$12,500	2014
College of Arts and Sciences Competitive Summer Faculty Development Award <b>Dick, A. S.</b> (PI)	PI	\$7,500	2011
F32DC008909 <i>Effects of early lesion on language and gesture comprehension: An fMRI study.</i> <b>Dick, A. S.</b> (PI) National Institute on Deafness and Other Communicative Disorders (NIDCD) Ruth L. Kirschstein National Research Service Award for Individual Postdoctoral Fellows (NRSA)	PI	\$147,750	2007-2010

Anthony Dick, Ph.D.: 2020-03-22

## Submitted Grants

Title/Funding Agency/Grant Number	Role	Amount	Dates
U54 MD012393 (PIs: Wagner, Sutherland, Trucco); Supplement to Sub-Project 5378. <i>Antecedents and consequences of electronic nicotine delivery systems in underrepresented youth: COVID-19 response</i>	Co-I	\$183,027.00	7/1/2020-6/30/2021

## Unfunded Grants (Recent)

Title/Funding Agency/Grant Number	Role	Amount	Dates
R21MH122797 <i>Leveraging the ABCD and AHEAD studies to define bio-signatures of ADHD in pre-K and elementary school children.</i> Öztekin, I. and <b>Dick, A.S.</b> (Co-PIs), Graziano, P., and Finlayson, M. (Co-Is) National Institute of Mental Health (NIMH)	Co-PI	\$405,625	9/1/2020-8/31/2022
R01DC12408559 <i>Individual differences in auditory and language brain networks in children who are hard of hearing: Associations with cumulative auditory experience.</i> Tomblin, B. and <b>Dick, A. S.</b> (Co-PIs); Joanna Lee, Elizabeth Walker, Kristi Hendrickson, Inyong Choi (Co-Is) National Institute for Deafness and Other Communication Disorders (NIDCD)	Co-PI	\$3,662,955	9/1/2019-8/31/2024
<i>Working memory development at the behavioral and neural levels: Growth of capacity or growth of control?</i> Öztekin, I. and <b>Dick, A.S.</b> (Co-PIs) National Science Foundation	Co-PI	\$736,891	9/1/19-8/31/23

## PRESENTED PAPERS AND LECTURES

### Invited Lectures

27. **Dick, A. S.** (2020). Two centuries after arcuate fasciculus—consensus and controversies in language networks. The National Hospital for Neurology and Neurosurgery Queen Square, London, UK.

26. **Dick, A. S.** (2020). The death of Broca and Wernicke territories? Fourth Annual Course in White Matter Surgery and Brain Mapping. The National Hospital for Neurology and Neurosurgery Queen Square, London, UK.

25. **Dick, A. S.** (2018). Puzzling out the structural connectome across development. University of Iowa, Iowa City, IA.

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24. **Dick, A. S.** (2017). The structural connectome supporting language and its development. University of Iowa, Iowa City, IA.
  23. **Dick, A. S.** (2017). Developmental cognitive neuroscience. National Science Foundation, Washington, DC.
  22. **Dick, A. S.** (2016). Broca and Wernicke are dead. Florida Atlantic University Conference on Psycholinguistics.
  21. **Dick, A. S.** (2016). Neuroimaging of language networks in pediatric stroke. Society for Brain Mapping and Therapeutics, Miami, FL.
  20. **Dick, A. S.** (2015). The developing brain's response to early stroke. Invited lecture at the University of Miami Department of Psychology, Miami, FL.
  19. **Dick, A. S.** (2015). Cerebellar contributions to language recovery following early pre- or perinatal stroke. Invited lecture at the Barbara Gordon Memorial Lecture and Linguistics Festival, Miami, FL.
  18. **Dick, A. S.** (2015). Neural connectivity and MRI methods: Contributions to the neurobiology of speech, language, and literacy. Invited lecture at the University of Guadalajara, Guadalajara, Mexico.
  17. **Dick, A. S.** (2014). Fiber pathways supporting developing speech, language, and literacy. Invited lecture at the Universite Laval, Quebec City, Canada.
  16. **Dick, A. S.** (2014). Neural development of speech and language in typical and atypical populations. Invited lecture at the Cincinnati Children's Hospital Medical Center, Cincinnati, OH.
  15. **Dick, A. S.** & Broce, I. (2014). Long association fiber pathways for speech and language in the developing brain. Invited lecture at the Barbara Gordon Memorial Lecture and Linguistics Festival, Miami, FL.
  14. **Dick, A. S.** (2013). Dorsal and ventral streams for language: Perspective from research on co-speech gesture. Invited lecture at the University of Trento Centre for Mind/Brain Sciences, Trento and Rovereto, Italy.
  13. **Dick, A. S.** (2013). Dorsal and ventral streams for language: Perspective from research on co-speech gesture. Invited lecture at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany.
  12. **Dick, A. S.** (2013). Replacing the Broca-Wernicke-Geschwind model: New thinking on the neurobiology of language. Invited lecture at the Florida International University Barbara Gordon Memorial Lecture in Linguistics. Florida International University, Miami, FL.
  11. **Dick, A. S.** (2012). Dorsal and ventral streams for audiovisual language. Invited lecture at the Florida Atlantic University Neuroscience Lecture Series. Florida Atlantic University, Boca Raton, FL.
  10. **Dick, A. S.** (2011). The neurobiological organization of language following early brain injury. Invited lecture at the University of Miami Department of Psychology Colloquium. University of Miami, Miami, FL.
  9. **Dick, A. S.** (2011). The neurobiological organization of language following early brain injury. Keynote address at the Florida International University/Florida Atlantic University Joint Conference on Cognition and Cognitive Development. Miami, FL.

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8. **Dick, A. S.** (2010). *Neural development of networks for audiovisual language*. Invited lecture at Florida International University Department of Psychology Colloquium. Florida International University, Miami, FL.
  7. **Dick, A. S.** (2010). *Neural development of networks for audiovisual language*. Invited lecture at Depaul University Department of Psychology Colloquium. Depaul University, Chicago, IL.
  6. **Dick, A. S.** (2010). *Neural development of networks for audiovisual language*. Invited lecture at The University of the Pacific Department of Psychology Colloquium. The University of the Pacific, Stockton, CA.
  5. **Dick, A. S.** (2010). *Neural development of networks for audiovisual language*. Invited lecture at The University of Chicago Developmental Brown Bag, The University of Chicago, Chicago, IL.
  4. **Dick, A. S.** (2010). *Basics of MRI and fMRI*. Invited lecture at the Department of Psychiatry Neuroscience Seminar, The University of Chicago, Chicago, IL.
  3. **Dick, A. S.** (2009). *MRI and fMRI: At what are we looking?* Invited lecture at the Department of Psychiatry Neuroscience Seminar, The University of Chicago, Chicago, IL.
  2. **Dick, A. S.** (2008). *Explaining cognitive inflexibility in children and adults*. Invited lecture at The University of Chicago Developmental Brown Bag, The University of Chicago, Chicago, IL.
  1. **Dick, A.S.** (2008). Database enabled visualization and analysis of neuroimaging data. Invited lecture at the Scientific and Statistical Computing Core, NIMH, Bethesda, MD (in collaboration with Uri Hasson, Michael Andric, and Steven L. Small).

#### Conference Presentations

Roles: \* Undergraduate student; \*\* Graduate student; ^ Post-Bac

86. Macchi, A., Coccia, C., Lovan, P., Coto, J., Garcia, A., **Dick, A.S.**, & Graziano G. (2019). A new strategy to assess self-regulation of food intake among elementary school children. *Journal of the Academy of Nutrition and Dietetics*, 119(9): A27. doi: <https://doi.org/10.1016/j.jand.2019.06.103>
85. Dick, A. S., Garic, D., Badran, R., Behar, D., Torres, A., Garcia, A., Hernandez, M., Borges, H., & Graziano, P. (2020, May). Data Blitz: The frontal aslant tract (FAT) is a frontal lobe white matter biosignature differentiating young children with ADHD from typical controls. Data blitz presentation presented at the virtual conference of the Cognitive Neuroscience Society.
84. Dick, A. S., Garic, D., Badran, R., Behar, D., Torres, A., Garcia, A., Hernandez, M., Borges, H., & Graziano, P. (2020, May). The frontal aslant tract (FAT) is a frontal lobe white matter biosignature differentiating young children with ADHD from typical controls. Poster presented at the virtual conference of the Cognitive Neuroscience Society.
83. Öztekin, I., Graziano, P., & Dick, A. S. (2020, May). *Microstructure in the posterior parietal cortex supports working memory function in 9-10-year-old children*. Poster presented at the virtual conference of the Cognitive Neuroscience Society.
82. Vias, C.\*\* & Dick, A. S. (2019). *Laterality of cerebellum distinguishes early stroke patients from typical brain development*. Poster presented at the 12<sup>th</sup> Meeting of the Society for the Study of Human Development, Portland, OR.

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81. Garic, D., Behar, D., Torres, A., Badran, R., Linoci, V., Borges, H., Graziano, P., & Dick, A.S., (2019, August). Frontal aslant tract structure differentially predicts executive function performance in children with and without ADHD. Poster presented at the 7<sup>th</sup> Annual Flux Congress, New York, NY.
80. Marshall, E. K., Nomi, J. S., Zaidel, E., Biswal, B., Castellanos, X., **Dick, A. S.**, Mooshagian, E., & Uddin, L. (2019, May). Extra-callosal pathways supporting interhemispheric communication after complete commissurotomy. Poster presented at the 12<sup>th</sup> Annual Meeting of the Social & Affective Neuroscience Society, Miami, FL.
79. Garic, D., Graziano, P., & **Dick, A. S.** (2019, May). Laterality of the frontal aslant tract (FAT) explains externalizing behaviors through its association with executive function. Poster presented at the 12<sup>th</sup> Annual Meeting of the Social & Affective Neuroscience Society, Miami, FL.
78. Garcia, A., Graziano, P., & **Dick, A. S.** (2019, May). Examining emotion dysregulation in young children with and without ADHD: A transdiagnostic approach. Poster presented at the 12<sup>th</sup> Annual Meeting of the Social & Affective Neuroscience Society, Miami, FL.
77. Garic, D., & **Dick, A.S.** (2019, April). Comparison of diffusion-weighted imaging density metrics: Examining neurite and axonal density *in vivo*. Poster presented at the annual Neural Engineering Research Symposium. Coral Gables, Florida.
76. Garic, D., Behar, D., Torres, A., Badran, R., Linocci, V., Borges, H., Graziano, P., & **Dick, A.S.** (2019, March). Bilateral Frontal Aslant Tract Development and its Relation to Inhibitory Control in 4- to 7-Year-Old Children. Poster presented at the Cognitive Neuroscience Society conference. San Francisco, California.
75. **Dick, A S.**, Comer, J.S., Silva, K., Gonzalez, R., Sutherland, M., Laird, A., Gurwitch, R., La Greca, A., Squeglia, L., Gray, K., Nixon, S.J., Cottler, L., & Tapert, S. (2019, March). Leveraging the ABCD study to examine the effects of Hurricane Irma exposure. Paper presented at the 2019 Biennial Meeting of the Society for Research in Child Development. Baltimore, MD.
74. **Dick, A. S.**, Garcia, N. L., Pruden, S. M., Thompson, W. K., Hawes, S. W., Sutherland, M., Riedel, M., Laird, A., & Gonzalez, R. (March, 2019). No bilingual advantage for executive function: Evidence from a large sample of children in the Adolescent Brain and Cognitive Development (ABCD) Study. Paper presented at the 2019 Biennial Meeting of the Society for Research in Child Development. Baltimore, MD.
73. **Dick, A. S.**, Comer, J., & Gonzalez, R. (2018). ABCD DYNAMIC: Hurricane Irma sub-study update. Presented at the annual meeting of the Adolescent Brain and Cognitive Development (ABCD) study, San Diego, CA.
72. Garic, D. & **Dick, A.S.** (2018, November). Neurite density patterns in the corpus callosum: Comparison of diffusion-weighted imaging density metrics. Poster presented at the International Society for Developmental Psychobiology conference. San Diego, California.
71. Sibley, M.H., **Dick, A.S.**, Graziano, P.A., & Ortiz, M. (2018, October). Clinical and Neurocognitive Profiles of Adolescents with Late-Onset ADHD Symptoms. In Sibley, M.H. "*Contemporary Issues in Diagnosing and Treating Adolescent ADHD: Stimulant Diversion, Late-Onset Symptoms, Sleep Problems, and Teenage Impulsivity.*" Paper Presented at the Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Seattle, WA.
70. **Dick, A. S.**, Garcia, N. L., Pruden, S. M., Thompson, W. K., Hawes, S. W., Sutherland, M., Riedel, M., Laird, A., & Gonzalez, R. (August, 2018). No bilingual advantage for executive function: Evidence from a

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large sample of children in the Adolescent Brain and Cognitive Development (ABCD) Study. Poster presented at the 2018 Flux Congress, Berlin, Germany.

69. Farant, K., Mattfeld, A., & **Dick, A. S.** (2018). Development of the hippocampus and its relation to episodic memory in children. Poster presented at the 2018 Flux Congress, Berlin, Germany.

68. Garic, D., Broce, I., & **Dick, A.S.** (2018, July). Bilateral differences in Frontal Aslant Tract development predicting verbal fluency: A Diffusion Tensor Imaging study. Poster presented at the International Society for the Study of Behavioural Development conference. Gold Coast, Queensland, Australia.

67. Garic, D., & **Dick, A.S.** (2018, April). Restricted Diffusion Imaging (RDI) of the human corpus callosum in children and adults: Evidence of the use of RDI as a metric of axonal packing density. Poster presented at the Statewide Graduate Student Research Symposium. Tallahassee, Florida.

66. Sutherland, M.T., Riedel, M.C., and **Dick, A.S.** (2018). Task-based neuroimaging probes of the developing brain in the ABCD study. Oral presentation delivered at the annual meeting of the *Research Society on Alcoholism*, San Diego, CA, June 16-20.

65. Marshall, E., Nomi, J. S., **Dick, A. S.**, Mooshagian, E., & Uddin, L. Q. (2018). Diffusion-weighted imaging reveals compensatory white matter reorganization after complete commissurotomy. Poster presented at the Organization for Human Brain Mapping Meeting, Singapore.

64. Dajani, D.R., Odriozola, P., Winters, M., Voorhies, W., Marcano, S., Baez, A., **Dick, A.S.**, Uddin, L.Q. (2018, June) Neural correlates of cognitive flexibility: Adapting the Flexible Item Selection Task to the fMRI environment. Poster presented at the Organization for Human Brain Mapping Meeting, Singapore.

63. Raja Beharelle, A., Asaridou, S., Siu, D., **Dick, A.S.**, Levine, S. C., Solodkin, A., McIntosh, A. R., & Small, S. L. (2018, June). Enhanced function of typical hubs supports near-normal language ability after early focal lesions. Poster presented at the Organization for Human Brain Mapping Meeting, Singapore.

62. **Dick, A. S.**, & Comer, J. (2018). Leveraging the ABCD study to examine the effects of Hurricane Irma exposure in youth: The Disaster and Youth, Neural and Affective Maturation in Context (DYNAMIC) study. Poster presented at the Conference for National Science Funding, Washington, DC.

61. Dick, A. S. (2017, October). Executive function across the lifespan. Paper presented at the 2017 Meeting of the Society for the Study of Human Development, Providence, RI.

60. **Garic, D.**, & Dick, A.S. (2018, April). Restricted Diffusion Imaging (RDI) of the human corpus callosum in children and adults: Evidence of the use of RDI as a metric of axonal packing density. Poster presented at the Statewide Graduate Student Research Symposium. Tallahassee, FL.

59. **Garic, D.**, Zetina, H., & Dick, A.S. (2017, November). Development of the Lateral Lemniscus and Its Relation to Receptive Vocabulary. Poster presented at the International Society for Developmental Psychobiology. Washington, DC.

58. **Dick, A. S.**, Garic, D.\*\* , & Zetina, H.\* (2017, September). Development of the lateral lemniscus and its relation to receptive vocabulary. Poster and Flash Presentation presented at the Flux Congress Meeting, Portland, OR.

57. Zetina, H. \*, Garic, D.\*\* , & **Dick, A. S.** (2017, April). The lateral lemniscus and its development in typical children. Poster presented at the March for Science, Miami, Florida.

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56. Broce, I., Garic, D., Mattfeld, A., & **Dick, A. S.** (2017, April). Dorsal and ventral streams supporting literacy: Connectivity of the vertical occipital fasciculus. Poster presented Society for Research in Child Development. Austin, Texas.
55. Zetina, H., Garic, D., & **Dick, A. S.** (2017, March). Diffusion-weighted imaging of the lateral lemniscus and its development in typical children. Poster presented at the Conference for Undergraduate Research. Miami, Florida.
54. Garic, D., Zetina, H., Broce, I., Graziano, P.A., & **Dick, A. S.** (2017, March). The Frontal Aslant Tract (FAT): Relation to executive function and attention in typical children. A mediation approach. Poster presented at the Cognitive Neuroscience Society conference, San Francisco, California.
53. Garic, D., Broce, I., Zetina, H., & **Dick, A. S.** (2016, September). Laterality of the Frontal Aslant Tract (FAT) and its relation to executive function in typical children. Poster presented at the Flux: The Society for Developmental Cognitive Neuroscience, St. Louis, Missouri. Also presented at Florida Psycholinguistics Meeting, Davie, Florida.
52. Garic, D., Broce, I., Zetina, H., & **Dick, A. S.** (2016, August). Development of the Frontal Aslant Tract (FAT) and its relation to executive function. Poster presented at the Society for the Neurobiology of Language, London, England.
51. Long, H. B., Panara, K., Molina, L., Williams, M., Buglo, E., Broce, I., Nomi, J. S., **Dick, A.S.**, & Uddin, L. (2016). *Sex differences in white matter tracts of the human anterior commissure: A diffusion magnetic resonance imaging study*. Poster presented at the University of Miami Undergraduate Research Symposium, Miami, FL.
50. Broce, I.\*\* , Baez, N.\* , Cabrera, L.\* , Hernandez, G.\* , & **Dick, A. S.** (2015). *Fiber pathways supporting early literacy in young children*". Poster presented at the Neurobiology of Language Conference, Chicago, IL.
49. Baez, N.\* , Broce, I.\*\* , Cabrera, L.\* , & **Dick, A. S.** (2015). *Relation of white matter microstructure to early literacy skill in young children*. Poster presented at Society for Research in Child Development, Philadelphia, PA.
48. Vias, C.\*\* , Mora, J.\* , Byron, A.\* , Morales, A.\* , **Dick, A. S.**, Solodkin, A., Small, S.L. (2015). *Cerebellar contributions to language recovery following early stroke*. Poster presented at Society for Research in Child Development, Philadelphia, PA.
47. DeFeria, A\*., Vias, C\*\*., Byron, A\*., Morales, A.\* , Medina, J.\* , **Dick., A.S.**, Solodkin, A., Small, S.L. (2013) Cerebellar Contributions to Language Recovery Following Pre- or Perinatal Stroke. Poster presented at the 22<sup>nd</sup> Annual Neuroscience Research Day at the University of Miami Leonard M. Miller School of Medicine. 12/2013
46. DeFeria, A.\* , Broce, I.J.\*\* , Iribarne, G.\* , **Dick, A.S.**, Tremblay, P., Hasson, U., Andric, M., Small, S.L. (2014) Neurobiology of Narrative Level Sentence Comprehension. Poster presented at the Florida Undergraduate Research Conference (FURC) at Florida International University. 02/2014
45. DeFeria, A.\* , Broce, I.J.\*\* , Iribarne, G.\* , **Dick, A.S.**, Tremblay, P., Hasson, U., Andric, M., Small, S.L. (2014) Neurobiology of Narrative Level Sentence Comprehension. Poster presented at the 11<sup>th</sup> Annual Advanced Research and Creativity in Honors (ARCH) Conference at Florida International University. 03/2014

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44. Vias, C.\*\* , Mora, J.\* , Byron, A.\* , Morales, A.\* , **Dick, A. S.**, Solodkin, A., Small, S.L. (2014). Cerebellar contributions to language recovery following early stroke. Poster presented at Cognitive Neuroscience Society in Boston, Massachusetts.
43. Broce, I.J\*\* , Iribarne, I.\* , Moraczewski, D.\* , Sheffield, M.\* , Bernal, B., Altman, N., **Dick., A.S.**, (2014, April) Frontal aslant fiber tract in the developing brain: A Diffusion Tensor Imaging (DTI) study. Poster presented at Cognitive Neuroscience Society in Boston, Massachusetts.
42. Bryon, A.\* , Vias, C.\*\* , **Dick, A. S.**, Solodkin, A., & Small, S.L. *Cerebellar contributions to language recovery following pre- or perinatal stroke*. Poster presented at the Florida Undergraduate Research Conference (2014, February). Miami, Florida.
41. Bryon, A.\* , Vias, C.\*\* , **Dick, A. S.**, Solodkin, A., & Small, S.L. *Cerebellar contributions to language recovery following pre- or perinatal stroke*. Poster presented at the Advanced Research and Creativity in Honors (2014, March) Miami, Florida.
40. Bryon, A.\* , **Dick, A.S.**, Solodkin, A., & Small, S.L. (2014, April). *Development of a semi-automated cerebellar atlas for use in brain imaging research*. Paper presented at the South Eastern Cell Undergraduate Research Symposium, Miami, Florida.
39. Giraldo, S., Medina, J., Maharaj, A., & **Dick, A. S.** (2013). *Evaluating sources of cognitive inflexibility in children and adults*. Poster presented at the Meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
38. ^Bradley, C., Araya, A., & **Dick, A. S.** (2013). *Development of audiovisual speech perception: An eye-tracking study in 5- to 8-year-olds*. Poster presented at the Meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
37. **Dick, A. S.**, \*\*Broce, I., ^Bradley, C., Bernal, B., \*\*Maharaj, A., & Altman, N. (2013). *Neurobiological development of audiovisual speech perception: An fMRI study in 5- to 8-year olds*. Poster to be presented at the annual meeting for the Organization for Human Brain Mapping, Seattle, WA (also presented at the SRCD meeting).
36. **Dick, A. S.**, ^Bradley, C., \*\*Broce, I., Bernal, B., \*\*Maharaj, A., & Altman, N. (2013). *Neurobiological development of audiovisual speech perception: An fMRI study in 5- to 8-year olds*. Poster presented at the biennial meeting for the Society for Research in Child Development, Seattle, WA.
35. \*Garcia, C., & **Dick, A. S.** (2013). *Influence of bilingual language dominance on resilient perseveration on the Dimensional Change Card Sort Task*. Poster presented at the biennial meeting for the Society for Research in Child Development, Seattle, WA.
34. \*Diaz, A., \*\*Mannino, M., \*Garcia-Iñiguez, \*Williams, M., \*Geisler, E., Hermanson, S., & **Dick, A. S.** (2013). *Development of eye morphology relevant to gaze-cuing in the human infant*. Poster presented at the biennial meeting for the Society for Research in Child Development, Seattle, WA.
33. \*Medina, J., \*\*Maharaj, A., \*Geisler, E., \*Giraldo, S., ^Bradley, C., \*Paz, M., & **Dick, A. S.** (2013). *Evaluating sources of cognitive inflexibility in children and adults*. Poster presented at the biennial meeting for the Society for Research in Child Development, Seattle, WA.
32. ^Bradley, C., & **Dick, A. S.** (2013). *Individual and developmental differences in audiovisual speech perception: An eye-tracking study*. Poster presented at the biennial meeting for the Society for Research in Child Development, Seattle, WA.



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31. **Dick, A. S.**, ^Bradley, C., \*\*Broce, I., Bernal, B., \*Junco, B., \*\*Maharaj, A., & Altman, N. (2012). *Individual and developmental differences in audiovisual speech perception: An eye-tracking and fMRI study*. Paper presented at the Conference for the Society for the Neurobiology of Language, San Sebastian, Spain.
30. \*\*Broce, I., **Dick, A. S.**, Tremblay, P., Hasson, U., Andric, M., & Small, S. L. (2012). *The neurobiology of sentence comprehension in a narrative context*. Poster presented at the Conference for the Society for the Neurobiology of Language, San Sebastian, Spain.
29. Tremblay, P., **Dick, A. S.**, & Small, S. L. (2012). *Are neuroanatomical changes driving neurophysiological changes in the speech sensorimotor neural system in aging?* An fMRI study. Poster presented at the Conference for the Society for the Neurobiology of Language, San Sebastian, Spain.
28. ^Bradley, C.A., **Dick, A.S.**, & Pruden, S.M. (2012) *Defining area of interest (AOI): Impact on eye-tracking results*. Paper presented at the 5<sup>th</sup> International EyeTrackKids Conference, Minneapolis, MN.
27. ^Bradley, C. A., \*\*Name, A., \*Delgado, N. T., Pruden, S. M., & **Dick, A. S.** (2012). *Establishing a sampling rate exclusion criterion for eye-tracking research*. Poster presented at the EyeTrack Kids Symposium at the International Conference on Infant Studies, Minneapolis, MN.
26. **Dick, A. S.**, & Wright, D. B. (2012). *There's a chance you're miscalculating chance: On the calculation of chance performance in developmental research*. Paper presented at the Society for Research in Child Development Developmental Methodology Themed Meeting, Tampa, FL.
25. ^Bradley, C. A., \*Junco, B., & **Dick, A. S.** (2012). *Visual speech influence on category boundary shifts in auditory speech perception*. Poster presented at the Southeast Psychological Association Conference, New Orleans, LA.
24. \*Junco, B., ^Bradley, C. A., & **Dick, A. S.** (2012). *Visual speech influence on category boundary shifts in auditory speech perception: An eye tracking study*. Poster presented at the Southeast Psychological Association Conference, New Orleans, LA.
23. Tremblay, P., ^Buchholz, B., **Dick, A. S.**, & Small, S. L. (2011). *Do elderly hear with their premotor cortices?* Poster presented at the Meeting of the Organization for Human Brain Mapping, Quebec City, QB.
22. Tremblay, P., **Dick, A. S.**, ^Buchholz, B., & Small, S. L. (2011). *Age-related changes in the role of the motor system in the perception and production of speech*. Paper presented at the International Seminar on Speech Production, Montreal, QB.
21. **Dick, A. S.**, Goldin-Meadow, S., Solodkin, A., & Small, S. L. (2011). *Gesture in the developing brain*. Poster presented at the Society for Research in Child Development, Montreal, QB.
20. **Dick, A. S.**, Raja Beharelle, A., Levine, S. C., Solodkin, A., & Small, S. L. (2011). *Interhemispheric functional connectivity following pre- or perinatal brain injury predicts language outcome*. Poster presented at the Society for Research in Child Development, Montreal, QB (this poster was also presented at the Neurobiology of Language and Society for Neuroscience Conferences, San Diego, 2010).
19. Mok, E. H., **Dick, A. S.**, Raja Beharelle, A., Zinchenko, E., Demir, O. E., & Small, S. L. (2010). *Neural processing of co-speech iconic gestures*. Poster presented at the Neurobiology of Language Conference, San Diego, CA

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18. **Dick, A. S.**, Solodkin, A., & Small, S. L. (2010). *Developmental differences in network interactions for speech and gesture*. Poster presented at the Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
17. **Dick, A. S.**, Solodkin, A., & Small, S. L. (October, 2009). *Neural development of networks for audiovisual speech comprehension*. Poster presented at the Neurobiology of Language Conference, Chicago, IL. (this poster was also presented at the Society for Neuroscience Conference, 2009)
16. **Dick, A. S.**, Solodkin, A., & Small, S. L. (October, 2009). *Neural development of networks for audiovisual speech comprehension*. Poster presented at the Conference of the Society for Neuroscience, Chicago, IL.
15. Raja, A. C., **Dick, A. S.**, Huttenlocher, P. R., Levine, S. C., Small, S. L. (April, 2009). *Regional functional plasticity in children with early left hemisphere lesions*. Paper presented at the Meeting of the Society for Research in Child Development, Denver, CO.
14. **Dick, A. S.** (August, 2008). *Further evidence for negative priming in dimensional shifting tasks*. Poster presented at the Development of Executive Functions workshop, Oxford, UK. (some of the data were also presented at the APS meeting, May 2008)
13. **Dick, A. S.** (August, 2008). *Development of cognitive flexibility beyond the preschool period*. Poster presented at the Development of Executive Functions workshop, Oxford, UK. (some of the data were also presented at the SRCD meeting, March 2007)
12. **Dick, A. S.** (May, 2008). *Sources of cognitive inflexibility in children and adults*. Poster presented at the Meeting of the Association for Psychological Science, Chicago, IL.
11. **Dick, A. S.**, & Small, S. L. (April, 2008). *Developmental differences in the functional organization of auditory and audiovisual discourse networks*. Poster presented at the Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
10. **Dick, A. S.**, Levine, S. C., Goldin-Meadow, S., Huttenlocher, P., & Small, S. L. (June, 2007). *Expressive and receptive language in people with early brain injury*. Poster presented at the Meeting of the Organization for Human Brain Mapping, Chicago, IL.
9. **Dick, A. S.**, & Overton, W. F. (March, 2007). *The development of cognitive flexibility beyond the preschool period*. Poster presented at the Meeting of the Society for Research in Child Development, Boston, MA.
8. **Dick, A. S.**, Skipper, J. I., Levine, S. C., Goldin-Meadow, S., Huttenlocher, P., & Small, S. L. (October, 2006). *Language and gesture processing in people with early brain lesions and their siblings: An fMRI study*. Paper presented at the Meeting of the Society for Neuroscience, Atlanta, GA.
7. **Dick, A. S.**, & Small, S. L. (September, 2006). *Language and gesture processing in children and adults: An fMRI study*. Poster presented at the University of Chicago Neuroscience Retreat, New Buffalo, MI.
6. Josse, G., Skipper, J. I., **Dick, A. S.**, Goldin-Meadow, S., & Small, S. (June, 2006). *How is discourse processing affected by speech-associated gesture? Evidence from fMRI*. Poster presented at the Conference on Human Brain Mapping, Florence, Italy.
5. Anderson, W. D., **Dick, A. S.**, & Overton, W. F. (June, 2006). *An investigation of sex differences in emotion based decision making*. Poster presented at the meeting of the Jean Piaget Society, Baltimore, MD.

4. **Dick, A. S.**, & Overton, W. F. (October, 2005). *Perseveration following a temporal delay in the Dimensional Change Card Sort*. Poster presented at the meeting of the Cognitive Development Society, San Diego, CA.
3. **Dick, A. S.**, Müller, U., Ringrose, A., & Overton, W. F. (June, 2005). *Determinants of perseveration in the Dimensional Change Card Sort*. Poster presented at the meeting of the Jean Piaget Society, Vancouver, CA.
2. **Dick, A. S.**, Müller, U., Overton, W. F. (October, 2003). *Further support for negative priming in the Dimensional Change Card Sort*. Poster presented at the meeting of the Cognitive Development Society, Park City, UT.
1. **Dick, A. S.**, Overton, W. F., & Kovacs, S. L. (April, 2003). *Using representations: Children's coordination of symbols in theory of mind, executive function, and representation of imagined objects*. Poster presented at the biennial meeting of the SRCD, Tampa, FL.

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## PROFESSIONAL HONORS, PRIZES, AND FELLOWSHIPS

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FIU Top Scholar for Research and Creative Activities	2017; 2019
College of Arts, Science, and Education Award for Research	2018
College of Arts and Sciences Competitive Summer Faculty Development Award 2011 (Total award: \$7,500)	2011
National Institute on Deafness and Other Communicative Disorders (NIH/NIDCD) Ruth L. Kirschstein National Research Service Award for Individual Postdoctoral Fellows (NRSA) <b>F32 DC008909: Effects of early lesion on language and gesture comprehension: An fMRI study.</b> (9/1/2007-8/31/2010; Total Award: \$147,750).	2007-2010
Certificate of Merit in Teaching, Temple University	2004; 2005

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## OFFICES HELD IN PROFESSIONAL SOCIETIES

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### Steering Committee

Society for the Study of Human Development (2012-present)

### Webmaster

Society for the Study of Human Development (2014-present)

### Local Organizing Committee

Society for the Study of Human Development (2013 meeting: Chair)

Academy of Aphasia (2014 meeting; Chair)

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## OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

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### Undergraduate Teaching

#### Florida International University

*Neuropsychology* (PSB 4240; Web Assisted): Spr 2019 (online); Spr 2016 (online); Sum 2015; Spr 2015; Fall 2014; Sum 2014 (online); Spr 2014; Fall 2013; Sum 2013; Spr 2013; Fall 2012; Sum 2012; Spr 2012; Spr 2011; Fall 2011

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*Directed Readings* (PSY 4900): Spr 2013  
*Independent Research* (PSY 4916): Fall 2010 – Spr 2019

Temple University (Graduate Instructor of Record)

*Inferential Methods in Psychology*: Fall 2003; Spr 2004; Sum 2004; Fall 2004; Sum 2005

*Research Methods in Psychology*: Sum 2002; Sum 2005; Fall 2005

*Introduction to Developmental Psychology*: Sum 2001; Sum 2005

### **Graduate Teaching (Florida International University)**

*Human Neuroanatomy* (PSB 6215; Web Assisted): Fall 2017; Fall 2015

*Cognitive Neuroscience* (EXP 5667; Web Assisted): Spr 2020; Fall 2017; Spr 2015; Spr 2013; Fall 2010

*Developmental Research Methods* (DEP 5796; Web Assisted): Spr 2014; Spr 2012

*History and Systems* (PSY 5605; Web Assisted): Fall 2019

Student Supervision and Advising

### **Postdoctoral Fellow Supervision**

Ilke Gillam (2018-present)

### **Graduate Student Supervision as Major Advisor**

Nisha Brijmohan (PhD program; Fall 2020-)

Iris Broce (PhD program; Fall 2011-Fall 2016)

Carolina Vias (PhD program; Fall 2014-)

Michael Mannino (terminal MA; Fall 2012 transferred)

Dea Garic (PhD program; Fall 2015-)

Kristafor Farrant (PhD Program; Fall 2016-)

Alexandra Lutz (PhD Program; Fall 2017-)

### **Graduate Student Supervision as Collaborator**

André Maharaj (PhD program; Graduated 2014)

### **Masters Thesis Committees**

Chair

Dea Garic (Developmental Science)

Iris Broce (Developmental Science)

Carolina Vias (Cognitive Neuroscience)

Kristafor Farrant (Cognitive Neuroscience)

Alexandra Lutz (Cognitive Neuroscience)

Committee Member

Nelcida Garcia (Developmental Science)

Puck Reeder (Cognitive Neuroscience)

Brianna Pankey (Cognitive Neuroscience)

Chris Clifford (Developmental Science)

Jessica Flannery (Cognitive Neuroscience)

Josh Herrington (Developmental Science)

Shwetha Shrikanth (Developmental Science)

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Brittany Yusko (Developmental Science)  
Elaine Espanola (Developmental Science)  
Carla Abad (Developmental Science)  
Vanessa Vieites (Developmental Science)

### **Dissertation Committees**

#### Chair

Nisha Brijmohan (Cognitive Neuroscience)  
Carolina Vias (Cognitive Neuroscience)  
Iris Broce (Developmental Science) “Brain networks supporting literacy development”  
Dea Garic (Developmental Science)

#### Committee Member

Jason Hays (Cognitive Neuroscience)  
Patricio Viera Perez (Cognitive Neuroscience)  
Nelcida Garcia (Developmental Science)  
Puck Reenders (Cognitive Neuroscience)  
Labiba Jahan (Computing and Information Sciences)  
Joshua Eisenberg (Computing and Information Sciences)  
Dina Dajani (University of Miami, Psychology)  
Gregory Maloney (Finance)  
Vanessa Vietes (Developmental Science)  
Andres Peña (Biomedical Engineering)  
Paloma Rodriguez (Pedraza) (Developmental Science)  
Josh Herrington (Developmental Science)  
Fernando Patterson (Finance)  
Nametha Raju (Developmental Science)  
Alina Nazareth (Developmental Science)

#### Undergraduate Student Supervision

### **McNair Scholar Mentees**

Alexarae Bryon (2014-2015)  
Jessica Medina (2013-2014)

### **Honors Thesis Committees**

Dany Alvarez (2018)  
Heidy Zetina (2016)  
Asiel Herrera (2012)  
Gretter Hernandez (2015)

### **Volunteer Mentees (Undergraduate)**

Daniel Sola  
Alexis Rodriguez  
Fabrizio Chavez  
Rina Badran

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Diana Behar  
Valentina Linoci  
Hector Borges  
Armando Torres  
Heidy Zetina  
Jervon Wright  
Diego Torres  
Sophia Tchir  
Ania Suros  
Jefferson Salan  
Dany Noguera  
Jairo Munoz  
Thandi Lyew  
German Lopez  
Judy Lobo  
Matteo Grudny  
Sophia Ramirez  
Ellie Cabrera  
Dustin Moraczewski  
Juan Correa  
Malgorzata Bielecka  
Luis Villena  
Luis Cabrera  
Jairo Munoz  
Alexarae Bryon  
Arnaldo Morales  
Andrea Cuadro  
Cynthia Goldberg  
Gretter Hernandez  
Natalie Baez  
Abby Araya  
Amy Diaz  
Anna De Fera  
Riyaad Secharan  
Natalie Gonzalez  
Phillip Agres  
Carolina Garcia  
Barbara Junco  
Jessica Mora  
Jessica Medina  
Jessica Garcia-Iñiguez  
Emily Geisler  
Stefany Giraldo  
Gonzalo Iribarne  
Mark Sheffield  
Nadia Myrthil  
Melanie Williams

#### **Volunteer Mentees (High School)**

Sophia Lehrman  
Kevin Roman  
Yaretson Camenate

Anthony Dick, Ph.D.: 2020-03-22

## **Student Awards**

Iris Broce, MA. *Dissertation Year Fellowship, 2015*

Iris Broce, MA. *Best Thesis, Psychology, 2014*

Yaretson Camenate *Best Presentation FIU Summer Research Internship Program*

## **Graduate Student Placements**

Dea Garic (Postdoctoral Fellow, UNC Carolina Institute for Developmental Disabilities; 2020-present)

Iris Broce (Postdoctoral Fellow, University of California at San Francisco; 2016-2020; Postdoctoral Scholar, University of California at San Diego, 2020-present)

## **Notable Undergraduate Student Placements**

Anna De Fera (New York Institute of Technology College of Osteopathic Medicine at Arkansas State University)

Dustin Moraczewski (Fall 2014, PhD Program Psychology University of Maryland; PhD 2019)

Barbara Junco (Fall 2012 Masters Program Birkbeck College University of London, Advisor: Dr. Fred Dick)

Melanie Williams (NIH Postbacc Intramural Research Training Award, Advisor: Dr. William Freed)

Abby Araya (Nova Southeastern Counseling Psychology; Fall 2014)

Amy Diaz (Carlos Abiza University PsyD Program; Fall 2015)

Philip Agres (University of Texas at Dallas, PhD Program; Fall 2015)

## **Post-graduate Student Supervision**

Andrea Bejarano (Lab Coordinator; 2019-present)

Catherine Bradley (Lab Coordinator; 2011-2013): University of Florida Speech Pathology Program, 2013-2015; Licensed Speech Pathologist US Department of Veterans Affairs

## Professional Service

### **Ad-hoc Journal Reviewer**

*Behavioral Neurology; Behavioral and Brain Functions; Brain; Brain and Language; Brain Research; Brain Structure and Function; Brain Topography; Cerebral Cortex; Child Development; Cognition; Cognitive, Affective, and Behavioral Neuroscience; Cognitive Neuropsychology; Developmental Psychology; Developmental Science; Developmental Psychobiology; Frontiers in Neuroscience; Hippocampus; Human Brain Mapping; Infancy; Journal of Abnormal Child Psychology; Journal of Cognition and Development; Journal of Cognitive Neuroscience; Journal of Experimental Child Psychology; Journal of Speech, Language, and Hearing Research; Nature Communications; Neuropsychologia; Psychological Bulletin; Wiley Interdisciplinary Reviews: Cognitive Science; Scientific Reports*

### **Panel Grant Reviewer**

National Science Foundation

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## **Ad-hoc Grant Reviewer**

National Science Foundation  
Human Brain Project, European Union  
Medical Research Council, United Kingdom

## **Editorial Service**

Guest Editor, "Bilingualism and Executive Function" Special Issue, *Neurobiology of Language*  
Consulting Editor, *Developmental Psychology*, 2017  
Review Editorial Board, *Frontiers in Brain Imaging Methods*, 2012-2016

## **Conference Reviewer**

*The Cognitive Development Society*  
*The Society for the Neurobiology of Language*  
*The Society for Research in Child Development*  
*The Society for the Study of Human Development*

## **Student Representative**

*The Jean Piaget Society (2002)*

## **Department, College, and University Service**

### Service to Department (Florida International University)

Founding Director, Cognitive Neuroscience Program (2014-present)  
Director, Developmental Science Program (2012-2014)  
Cognitive Neuroscience Program Committee (2014-present)  
Developmental Science Program Committee (2010-present)  
Member, Personnel Practices Committee (2018-present)  
Member, Department Strategic Planning Committee (2011-present)  
Chair, Cognitive Neuroscience Hiring Committee (2017; 2018; 2019)  
Member, Developmental Methods Hiring Committee (2012)  
Member, Cognitive Neuroscience Hiring Committee (2012; 2014)  
SACS reviewer (2011; 2012)  
Conference Co-Organizer, South Florida Child Psychology Research Conference, 2014; 2015

### Service to College and University (Florida International University)

Co-Chair, Cognitive Neuroscience PhD Committee (2019-present)  
Chair, Cognitive Neuroscience Committee (2011-2016)  
Founding Director, Graduate Certificate in Cognitive Neuroscience (2012-present)  
Organizer, Lectures in Cognitive Neuroscience (2011-2016)  
CASE Steering Committee (2019-present)  
CASE Postdoctoral Fellow Review Committee (2020)

### Professional Memberships

*Cognitive Neuroscience Imaging Center (FIU; 2014-2016)*  
*Center for Children and Families (FIU; 2012-present)*  
*Institute for Child Health and Development (FIU; 2010-2012)*  
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*Flux Congress*  
*The Society for Research in Child Development*  
*The Society for the Study of Human Development*  
*The Academy of Aphasia*  
*The Society for the Neurobiology of Language*  
*The Society for Neuroscience*  
*The Cognitive Development Society*  
*The Jean Piaget Society*

## REFERENCES

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1. Dr. Steven L. Small, Ph.D., M.D.  
Department of Neurology  
University of California, Irvine  
200 S. Manchester Ave (Suite 206)  
Email: [small@uci.edu](mailto:small@uci.edu)
2. Dr. Willis F. Overton, Ph.D.  
Department of Psychology  
Temple University  
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Philadelphia, PA 19122  
Email: [overton@temple.edu](mailto:overton@temple.edu)
3. Dr. Nora Newcombe, Ph.D.  
Department of Psychology  
Temple University  
1701 N. 13<sup>th</sup> Street  
Philadelphia, PA 19122  
(215) 204-6944  
Email: [newcombe@temple.edu](mailto:newcombe@temple.edu)
4. Dr. Susan Goldin-Meadow, Ph.D.  
Department of Psychology  
University of Chicago  
5848 South University Ave.  
Chicago, IL 60637  
Email: [sgm@uchicago.edu](mailto:sgm@uchicago.edu)

## GEORGE A. BUZZELL

### *Curriculum Vitae*

Florida International University, Miami, FL  
email: gbuzzell@fiu.edu; phone: (703) 851-5843

#### Academic Positions

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- |              |   |
|--------------|---|
| 2020-present | Assistant Professor, Department of Psychology, Florida International University, Miami, FL  |
| 2016-2020    | Postdoctoral Fellow, Department of Human Development and Quantitative Methodology, University of Maryland, College Park, MD<br>PI: Nathan A. Fox, PhD |

#### Education

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- |          |  |
|----------|--|
| May 2016 | <i>PhD, Psychology: Cognitive and Behavioral Neuroscience</i><br>George Mason University (Advisor: Craig. G. McDonald)<br>Dissertation: "My own worst enemy: monitoring for errors or processing feedback can lead to impaired performance when inter-trial-intervals are short" |
| May 2011 | <i>Bachelor of Science in Psychology with Honors</i><br>George Mason University<br>Thesis: "Electrophysiological indices of conflict in an auditory spatial Stroop task"   |

#### Grants

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##### Active

- |           |   |
|-----------|---|
| 2020-2022 | <i>Brain &amp; Behavior Research Foundation, \$70,000</i><br>NARSAD Young Investigator Grant: A neural mechanism underlying the emergence of social anxiety during the adolescent period<br>Role: <b>Principal Investigator</b> |
| 2018-2020 | <i>Bill and Melinda Gates Foundation, \$80,000</i><br>Optimizing prediction of infant brain health outcomes through advanced EEG signal processing and network analysis<br>Role: <b>Principal Investigator</b>                  |

##### Pending

- |           |  |
|-----------|--|
| 2021-2024 | <i>James S. McDonnell Foundation, \$250,000</i><br>JSMF Opportunity Award: "Studying adolescent cognitive control and the influence of social context within a continuous, real-world setting."<br>Role: <b>Principal Investigator</b> |
|-----------|--|

## Publications

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- Buzzell, G. A.**, Troller-Renfree, S.V., Mark Wade, Debnath, R., Bowers, M., Zeanah, C. H., Nelson, C. A., Fox, N. A. (in press). Adolescent Cognitive Control and Medial Frontal Theta Oscillations Are Disrupted by Neglect: Associations with Transdiagnostic Risk for Psychopathology in a Randomized Controlled Trial. *Developmental Cognitive Neuroscience*, in press.
- Buzzell, G. A.**, Morales, S., Bowers M. E., Troller-Renfree, S. V., Pine, D. S., Henderson, H. A., Fox, N. A. (in press). A two-pathway model for the development of social anxiety. *Developmental Science*, in press.
- Buzzell, G. A.**, Lahat, A., Fox, N. A. (in press). The neural correlates of cognitive control and the development of social behavior. In J. Rubenstein and P. Rakic (Eds.), *Comprehensive Developmental Neuroscience: Neural Circuit and Cognitive Development (Second Edition, Vol 2)*. Amsterdam, Netherlands: Elsevier.
- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., & McDonald, C. G. (in press). Contrasting time and frequency domains: ERN and induced theta oscillations differentially predict post-error behavior. *Cognitive, Affective, & Behavioral Neuroscience*, in press.
- Troller-Renfree, S. V., **Buzzell, G. A.**, & Fox, N. A. (in press). Changes in working memory influence the transition from reactive to proactive cognitive control during childhood. *Developmental Science*, in press.
- Smith, A. R., White, L. K., Leibenluft, E., McGlade, A., Heckelman, A. C., Haller, S. P., **Buzzell, G. A.**, Fox, N. A., Pine, D. S. (in press). The heterogeneity of anxious phenotypes: Neural responses to errors in treatment-seeking anxious and behaviorally-inhibited youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, in press.
- Filippi, C. A., Subar, A. R., Sachs, J. F., Kircanski, K., Winkler, A., **Buzzell, G. A.**, Pagliaccio, D., Abend, R., Fox, N. A., Leibenluft, E., Pine, D. S. (in press). Developmental pathways to social anxiety and irritability: cognitive control as a moderator. *Development and Psychopathology*, in press.
- Leach, S. C., Morales, S., Bowers, M. E., **Buzzell, G. A.**, Debnath, R., Beall, D., Fox N. A. (in press). Adjusting ADJUST: Optimizing the ADJUST algorithm for pediatric data using geodesic nets. *Psychophysiology*, in press.
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- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., McDonald, C. G. (2018). Speeded response errors and the error-related negativity modulate early sensory processing. *NeuroImage*, 183, 112–120.
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- \*Authors contributed equally to this manuscript

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- Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Chronis-Tuscano, A., Henderson, H. A., ... Fox, N. A. (2017). A neurobehavioral mechanism linking behaviorally inhibited temperament and later adolescent social anxiety. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(12), 1097–1105.
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- Buzzell, G.,** Chubb, L., Safford, A. S., Thompson, J. C., McDonald, C. G. (2013). Speed of human biological form and motion processing. *PLoS ONE*, 8(7), e69396.
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### **Oral Presentations and Symposia (Conferences)**

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- Buzzell, G. A.,** Solway, A., Bernat, E. M., Morales, S., Barker, T. V., Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2019). Clarifying the link between performance monitoring and control in adolescents with a history of behavioral inhibition. *Society for Psychophysiological Research*, Washington, D.C.
- Buzzell, G. A.,** Barker, T. V., Troller-Renfree, S. V., Bernat, E. M., Bowers M., Morales, S., Bowman, L., Henderson, H. A., Pine, D. S., Fox, N. A. (2019). Leveraging time-frequency EEG to understand the role of theta oscillations in adolescent cognitive control. *Society for Research on Child Development*, Baltimore, Maryland.
- Buzzell, G. A.,** Troller-Renfree, S. V., Debnath, R., Tang, A., Zeanah, C. H., Nelson, C. A., Fox, N. A. (2019). RCT of foster care leads to improvements in control-related theta oscillations over one decade later. *Society for Research on Child Development*, Baltimore, Maryland.
- Debnath, R., Salo, V., **Buzzell, G. A.,** Yoo, K., Fox, N. A. (2019). Mirroring activity during observation of actions underlies distinct yet functionally connected motor and attention processes. *Society for Research on Child Development*, Baltimore, Maryland.
- Buzzell, G. A.,** Barker, T. V., Troller-Renfree, S. V., Bowers., M. E., Morales, S., Bowman, L. C., Beatty, P. Roberts, D., McDonald, C. G., Bernat, E., Henderson, H., Pine, D. S, Fox, N. A (2018). Complex relations between error monitoring and subsequent control in adolescence. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Buzzell, G. A.,** Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2017). Heightened error monitoring within a social context mediates longitudinal relations between behavioral inhibition and adolescent social anxiety. *Society for Psychophysiological Research*, Vienna, Austria.
- Buzzell, G. A.,** Barker, T. V., Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2017). A neurobehavioral mechanism linking temperament and social anxiety. *Society for Research on Child Development*, Austin, Texas.

Troller-Renfree, S. V., Stevens, B., **Buzzell, G. A.**, Degnan, K., Henderson, H. A., Fox, N. A. (2017). The moderating role of cognitive control on the link between behavioral inhibition and the development of anxiety. *Society for Research on Child Development*, Austin, Texas.

**Buzzell, G. A.**, Roberts, D., Taylor, B., Barrow, J., Baldwin, C. L. (2010). Neurophysiological measures of mental workload in a visual search task. *Virginia Social Science Association*, Petersburg, Virginia.

### Invited Talks

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Leveraging source localization of EEG to study cognitive control. *Steinhauser Lab*, Catholic University Eichstätt-Ingolstadt, Bavaria, Germany, 2019.

The neurocognitive development of cognitive control. *Cognitive and Neural Systems Seminar*, University of Maryland, College Park, MD, 2019.

Cognitive control in youth and adults: links to pediatric anxiety. *Affective Neuroscience Lecture Series (ANGST)*, NIH, Bethesda, MD, 2018.

Mind your mistakes: the neural basis of error monitoring across development and relations to psychopathology. *ADP Colloquia Series*, George Mason University, Fairfax, VA, 2018.

### Refereed Conference Proceedings

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Martini, M. C., **Buzzell, G. A.**, Wiese, E. (2015). Agent appearance modulates mind attribution and social attention in human-robot interaction. In *Social Robotics*.

Barrow, J. H., Baldwin, C. L., Roberts, D., Taylor, B., Sibley, C., Coyne, J. T., Mandulak, A., **Buzzell, G. A.**, Penaranda, N. (2011). Using physiological measures to improve training for UAV operators. In *Proceedings of the 16th International Symposium on Aviation Psychology*.

Roberts, D., Taylor, B., Barrow, J., Robertson, G., **Buzzell, G. A.**, Sibley, C., Cole, A., Coyne, J., Baldwin, B. (2010). EEG spectral analysis of workload for a part-task UAV simulation. In *Proceedings of the Annual Meeting of the Human Factors & Ergonomics Society*.

### Poster Presentations (Conferences)

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**Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Morales, S., Bernat, E. M., Henderson, H. A., Pine, D. S., Fox, N. A. (2019). Relations between social anxiety and cognitive control dynamics while under social observation. *7<sup>th</sup> International Symposium on Motivational and Cognitive control*, Berlin, Germany.

Leach, S. C., Morales, S., Bowers, M. E., **Buzzell, G. A.**, Debnath, R., Beall, D., Elliott, A., Fifer, W., Fox N. A. (2019). Adjusting ADJUST: optimizing the ADJUST algorithm for pediatric data using geodesic nets. *Society for Psychophysiological Research*, Washington, D.C.

- Morales, S., Suarez, G. L., **Buzzell, G. A.**, Debnath, R., Redcay, E., Fox, N. A. (2019). Involvement of the mirror neuron system in automatic imitation in childhood. *Society for Psychophysiological Research*, Washington, D.C.
- Beatty, P., **Buzzell, G. A.**, Roberts, D., McDonald, C. G. (2019). Contrasting time and frequency domains: transient frontal midline theta predicts adaptive post-error compensations. *Society for Psychophysiological Research*, Washington, D.C.
- Bowers, M., **Buzzell, G. A.**, Morales, S., Troller-Renfree, S. V., Bernat, E., Pine, D., Fox, N. A. (2019). Time-frequency approach to studying cognitive control in children: the role of theta and delta oscillations. *Society for Research on Child Development*, Baltimore, MD.
- Bowers, M., Reider, L., Morales, S., **Buzzell, G. A.**, Miller, N., Troller-Renfree, S. V., Pine, D. S., Henderson, H. A., Fox, N. A. (2019). Differences in parent and child report of the SCARED: implications for investigations of social anxiety. *Society for Research on Child Development*, Baltimore, MD.
- Morales, S., **Buzzell, G. A.**, Harrewijn, A., Marshall, P. J., Reeb-Sutherland, B. C., Pine, D. S., Henderson, H. A., Fox, N. A. (2018). Infant electrophysiological responses to auditory novelty longitudinally predict externalizing and attention problems across childhood. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Bowers, M. E., **Buzzell, G. A.**, Barker, T. V., Troller-Renfree, S. V., Bernat, E. M., Morales, S., Pine, D. S., Henderson, H. A., Fox, N. A. (2018). Associations between rule-breaking behaviors and electrophysiological measures of cognitive control in adolescence. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Beatty, P., **Buzzell, G. A.**, Roberts, D., McDonald, C. G. (2018). Speeded response errors and the error-related negativity modulate early sensory processing. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Buzzell, G. A.**, Debnath, R., Troller-Renfree, S. V., Tang, A., Zeanah, C. H., Nelson, C. A., Fox, N. A. (2018). Long-lasting improvements in cognitive control: behavioral and neural outcomes of a randomized control trial of a foster care intervention over one decade later. *Flux Satellite Meeting*, Chapel Hill, NC.
- Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowers, M., Bowman, L., Bernat, E., ... Fox, N. A. (2018). Complex dynamics of the error-monitoring system reveal insights into social anxiety within structured and unstructured social settings. *Biological Psychiatry*, 83(9), S243.
- Debnath, R., Tang, A., **Buzzell, G. A.**, Fox, N. A., Zeanah, C. H., Nelson, C. A. (2018). Institutional care is associated with changes in brain electrical activity: results from a longitudinal, randomized control trial of children in Romania. *Biological Psychiatry*, 83(9), S364–S365.
- Harrewijn, A., **Buzzell, G. A.**, Debnath, R., Pine, D. S., Fox, N. A. (2018). Influence of behavioral inhibition and EEG resting state on social anxiety symptoms. *Biological Psychiatry*, 83(9), S349–S350.



- Bowers, M. E., **Buzzell, G. A.**, Salo, V., Troller-Renfree, S. V., Hodgkinson, C. A., Goldman, D., Gorodetsky, E., McDermott, J. M., Henderson, H. A., Fox, N. A. (2018). Relations between catechol-O-methyltransferase (COMT) genotype and inhibitory control development in childhood. *Cognitive Neuroscience Society*, Boston, MA.
- Buzzell, G. A.**, Forman-Alberti, A., Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Pine, D. S., Henderson, H. A., Fox, N. A. (2017). The error-related negativity mediates longitudinal relations between behavioral inhibition and observed social anxiety. *International Society for Developmental Psychobiology*, Washington, D.C.
- Bowers, M. E., **Buzzell, G. A.**, Barker, T. V., Bernat, E. M., Fox, N. A. (2017). The development of feedback processing in adolescence: an electrophysiological study. *International Society for Developmental Psychobiology*, Washington, D.C.
- Buzzell, G. A.**, Richards, J. E., White, L. K., Barker, T. V., Pine, D. S., Fox, N. A. (2017). Development of the error monitoring system from ages 9-35: unique insight provided by MRI-constrained source localization of EEG. *Cognitive Neuroscience Society*, San Diego, CA.
- Beatty, P. J., **Buzzell, G. A.**, Paquette N. A., Roberts D. M., McDonald C. G. (2017). Error-induced blindness: error detection leads to impaired sensory processing and lower accuracy at short response-stimulus intervals. *Cognitive Neuroscience Society*, San Diego, CA.
- Abubshait, A., Wiese, E., **Buzzell, G. A.**, Beatty, P. J. (2017). Seeing minds in others: activation of left temporoparietal junction during mentalizing is directly related to performance in social interactions. *Cognitive Neuroscience Society*, New York, NY.
- Abubshait, A., **Buzzell, G. A.**, Beatty, P. J., Wiese, E. (2016). Mentalizing and the uncanny valley: mentalizing network activity predicts social behavior. *Cognitive Neuroscience Society*, New York, NY.
- Beatty, P. J., **Buzzell, G. A.**, Paquette, N., Roberts, D. M., McDonald, C. G. (2016). P3b and Pe as Neural Indices of Confidence. *Cognitive Neuroscience Society*, New York, NY.
- Buzzell, G. A.**, Roberts, D. M., Cummings, L. R., Fedota, J. R., Thompson, J. C., Parasuraman, R., McDonald, C. G. (2015). Uncertainty monitoring as a mechanism for flexible cognitive control: new insights from individual differences. *Cognitive Neuroscience Society*, San Francisco, CA.
- Roberts, D. M., **Buzzell, G. A.**, Parasuraman, R., McDonald, C. G. (2015). Comparing the predicted activations of an ACT-R cognitive model with human fMRI BOLD response in a difficult visual discrimination task. *Cognitive Neuroscience Society*, San Francisco, CA.
- Jesso, M., Roberts, D. M., **Buzzell, G. A.**, McDonald, C. G., Baldwin, C. L. (2015). Electrophysiological evidence for facilitation of auditory change detection with spatialized audio. *Cognitive Neuroscience Society*, San Francisco, CA.
- Buzzell, G. A.**, Nkongho, L. E., McDonald, C. G., Kidanu, A. W., Kim, H., Brinkman, M. C., Gordon, S. M., Clark, P. I. (2015). Acute neurocognitive alterations produced by smokeless tobacco products. *Society for Research on Nicotine and Tobacco*, Philadelphia, PA.

- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., McDonald, C. G. (2014). The correct-response negativity as an index of perceptual uncertainty. *Cognitive Neuroscience Society*, San Francisco, CA.
- Buzzell, G. A.**, Fedota, J. R., Daniel, R. M., Shaw, E. P., McDonald, C. G. (2014). Sensory evidence is predictive of certainty in perceptual decisions. *Society for Neuroscience*, Washington D.C.
- Buzzell, G. A.**, Fedota, J. R., Braymiller, J., Thompson, J. C., Parasuraman, R., McDonald, C. G. (2014). Ventral striatal and dorsal anterior cingulate activation reflect subjective certainty in a difficult visual discrimination task. *Cognitive Neuroscience Society*, Boston, MA.
- Shaw, E. P., **Buzzell, G. A.**, McDonald, C. G. (2014). Motivational significance does not selectively modulate early visual discrimination processes in a difficult discrimination task. *Cognitive Neuroscience Society*, Boston, MA.
- Baldwin, C. L., Roberts D. M., **Buzzell, G. A.**, Sin. B. S., Jesso, M., Sipmson, B. D., Iyer, N. (2014). Individual differences in change deafness: Verbal cognitive style aids detection. *Cognitive Neuroscience Society*, Boston, MA.
- Buzzell, G. A.**, Nkongho, L. E., Sharma, E., Kidanu, A. W., McDonald, C. G., Clark, P. I. (2014). The influence of electronic nicotine delivery systems on electrophysiological correlates of attention. *Society for Research on Nicotine and Tobacco*, Seattle, WA.
- Buzzell, G. A.**, Fedota, J. R., Daniel, R. M., Shaw, E. P., McDonald, C. G. (2013). Certainly you're wrong: A dissociation between neural correlates of stimulus discrimination and confidence in perceptual decisions. *Society for Neuroscience*, San Diego, CA.
- Buzzell, G. A.**, Roberts, D., Fedota, J., McDonald, C. G. (2013). N2 as an index of impaired inhibitory control in smokers. *Cognitive Neuroscience Society*, San Francisco, CA.
- Roberts, D., Fedota, J., **Buzzell, G. A.**, Parasuraman, R., McDonald, C. (2013). Top-down control selectively suppresses pre-stimulus alpha power in a contextual discrimination task. *Cognitive Neuroscience Society*, San Francisco, CA.
- Clark, P. I., McDonald, C. G, Coleman, B. N., Sharma, E., **Buzzell, G. A.** (2013). Electrophysiological assessment of consumer acceptability of electronic nicotine delivery systems. *Society for Research on Nicotine and Tobacco*, Boston, MA.
- Buzzell, G. A.**, Chubb, L., Safford, A. S., Thompson, J. C., McDonald, C. G. (2012). Speed of human biological form and motion processing. *Society for Neuroscience*, New Orleans, LA.
- Buzzell, G. A.**, Baldwin, C., Roberts, D., Barrow, J., McDonald, C. (2012). Navigational style and electrophysiological correlates of conflict in an auditory spatial Stroop task. *Cognitive Neuroscience Society*, Chicago, IL.
- Buzzell, G. A.**, Baldwin, C. L., Wenger, L., Roberts, D., Barrow, J., McDonald, C. G. (2011). Electrophysiological indices of conflict in an auditory spatial Stroop task. *Society for Neuroscience*. Washington D. C.

**Buzzell, G. A.** (2011). Electrophysiological indices of conflict in an auditory spatial Stroop task. *College of Humanities and Social Sciences Colloquium*, Fairfax, VA.

Roberts, D., Block, C. K., Barrow, J., Taylor, B., **Buzzell, G. A.**, Baldwin, C. L. (2010). Effect of stimulus quality on language processing in younger and older adults. *Cognitive Neuroscience Society*, Montreal, Canada.

### **Awards and Scholarships**

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International Society for Developmental Psychobiology Travel Award (2019, 2017)

-Competitive travel grant, \$500

Outstanding TA Award (2016)

-Competitive award granted to one TA in the GMU Psychology Department, \$100

Undergraduate Apprenticeship Program Writing Fellowship (2011)

-Fellowship awarded for the advancement of undergraduate research or scientific writing, \$1000

GMU Psychology Department Mellinger Award (2011)

-For excellence in the areas of scholarship, academics, and service, \$100

Advanced Scholar Award (2011)

-For the highest GPA in the GMU Psychology department's graduating class, \$100

Award for Best Project Involving Information technology (2011)

-Awarded for a poster presentation at the GMU CHSS Colloquium, \$200

Dean's Challenge Scholarship (2010)

- Awarded for scholarship, academic achievements, and extracurricular activities, \$2000

### **Teaching**

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2016, 2012-2013      Biological Psychology Undergraduate Course

2013-2016              Co-instructor for the GMU Undergraduate Psychology Honors Program

#### Teaching Assistantships

2011-2012              Sensation and Perception Undergraduate Course

2011                      Biological Psychology Undergraduate Course

2011                      Psychology of Communication Undergraduate Course

### **Consulting Work (paid)**

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2-day workshop covering EEG analysis and theory

-New York University (2019)

-Weill Cornell Medicine (2018)

Preconference workshop on EEG analysis at the Society for Psychophysiological Research (2019)

### **Mentorship Experience**

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PhD and undergraduate students in the lab of Dr. Nathan A. Fox (UMD; 2016-2020)

PhD, master's and undergraduate students in the lab of Dr. Craig G. McDonald (GMU; 2012-2016)

### **Academic Service**

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Ad-hoc reviewer: *Psychological Science*, *The Journal of Neuroscience*, *Cerebral Cortex*, *eLife*, *Child Development*, *NeuroImage*, *Developmental Cognitive Neuroscience*, *Psychophysiology*, *Developmental Science*, *Biological Psychiatry*, *Biological Psychology*, *Neuropsychologia*, *Cognitive Affective and Behavioral Neuroscience*, *Developmental Psychobiology*, *International Journal of Psychophysiology*, *BMC Medicine*

Co-organizer and host, Students in Neuroscience Symposium (2014-2015)

President, Students in Neuroscience student group (2014-2015)

Vice-President, Students in Neuroscience student group (2013-2014)

Student liaison for the GMU Cognitive and Behavioral Neuroscience (CBN) program (2012-2016)

GMU Student Advising Counselor (2012)

***Raul Gonzalez, Ph.D.***  
**PROFESSOR OF PSYCHOLOGY, PSYCHIATRY, AND IMMUNOLOGY**  
**FLORIDA INTERNATIONAL UNIVERSITY**  
**SUBSTANCE USE NEUROPSYCHOLOGY LABORATORY**  
**SUN LAB**

***CONTACT INFORMATION***

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<http://sunlab.fiu.edu>  
<https://scholar.google.com/citations?user=cG-26IIAAAAJ>

***APPOINTMENTS***

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2017 – P	<b>Professor of Psychology</b> (secondary appointments in <b>Psychiatry and Immunology</b> , FIU Wertheim College of Medicine) Florida International University, Miami, Department of Psychology
2014 – 2017	<b>Associate Professor of Psychiatry and Immunology (secondary appointments)</b> Florida International University, Miami, Herbert Wertheim College of Medicine
2012 – 2017	<b>Associate Professor of Psychology (Tenured), Director of SUHN Lab</b> Florida International University, Miami, Department of Psychology
2010 – 2012	<b>Assistant Professor of Psychology (secondary appointment)</b> University of Illinois, Chicago, Department of Psychology
2006 – 2012	<b>Assistant Professor of Psychiatry (Tenure Track)</b> University of Illinois, Chicago, Department of Psychiatry

***LICENSURE***

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2014 – P	<b>Licensed Clinical Psychologist</b> State of Florida
2006 – 2016	<b>Licensed Clinical Psychologist [inactive]</b> State of Illinois

***EDUCATION***

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2004 – 2006	<b>Post-doctoral Research Fellow in Neuropsychology, Cognitive &amp; Addictions Neuroscience</b> University of Illinois, Chicago, Department of Psychiatry <i>Fulfills INS/Divison40 postdoctoral training guidelines in clinical neuropsychology</i>
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- 2003 – 2004     **Clinical Psychology Internship**  
University of Illinois, Chicago, Department of Psychiatry  
*APA-accredited internship; APCS Member Program*
- 1998 – 2004     **Ph.D. in Clinical Psychology (Neuropsychology track)**  
San Diego State University / University of California, San Diego  
UCSD, Department of Psychiatry & SDSU, Department of Psychology  
*APA-accredited doctoral program; APCS Member Program*
- 1998 – 2002     **M.S. in Clinical Psychology (Neuropsychology track)**  
San Diego State University / University of California, San Diego  
UCSD, Department of Psychiatry & SDSU, Department of Psychology  
*APA-accredited doctoral program; APCS Member Program*
- 1995 - 1997     **B.A. in Psychology, minor in Chemistry, *magna cum laude*, Honors College**  
Florida International University, Miami, FL, College of Arts & Sciences

## RESEARCH FUNDING

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### AWARDED (ACTIVE)

- 2020 – 2027     “ABCD-USA CONSORTIUM: RESEARCH PROJECT SITE AT FIU”  
\$13,940,663 total costs  
Principal Investigator                      NIH/NIDA                      2U01 DA041156
- 2017 – 2022     “FIU Center for Reducing Disparities in Substance Abuse & HIV in South Florida”  
\$16,141,454  
Co-Investigator (PI: Wagner)     NIH/NIMHH                      U54 MD012393
- 2015 – 2020     “MRI: Development of an integrated neuroimaging instrument with temporal and spatial alignments for brain research.”  
\$3,755,112  
Co-investigator (PI: Malek)                      NSF/CNS                      CNS-1532061
- 2015 – 2020     “Nano-delivery of methanandamide across BBB to block cannabinoid induced effects in HIV-1 infection”  
\$2,929,011  
Co-investigator (PI: Nair)                      NIH/NIDA                      R01 DA40537

### AWARDED (COMPLETED)

- 2015 – 2020     “Adolescent Brain Cognitive Development (ABCD): FIU”  
\$12,689,357 total costs  
Principal Investigator     NIH/NIDA                      U01 DA041156
- 2018 – 2019     “Leveraging the ABCD study to examine the effects of Hurricane Irma exposure: the disaster and youth, neural, and affective maturation in context (DYNAMIC) study.”  
\$179,982  
Co-investigator (PI: Dick, Comer)                      NSF                      RAPID BCS1805645
- 2012 – 2019     “The impact of cannabis use on the neuropsychological functioning of individuals with HIV/AIDS”  
\$2,210,750 total costs  
Principal Investigator     NIH/NIDA                      R01 DA033156
- 2012 – 2019     “Decision-making and episodic memory in trajectories to cannabis addiction”  
\$2,174,102 total costs  
Principal Investigator     NIH/NIDA                      R01 DA031176

2017 – 2018 "The joint effect of neighborhood-level factors and decision-making on changes in cannabis use"  
 \$99,847 total costs  
 Principal Investigator [mentor] NIH/NIDA R01 DA031176-S1

2012 – 2017 "Cognitive neuropsychology of HIV and drug abuse"  
 Co-Investigator (PI: Martin) NIH/NIDA R01 DA012828-11  
 \*Role changed to consultant after change of institution

2012 – 2014 "Administrative supplement: Social-emotional contexts of adolescent smoking patterns"  
 Co-Investigator (PI: Mermelstein) NIH/NCI Supplement to P01 CA098262  
 \*Role changed to consultant after change of institution

2008 – 2012 "Neurocognitive disinhibition and cannabis addiction"  
 \$476,184  
 Principal Investigator NIH/NIDA K23 DA023560

2007 – 2008 "Executive function and alcohol use: precursors and consequences"  
 Co-Investigator (PI: Kassel) University of Illinois Chicago  
 Institute for Health Research and Policy (IHRP) Pilot Grant Program

2006 – 2008 "Cognitive neuropsychology of HIV and drug abuse"  
 Co-Investigator (PI: Martin) NIH/NIDA R01 DA012828-06

2005 – 2007 "Drug Addiction, HIV, and neurocognitive functioning"  
 [loan repayment]  
 Principal Investigator NIH/NIDA L30 DA018528  
 NIH Clinical Research Loan Repayment Program (Competitive Renewal)

2005 -2007 "Mechanisms for neurocognitive damage of HIV+ drug users"  
 \$86,044  
 Principal Investigator NIH/NIDA F32 DA018522  
 Ruth L. Kirschstein National Research Service Award (NRSA)

2000 – 2003 "Neurocognitive effects of combined methamphetamine and alcohol abuse"  
 Principal Investigator NIH/NIDA Supplement to P01 DA12065  
 Grant Supplement for Underrepresented Minorities

## *HONORS, AWARDS, & RECOGNITIONS*

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1998 – 2000 San Diego Fellowship, UCSD

2006 APA 2006 NIDA Early Career Investigator Invited Travel Award

2006 NIDA Research Training Institute Invited Travel Award

2007 APA 2007 NIDA Early Career Investigator Invited Travel Award

2010 Center for Clinical and Translational Science Mentor Academy Stipend

2012 UIC Faculty Scholarship Support Program Award

2013 NIDA DCNBR Outstanding Early Career Investigator Award

2013 Florida International University Top Scholar

2016 Florida International University Top Scholar

2016 Florida International University Faculty Senate Award for Excellence in Research and Creative Activities

2016 Florida International University College of Arts and Sciences Faculty Award – Research

### CITATION METRICS

(Based only on publications with data on Google Scholar)

<http://scholar.google.com/citations?user=cG-26IIAAAAJ&hl=en>

Times cited: 5192

h-index: 34

i10-index: 63

i100-index: 16

### BOOK CHAPTERS

1. **Gonzalez, R.**, Martin, E.M., & Grant, I. (2007). *Marijuana*. In Kalechstein, A. & Van Gorp, W. (Eds.). *Neuropsychology and Substance Use: State of the Art and Future Directions*. New York: Taylor and Francis, 139 – 170.
2. **Gonzalez, R.**, Vassileva, J., Scott, J.C. (2009). *Neuropsychological Consequences of Drug Abuse*. In Grant, I. & Adams, K.M. (Eds.), *Neuropsychological Assessment of Neuropsychiatric Disorders*, 3rd Edition. New York: Oxford University Press, 455 – 479.
3. **Gonzalez, R.**, Quartana, Phillip J., Martin, E. M. (2009). *Co-occurrence of HIV, Hepatitis C, and Substance Use Disorders: Effects on Brain Functioning*. In Paul, R.H., Sacktor, N.C., Valcour, V., & Tashima, K.T. (Eds.) *HIV and the Brain: New Challenges in the Modern Era*. New York: Humana Press, 213 – 232.
4. Levine, A., **Gonzalez, R.**, Martin, E.M. (2012). *Neurocognition in HIV and Substance Use Disorders*. In Gendelman, H.E., Grant, I., Everall, I.P., Gelbard, H.A., Fox, H.S., Lipton, S.A., and Swindells, S. (Eds.) *The Neurology of AIDS, Third Edition*. New York: Oxford University Press, 1034 – 1044.
5. Levine, A.J., Ross, J.M., **Gonzalez, R.**, Martin, M. (2015). Neurocognitive functioning in HIV-infected substance users. In Hope, T.J., Stevenson, M., and Richman, D. (Eds.) *Encyclopedia of AIDS*. New York: Springer, 1-8.
6. \*Pacheco-Colon, I., Duperrouzel, J., **Gonzalez, R.** (2018). Studies in cannabis use. In Koffler, S, Mahone, M.E., Marcopulos, B.A., Johnson-Greene, D.E., Smith, G. (eds.) "Neuropsychology: Science and Practice v3." Oxford University Press.
7. \*Pacheco-Colon, I. & **Gonzalez, R.** (2020). Cognitive sequelae of cannabis use. In Verdejo-Garcia, A. (ed.) "Cognition and Addiction: A researcher's guide from mechanisms towards interventions. Academic Press.

### REVIEW ARTICLES AND COMMENTARIES

1. **Gonzalez, R.**, Carey, C., Grant I. (2002). Nonacute (Residual) neuropsychological effects of cannabis use: A qualitative analysis and systemic review. *Journal of Clinical Pharmacology*, 42, 48S-57S. [PMID: 12412836](#)
2. **Gonzalez, R.**, Jacobus, J., & Martin, E.M. (2005). Investigating neurocognitive features of hepatitis C virus infection in drug users: potential challenges and lessons learned from the HIV literature. *Clinical Infectious Diseases*. 41, S45 – S49. [PMID: 16265613](#)
3. **Gonzalez, R.** (2007). Acute and non-acute effects of cannabis on brain functioning and neuropsychological performance. *Neuropsychology Review*, 17, 347 – 361. [PMID: 17680367](#)
4. **Gonzalez, R.** & Cherner, M. (2008). Co-factors in HIV neurobehavioral disturbances: Substance abuse, Hepatitis C, and aging. *International Review of Psychiatry*, 20, 49 – 60. [PMID: 18240062](#)
5. \*Schuster, R.M. & **Gonzalez, R.** (2012). Substance abuse, hepatitis C, and aging in HIV: Common co-factors that contribute to neurobehavioral disturbances. *Neurobehavioral HIV Medicine*, 4, 15 – 34. [Open Access](#)
6. **Gonzalez, R.** & Swanson, J.M. (2012). Long-term effects of adolescent-onset and persistent use of cannabis: current trends, new findings, questions, and importance. [*Commentary on Meier et al's "Persistent cannabis users show neuropsychological decline from childhood to midlife"*] *Proceedings of the National Academy of Sciences*, 109, 15970 – 15971. [PMID: 23012451](#), [PMCID: PMC3479595](#)
7. \*Crane, M., Schuster, R.M., Fusar-Poli, P., **Gonzalez, R.** (2013). Effects of cannabis on neurocognitive functioning: Recent advances, neurodevelopmental influences, and sex differences. *Neuropsychology Review*, 23, 117 - 137. [PMID: 23129391](#), [PMCID: PMC3593817](#)
8. Volkow, N.D., Swanson, J.M., Evins, A.E., DeLisi, L.E., Meier, M.H., **Gonzalez, R.**, Bloomfield, M.A.P., Curran, H.V., Baler, R. (2016). Effects of cannabis use on human behavior, including cognition, motivation, and psychosis: a review. *JAMA Psychiatry*, 73, 292-297. [PMID: 26842658](#)



9. \*Ross, J.M., Duperrouzel, J., Vega, M., **Gonzalez, R.** (2016). The neuropsychology of risky sexual behavior. Journal of the International Neuropsychological Society, 22, 586-594. PMID: 27173086, PMCID: PMC5287595.
10. Walsh, Z., **Gonzalez, R.**, Crosby, K. Thiessen, M., Carroll, C., Bonn-Miller, M.O. (2017). Medical cannabis and mental health: a guided systematic review. Clinical Psychology Review, 51, 15-29. PMID: 27816801.
11. **Gonzalez, R.**, Pacheco-Colon, I, Duperrouzel, J.C., Hawes, S.W. (2018). Does cannabis cause declines in neuropsychological functioning? A review of longitudinal studies. Journal of the International Neuropsychological Society, 23, 893-902.
12. \*Pacheco-Colón, I, Limia, JM, **Gonzalez, R.** (2018). Nonacute effects of cannabis use on motivation and reward sensitivity in humans: a systematic review. Psychology of Addictive Behaviors, 32, 497-507.
13. \*Pacheco-Colón, I., Ramirez, A.R., **Gonzalez, R.** (2019). Effects of adolescent cannabis use on motivation and depression: a systematic review. Current Addiction Reports, 6, 532-546.
14. \*Duperrouzel, J., Granja, K., Pacheco-Colón, I., **Gonzalez, R.** (2020). Adverse effects of cannabis use on neurocognitive functioning: A systematic review of meta-analytic studies. Journal of Dual Diagnosis, 16, 43-57.

*\*Lead author is Dr. Gonzalez's trainee and/or Dr. Gonzalez is senior author.*

## RESEARCH ARTICLES

15. **Gonzalez, R.**, Heaton, R.K., Moore, D.J., Letendre, S., Ellis, R.J., Wolfson, T., Marcotte, T., Cherner, M., Rippeth, J., Grant, I., & the HNRC Group. (2003). Computerized reaction time battery versus a traditional neuropsychological battery: Detecting HIV-related impairments. Journal of the International Neuropsychological Society, 8, 64 – 71. [PMID: 12570359](#)
16. Grant, I., **Gonzalez, R.**, Carey, C., Wolfson, T., & Natarajan, L. (2003). Non-acute (residual) neurocognitive consequences of marijuana: A meta-analytic study. Journal of the International Neuropsychological Society, 9, 679 – 689. [PMID: 12901774](#)
17. Schweinsburg, B.C., Alhassoon, O.M., Taylor, M.J., **Gonzalez, R.**, Videen, J.S., Brown, G.G., Patterson, T.L., & Grant, I. (2003). Effects of alcoholism and gender on brain metabolism. American Journal of Psychiatry, 160, 1180 – 1183. [PMID: 12777281](#)
18. **Gonzalez, R.**, Rippeth, J.D., Carey, C.L., Heaton, R.K., Moore, D.J., Schweinsburg, B.C., Cherner, M., & Grant, I. (2004). Neurocognitive performance of methamphetamine users discordant for history of marijuana exposure. Drug and Alcohol Dependence, 76, 181 – 190. [PMID: 15488342](#)
19. Carey, C., Woods, S.P., **Gonzalez, R.**, Conover, E., Grant, I., Heaton, R.K., & the HNRC Group. (2004). Predictive validity of global deficit scores in detecting neuropsychological impairment in HIV infection. Journal of Clinical and Experimental Neuropsychology, 26, 307 – 319. [PMID: 15512922](#)
20. Carey, C., Woods, S.P., Rippeth, J., **Gonzalez, R.**, Moore, D.J., Marcotte, T., Grant, I., Heaton, R., & the HNRC Group. (2004). Initial validation of a neuropsychological screening battery for the detection of HIV-related cognitive impairment. The Clinical Neuropsychologist, 18, 234 – 248. [PMID: 15587671](#)
21. Woods, S.P., Conover, E., Rippeth, J.D., Carey, C., **Gonzalez, R.**, Marcotte, T.D., Heaton, R.K., Grant, I., & the HNRC Group. (2004). Qualitative aspects of verbal fluency performance in HIV-associated dementia: A deficit in rule-guided lexical-semantic search processes? Neuropsychologia, 42, 801 – 809. [PMID: 15037058](#)
22. Marcotte, T.D., Wolfson, T., Rosenthal, T.J., Heaton, R.K., **Gonzalez, R.**, Ellis, R.J., Grant, I., & the HNRC Group. (2004). A Multimodal Assessment of Driving Performance in HIV Infection. Neurology, 63, 1417 – 1422. [PMID: 15505158](#)
23. Martin, E.M., Novak, R.M., Fendrich, M., Vassileva, J., **Gonzalez, R.**, Grbesic, S., Sworowski, L. (2004). Stroop performance in drug users classified by HIV and hepatitis C virus serostatus. Journal of the International Neuropsychological Society, 10, 298 – 300. [PMID: 15012850](#)
24. Rippeth, J.D., Heaton, R.K., Carey, C.L., Marcotte, T.D., Moore, D.J., **Gonzalez, R.**, Wolfson, T., Grant, I., & the HNRC Group. (2004). Methamphetamine dependence increases risk of neuropsychological impairment in HIV infected persons. Journal of the International Neuropsychological Society, 10, 1 – 14. [PMID: 14751002](#)
25. **Gonzalez, R.**, Vassileva, J., Bechara, A., Grebesic, S., Sworowski, L., Novak, R.M., Nunnally, G., & Martin, E.M. (2005). The influence of executive functions, sensation seeking, and HIV serostatus on the risky sexual practices of substance dependent individuals. Journal of the International Neuropsychological Society, 11, 1 – 11. [PMID: 15962700](#)
26. Moore, D.J., Atkinson, J.H., Akiskal, H., **Gonzalez, R.**, Wolfson, T., Grant, I., & the HNRC Group. (2005). Temperament and risky behaviors: A pathway to HIV? Journal of Affective Disorders, 85, 191 – 200. [PMID: 15780689](#)
27. Schweinsburg, B.C., Taylor, M.J., Alhassoon, O.M., **Gonzalez, R.**, Brown, G.G., Ellis, R.J., Letendre, S., Videen, J.S., McCutchan, J.A., Patterson, T.L., Grant, I & the HNRC Group. (2005) Brain mitochondrial injury in human immunodeficiency virus-seropositive (HIV+) individuals taking nucleoside reverse transcriptase inhibitors. Journal of Neurovirology, 11, 356 – 364. [PMID: 16206458](#)

28. Woods, S.P., Rippeth, J.D., Conover, E., Gongvatana, A., **Gonzalez, R.**, Carey, C.L., Cherner, M., Heaton, R.K., Grant, I., & the HNRC Group. (2005). Deficient strategic control of verbal encoding and retrieval in individuals with methamphetamine dependence. *Neuropsychology*, *19*, 35 – 43. [PMID: 15656761](#)
29. Richardson, J.L., Nowicki, M., Danley, K., Martin, E.M., Cohen, M.H., **Gonzalez, R.**, Vassileva, J., & Levine, A.M. (2005). Neuropsychological functioning in a cohort of HIV and hepatitis-C infected women. *AIDS*, *19*, 1659 – 1667. [PMID: 16184036](#)
30. **Gonzalez, R.**, Grant, I., Miller, S.W., Taylor, M.J., Schweinsburg, B.C., Carey, C.L., Woods, S.P., Norman, M.A., Rippeth, J.D., Martin, E.M., & Heaton, R.K. (2006). Demographically adjusted normative standards for new indices of performance on the Paced Auditory Serial Addition Task (PASAT). *The Clinical Neuropsychologist*, *20*, 396 – 413. [PMID: 16895855](#)
31. **Gonzalez, R.**, Grant, I., Miller, S.W., Carey, C.L., Woods, S.P., Rippeth, J.D., Schweinsburg, B.C., Norman, M.A., Martin, E.M., & Heaton, R.K. (2006). Association between dyads and correct responses on the Paced Auditory Serial Addition Task (PASAT). *Assessment*, *13*, 381 - 384. [PMID: 17050907](#)
32. Carey C.L., Woods, S.P., Rippeth, J.D., **Gonzalez, R.**, Heaton, R.K., Grant, I., & the HNRC group. (2006). Additive effects of methamphetamine dependence and immunosuppression on neuropsychological functioning in HIV infection. *AIDS & Behavior*, *14*, 1 – 6. [PMID: 16477511](#)
33. Moore, D.J., Masliah, E., Rippeth, J.D., **Gonzalez, R.**, Carey, C.L., Cherner, M., Ellis, R.J., Achim, C.L., Marcotte, T.D., Heaton, R.K., Grant, I., & the HNRC Group (2006). Cortical and subcortical neurodegeneration is associated with HIV neurocognitive impairment. *AIDS*, *20*, 879 – 887. [PMID: 16549972](#)
34. **Gonzalez, R.**, Bechara, A., Martin, E.M. (2007). Executive functions among individuals with methamphetamine or alcohol as drugs of choice: preliminary observations. *Journal of Clinical and Experimental Neuropsychology*, *29*, 155 – 159. [PMID: 17365250](#)
35. Martin, E.M., Nixon, H., Pitrak, D.L., Weddington, W., Rains, N.A., Nunnally, G., Grbesic, S., **Gonzalez, R.**, Jacobus, J., Bechara, A. (2007). Characteristics of prospective memory deficits in HIV-seropositive substance-dependent individuals: preliminary observations. *Journal of Clinical and Experimental Neuropsychology*, *29*, 496-504. [PMID: 17564915](#)
36. Vassileva, J., **Gonzalez, R.**, Bechara, A., Martin, E.M. (2007). Are all drug addicts impulsive?: Effects of antisociality and extent of multidrug use on cognitive and motor impulsivity. *Addictive Behaviors*, *32*, 3071 – 3076. [PMID: 17507173](#), [PMCID: PMC2128047](#)
37. **Gonzalez, R.**, Jacobus, J., Amatya, A.K., Quartana, P.J., Vassileva, J., Martin, E.M. (2008). Deficits in complex motor functions, despite no evidence of procedural learning deficits, among HIV+ individuals with history of substance dependence. *Neuropsychology*, *22*, 776-786. [PMID: 18999351](#), [PMCID: PMC2630709](#)
38. **Gonzalez, R.**, Wardle, M., Jacobus, J., Vassileva, J., Martin, E. M. (2010). Influence of procedural learning on Iowa Gambling Task performance among HIV+ Individuals with history of substance dependence. *Archives of Clinical Neuropsychology*, *25*, 28 – 38. [PMID: 19939850](#), [PMCID: PMC2809553](#)
39. \*Wardle, M. C., **Gonzalez, R.**, Bechara, A., Martin-Thormeyer, E. M. (2010). Iowa Gambling Task performance and emotional distress interact to predict risky sexual behavior in individuals with dual substance and HIV diagnoses, *Journal of Clinical and Experimental Neuropsychology*, *32*, 1110-1121. [PMID: 20480423](#), [PMCID: PMC3639122](#)
40. Martin, E.M., **Gonzalez, R.**, Vassileva, J., Maki, P. (2011). HIV+ men and women show different performance patterns on procedural learning tasks. *Journal of Clinical and Experimental Neuropsychology*, *33*, 112-120. [PMID: 20694870](#), [PMCID: PMC2990780](#)
41. Vassileva, J., Georgiev, S., Martin, E.M., **Gonzalez, R.**, Segala, L. (2011). Psychopathic heroin addicts are not uniformly impaired across neurocognitive domains of impulsivity. *Drug and Alcohol Dependence*, *114*, 194-200. [PMID: 21112701](#), [PMCID: PMC3062675](#)
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45. \*Schuster, R. M., Crane, N., Mermelstein, R., **Gonzalez, R.** (2012). The influence of inhibitory control and episodic memory on the risky sexual behavior of young adult cannabis users. *Journal of the International Neuropsychological Society*, *18*, 827-833. [PMID: 22676889](#), [PMID: PMC3677559](#)
46. **Gonzalez, R.**, Schuster, R.M., Mermelstein, R.J., Vassileva, J., Martin, E.M., Diviak, K.R. (2012). Performance of young adult cannabis users on neurocognitive measures of impulsive behavior and their relationships to symptoms of

- cannabis use disorders. *Journal of Clinical and Experimental Neuropsychology*, 34, 962-976. [PMID: 22882144](#), [PMCID: PMC3488122](#)
47. Martin, E.M., DeHaan, S., Vassileva, J., **Gonzalez, R.**, Weller, J., Bechara, A. (2013). Decision making among HIV+ drug using men who have sex with men: A preliminary report from the Chicago Multicenter AIDS Cohort Study. *Journal of Clinical and Experimental Neuropsychology*, 35, 573 – 583. [PMID: 23701366](#), [PMCID: PMC3700610](#)
  48. Vassileva, J., Ahn, Woo-Young, Weber, K.M., Busemeyer, J., Stout, J.C., **Gonzalez, R.**, Cohen, M.H. (2013). Computational modeling reveals distinct effects of HIV and history of drug use on decision-making processes in women. *PLOS ONE*, 8, e68962. [PMID: 23950880](#), [PMCID: PMC3737214](#)
  49. \*Crane, N.A., Schuster, R.M., **Gonzalez, R.** (2013). Preliminary evidence for a sex-specific relationship between amount of cannabis use and neurocognitive performance in young adult cannabis users. *Journal of the International Neuropsychological Society*, 19, 1009 – 1015. [PMID: 23962414](#), [PMCID: PMC3895398](#)
  50. Wilson, M., Martin-Engel, L., Vassileva, J., **Gonzalez, R.**, Martin, E. (2013). An investigation of the effects of antiretroviral CNS penetration effectiveness on procedural learning in HIV+ drug users. *Journal of Clinical and Experimental Neuropsychology*, 35, 915 – 925. [PMID: 24079384](#), [PMCID: PMC3856247](#)
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  53. \*Ross, J.M., Coxe, S., Schuster, R.M., Rojas, A., **Gonzalez, R.** (2015). The moderating effects of cannabis use and decision making on the relationship between conduct disorder and risky sexual behavior. *Journal of Clinical and Experimental Neuropsychology*, 37, 303-315. [PMID: 25832553](#), [PMCID: PMC4441872](#).
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  55. **Gonzalez, R.**, Schuster, R.M., Mermelstein, R., Diviak, K.R. (2015). The role of decision-making in cannabis-related problems among young adults. *Drug & Alcohol Dependence*, 154, 214-221. [PMID: 26199058](#), [PMCID: PMC4536096](#).
  56. Martin, E., **Gonzalez, R.**, Vassileva, J., Bechara, A. (2015). Delay discounting is greater among drug users seropositive for hepatitis C but not HIV. *Neuropsychology*, 29, 926-932. [PMID: 25984995](#), [PMCID: PMC4640934](#).
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  58. Martin E., **Gonzalez, R.**, Vassileva, J., Maki, P.M., Bechara, A., Brand, M. (2016). Sex and HIV serostatus differences in decision making under risk among substance dependent individuals. *Journal of Clinical and Experimental Neuropsychology*, 38, 404-415. [PMID: 26882176](#), [PMCID: PMC4762046](#).
  59. \*Ross, J.M., Graziano, P., Pacheco-Colon, I., Coxe, S., **Gonzalez, R.** (2016). Decision-making does not moderate the association between cannabis use and body mass index among adolescent cannabis users. *Journal of the International Neuropsychological Society*, 22, 944-949. [PMID: 27079834](#), [PMCID: PMC5280071](#).
  60. Keutmann, M., **Gonzalez, R.**, Maki, P., Rubin, L., Vassileva, J., Martin, E. (2017). Sex differences in HIV effects on visual memory among substance dependent individuals. *Journal of Clinical and Experimental Neuropsychology*, 39, 574-586. [PMID: 27841082](#), [PMCID: PMC5395326](#)
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  62. \*Duperrouzel, J., Hawes, S., Lopez-Quintero, C., Pacheco-Colon, I., Comer, J., **Gonzalez, R.** (2018). The association between adolescent cannabis use and anxiety: a parallel process analysis. *Addictive Behaviors*, 78, 107-113.
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  64. \*Pacheco-Colon, I., Coxe, S., Duperrouzel, J., Ross, J.M., **Gonzalez, R.** (2017). Is cannabis use associated with various indices of motivation among adolescents? *Substance Use and Misuse*, 23, 855-863.
  65. Hawes, S.W., Byrd, A.L., Kelley, S., **Gonzalez, R.**, Edens, J., Pardini, D.A. (2018). Psychopathic features across development: Assessing longitudinal invariance among Caucasian and African American youths. *Journal of Research in Personality*, 73, 180-188.
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## CONFERENCE PRESENTATIONS & ABSTRACTS

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81. \*Crane, N.A., Schuster, R. M., & **Gonzalez, R.** (2013). Sex differences in associations between amount of cannabis use and neuropsychological performance. 41<sup>st</sup> annual meeting of the International Neuropsychological Society.
82. Segala, L., Vasilev, G., Bozgunov, K., Naslednikova, R., Raynov, I., Gonzalez, R., Vassileva, J. (2013). ADHD assessed with self-report does not predict neurocognitive performance in abstinent opiate and amphetamine users. National Academy of Neuropsychology, 33<sup>rd</sup> Annual Conference.
83. \*Crane, N.A., Schuster, R.M., & **Gonzalez, R.** (2013). Sex differences in associations between age of initiated cannabis use and neuropsychological performance. Oral Presentation at the 75<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence. [*Recipient of NIDA Women and Sex/Gender Junior Investigator Travel Award.*]
84. Thames, A., **Gonzalez, R.**, Padula, C., Paltzer, J., Saez, P., & Touradji, P. (2013). Establishing a successful mentee-mentor relationship: words from the wise. 2013 American Psychological Association Annual Convention.
85. **Gonzalez, R.**, Schuster, R.M., Crane, N.A. (2013). The impact of decision-making performance and ADHD symptoms on cannabis-related problems among emerging adults. Oral presentation at the 23<sup>rd</sup> Symposium of the International Cannabinoid Research Society. Vancouver, B.C.
86. Martin, E., **Gonzalez, R.**, Vassileva, J. (2013). Effects of HIV serostatus and comorbid drug dependence on neurocognition. 12<sup>th</sup> International Symposium on NeuroVirology. *Journal of Neurovirology*, 19, S53 – S54.
87. **Gonzalez, R.** (2014). Sifting through the smoke: Uncovering the impact of marijuana use on neurocognition. *Chair of invited symposium at the 42<sup>nd</sup> Annual Meeting of the International Neuropsychological Society.* Seattle, WA.
88. \*Crane, N.A., Schuster, R.M., Mermelstein, R.J., **Gonzalez, R.** (2014). Neuropsychological & Affective Sex Differences in Cannabis Users. *Symposia presented at the American Psychological Association Annual Convention, Washington, DC, August 7-10.*
89. \*Schuster, R. M., Mermelstein, R., & **Gonzalez, R.** (2014). Assessment of working memory functioning via ecological momentary assessment in the context of simultaneous cannabis and tobacco use. 42<sup>nd</sup> annual meeting of the International Neuropsychological Society.
90. \*Ross, J.M., Coxe, S., Schuster, R.M., & **Gonzalez, R.** (2014). Decision-making, conduct disorder symptoms, and level of cannabis use interact to predict number of sexual partners. 42<sup>nd</sup> annual meeting of the International Neuropsychological Society.



91. **Gonzalez, R.** & Schuster, R.M. (2014). Decision-making as a moderator of cannabis use and consequences from use. Oral presentation for invited symposium at the 42<sup>nd</sup> annual meeting of the International Neuropsychological Society.
92. \*Crane, N.A., Schuster, R.M., Mermelstein, R.J., & **Gonzalez, R.** (2014). Neuropsychological & affective sex differences in cannabis users. Invited symposium presentation at the 2014 American Psychological Association Annual Convention.
93. Martin, E., **Gonzalez, R.**, Vassileva, J., Maki, P., Bechara, A., & Brand, M. (2014). Sex and HIV serostatus effects on high risk decision-making. 76<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
94. Weiss, S., Swanson, J., Evins, A.E., DeLisi, L., Meier, M., **Gonzalez, R.**, Bloomfield, M., Curran, H.V. (2014). Proponents and opponents of legalization of marijuana: evidence of benefits and costs in three areas (psychosis, cognition, and motivation). Neuropsychopharmacology, 39, S24-S25.
95. Keutmann, M., **Gonzalez, R.**, Vassileva, J., Maki, P., Franco, C., Chen, S., Ladd, L., Martin, E. (2015). Sex differences in visuospatial memory impairment among HIV+ drug users. 43<sup>rd</sup> Annual Meeting of the International Neuropsychological Society.
96. Martin, E.M., **Gonzalez, R.**, Vassileva, J., Franco, J., Chen, S., Keutmann, M., Ladd, L., Maki, P.M. (2015). Verbal memory is impaired among HIV+ female, but not HIV+ male cocaine users. 77<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
97. Martin, E.M., Gonzalez, R., Maki, P.M., Franco, C., Chen, S., Keutmann, M., Ladd, L., Vassileva, J. (2015). Effects of sex and HIV serostatus on spatial learning performance of drug users. 13<sup>th</sup> Annual Symposium on NeuroVirology.
98. \*Duperrouzel, J.C. & **Gonzalez, R.** (2015). Relationship between changes in cannabis use and anxiety among adolescents. 77<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
99. \*Ross, J.M., Graziano, P., Duperrouzel, J.C., Gonzalez, I., **Gonzalez, R.** (2015). Moderating effects of decision-making on cannabis use and body mass index among adolescents. 77<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
100. **Gonzalez, R.**, Copeland, J., Yurcel, M. (2015). Of brains and bongos: the neuropsychology of cannabis use disorders and their treatment. 5<sup>th</sup> INS/ASSBI Pacific Rim Conference: Sydney, Australia.
101. **Gonzalez, R.** Cannabis, HIV, and Neuropsychological Functioning: Good Medicine? Miami CFAR Seminar Series. University of Miami School of Medicine.
102. \*Duperrouzel, J.C., Laird, A.R., Sutherland, M., Ross, J.M., **Gonzalez, R.** (2016). Functional neuroimaging consensus regarding executive function alterations among cannabis using adolescents and young adults. 44<sup>th</sup> Annual Meeting of the International Neuropsychological Society.
103. **Gonzalez, R.**, Gonzalez, I., Ross, J.M., Duperrouzel, J. (2016). Effects of cannabis use on neurocognition among persons living with HIV: preliminary observations. 44<sup>th</sup> Annual Meeting of the International Neuropsychological Society.
104. \*Ross, J.M., Duperrouzel, J., Gonzalez, I., **Gonzalez, R.** (2016). Decision-making and cannabis use interact to predict risky sexual behavior. 44<sup>th</sup> Annual Meeting of the International Neuropsychological Society.
105. **Gonzalez, R.**, Ross, J.M., Duperrouzel, J. (2016). Decision-making as a risk for development of cannabis dependence among teens: preliminary observations. 44<sup>th</sup> Annual Meeting of the International Neuropsychological Society.
106. Martin, E., **Gonzalez, R.**, Vassileva, J., Maki, P., Rubin, L., Hardy, D. (2016). Working memory performance is impaired for both male and female HIV+ substance users. 78<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
107. **Gonzalez, R.** (2016). "Marijuana: Impact on the brain and neurocognition." University of Miami Neurology Department Grand Rounds.
108. Martin, E.M., Keutmann, M., **Gonzalez, R.**, Rubin, L.H., Maki, P.M., Ladd, L., Vassileva, J. (2016). Sex differences in HIV effects on mechanisms of executive dysfunction among drug users. 14<sup>th</sup> Annual Symposium on Neurovirology.
109. **Gonzalez, R.**, Lopez-Quintero, C., Granja, K., Hawes, S. (2016). Performance of adolescent cannabis users on dimensions of decision-making. 55<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology.
110. \*Lopez-Quintero, C., Hawes, S., **Gonzalez, R.** (2016). Does decision-making modify the association between parental education and cannabis use? 55<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology.
111. \*Pacheco-Colon, I., Coxe, S., Duperrouzel, J., Ross, J.M., **Gonzalez, R.** (2017). The association between cannabis use and motivation among adolescents. 45<sup>th</sup> Annual Meeting of the International Neuropsychological Society.
112. Paz, A.L., Conniff, J., Ferrato, D., **Gonzalez, R.**, Roselli, M. (2017). Inhibitory processing predicts increases in binge drinking behavior: a six-month longitudinal design. 79<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
113. \*Duperrouzel, J.C., Pacheco-Colon, I., Lopez-Quintero, C., Hawes, S., **Gonzalez, R.** (2017). Material-specific sex differences in relationships between cannabis use and episodic memory among adolescents. 79<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence.
114. \*Pacheco-Colon, I., Hawes, S., Duperrouzel, J.C., **Gonzalez, R.** (2017). Does physical activity influence the association between cannabis use and memory? 79<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence, Montreal, Canada.

115. Riedel, M., Flannery, J.S., **Gonzalez, R.**, Laird, A.R., Sutherland, M.T. (2017). Combined impact of HIV and cannabis on insular functional connectivity. 47<sup>th</sup> Annual Meeting of the Society for Neuroscience.
116. **Gonzalez, R.** (2017). Assessment of Culture and Environment in ABCD. Presented in symposium, "The Adolescent Brain Cognitive Development Study (ABCD) – A discussion of the Goals and Methodologies. 2017 Annual Meeting of the American Psychological Association.
117. **Gonzalez, R.**, Pacheco-Colon, I., Lopez-Quintero, C. (2018). Reward sensitivity and motivation among adolescent cannabis users. Meeting of the International Neuropsychological Society 2018 – Washington D.C.
118. \*Pacheco-Colon, I., Hawes, S.W., **Gonzalez, R.** (2018). Adolescent cannabis use trajectories and motivation: a longitudinal analysis. Meeting of the International Neuropsychological Society 2018 – Washington D.C.
119. Martin, E., Maki, P., Fogel, J., **Gonzalez, R.**, Rubin, L., Keutmann, M., Hardy, D. (2018). Verbal and spatial working memory among drug-using HIV-infected men and women. 15th Annual Symposium on Neurovirology.
120. Hawes, S. W., **Gonzalez, R.**, Byrd, A. L., Pardini, D. A. (2018). Differences in reward processing across development and conduct problem subtypes. In L. C. Thornton (Chair), The neurobiology of callous-unemotional traits: A case for the importance of biological factors in understanding antisocial behavior. 2018 American Psychology-Law Society, Memphis, TN.
121. Riedel, M. C., Flannery, J. S., Gonzalez Jr, R., Laird, A. R., & Sutherland, M. T. (2018). Combined impact of HIV and cannabis use on insular functional connectivity. In *Society for Neuroscience*. San Diego, CA.
122. Lopez-Quintero C., Duperrouzel J.C., **Gonzalez, R.** (2018). The independent and combined effects of cannabis use and HIV on everyday functioning. World Psychiatric Association, Section on Epidemiology and Public Health 2018 Meeting, New York, NY.
123. \*Duperrouzel, J.C., Lopez-Quintero, C., Granja, K., Pacheco- Colón, I., Hawes, S., **Gonzalez, R.** (2018). Does anxiety moderate the effects of cannabis use on decision-making? 16<sup>th</sup> Annual Conference of the American Academy of Clinical Neuropsychology, San Diego, CA.
124. \*Pacheco-Colón, I. & **Gonzalez, R.** (2018). Is heavy cannabis use associated with reduced motivation among adolescents? 80th Annual Meeting of the College on Problems of Drug Dependence, San Diego, CA.
125. **Gonzalez, R.** & Hawes, S.W. (2018). Culture and environmental risk and protective factors: preliminary findings from the ABCD study. In workshop "The Adolescent Brain Cognitive Development (ABCD) Study: emerging findings on substance use, risk and protective factors, and neuroimaging" Chairs: Heitzeg, M. & Lisdahl, K. 80th Annual Meeting of the College on Problems of Drug Dependence, San Diego, CA.
126. Hawes, S. W., **Gonzalez, R.**, Brown, S. (2018). Callous-Unemotional Traits and its Correlates in the ABCD Study. In D. Barch (Chair), Big-Data Approaches to Identifying the Neurodevelopmental Trajectories of Psychiatric Illness: Novel Emerging Results from the Adolescent Brain and Cognitive Development Study. Paper presented at the 57th Annual Meeting of the American College of Neuropsychopharmacology, Ft. Lauderdale, FL.
127. Martin, E., **Gonzalez, R.**, Vassileva, J., Fogel, J., Bechara, A. (2018). Double dissociation of HIV and SUD effects on tasks dependent on striatal integrity. 80th Annual Meeting of the College on Problems of Drug Dependence
128. **Gonzalez, R.** & Hawes, S.W. (2018). Assessment of culture and environment. In workshop "The Adolescent Brain Cognitive Development Study: overview, emerging data, and opportunities" Chair: Brown, S.A. 2018 Annual Meeting of the American Psychological Association. San Francisco, CA.
129. Sanchez, M., Cano, M.A., Wuyke, G., **Gonzalez, R.**, & Arroyo., J. (2018, October). Preliminary Validation of the Vancouver Index of Acculturation in a Nationally Representative Cohort of Adults in the US. Poster presented at the National Hispanic Science 18th Annual International Conference. Rockville, MD.
130. **Gonzalez, R.**, Hawes, S. Pacheco-Cólon, I. (2018). Decision-making predicts escalating cannabis use among girls and boys. 2018 Annual Meeting of the American College on Neuropsychopharmacology. Hollywood, FL.
131. **Gonzalez, R.**, (2019). Cannabis and cognitive functioning in adolescence. Behavior and Development State-of-the-Art Lecture. Western Medical Research Conference. Carmel, CA.
132. **Gonzalez, R.** (chair, 2019). Debate: Going to pot? Clearing away the smoke on brain, behavior, and cannabis. 2019 Annual Meeting of the International Neuropsychological Society, New York, NY.
133. \*Pacheco-Cólon, I., Hawes, S.W., Duperrouzel, J.C., Lopez-Quintero, C., **Gonzalez, R.** (2019). Assessing measurement invariance of a latent decision-making construct in a sample of adolescent cannabis users. 2019 Annual Meeting of the International Neuropsychological Society, New York, NY.
134. \*Duperrouzel, J., Hawes, S.W., Pacheco-Cólon, I., Granja, K., **Gonzalez, R.** (2019). No evidence for additive adverse effects of alcohol and cannabis use on memory performance during adolescence. 2019 Annual Meeting of the International Neuropsychological Society, New York, NY.
135. Bottenhorn, K. L., Riedel, M. C., Sutherland, M. T., **Gonzalez, R.**, & Laird, A. R. (2019). Uncovering a latent factor structure underlying pre-adolescent self-regulation and its neural substrates. 2019 Social and Affective Neuroscience Society. Miami, FL.
136. Dick, A. S., Comer, J. S., Silva, K., **Gonzalez, R.**, Sutherland, M. T., Laird, A. R., ... Tapert, S. (2019). Leveraging the ABCD study to examine the effects of Hurricane Irma exposure. 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.
137. Dick, A. S., García, N. L., Pruden, S. M., Thompson, W. K., Hawes, S. W., Sutherland, M. T., ... **Gonzalez, R.** (2019). No bilingual advantage for executive function: Evidence from a large sample of children in the Adolescent

Brain and Cognitive Development (ABCD) study. Biennial meeting of the Society for Research in Child Development (SRCD), Baltimore, MD.

138. **Gonzalez, R.** & Hawes, S. (2019). Cultural and environmental predictors of early sipping in pre-teen youth. In symposium "What predicts early alcohol sipping, caffeine use and screen media activity in youth? Two-year findings from the adolescent brain cognitive development study. Chairs: Weiss, S. & Lisdahl, K. 81<sup>st</sup> Annual Meeting of the College on Problems of Drug Dependence. San Antonio, TX.
139. Pacheco-Colón, I., Hawes, S.W., Duperrouzel, J., Salamanca, M.J., **Gonzalez, R.** (2020). Disentangling longitudinal associations between adolescent cannabis use, decision making, and episodic memory. 2020 Annual Meeting of the International Neuropsychological Society. Denver, CO.
140. Duperrouzel, J.C., Pacheco-Colón, I., Hawes, S.W., **Gonzalez, R.** (2020). Associations among adolescent cannabis use trajectories, anxiety, and risky decision-making. . 2020 Annual Meeting of the International Neuropsychological Society. Denver, CO.

*\*Lead author is Dr. Gonzalez's trainee and/or Dr. Gonzalez is senior author.*

## **TEACHING & MENTORSHIP**

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### **Mentor on Funded Training Grants**

- |   |                                 |                              |
|---|---------------------------------|------------------------------|
| K01 DA046715  | R. Gonzalez (Primary Mentor)    | September 2018 – August 2023 |
| "Drug use disparities among Hispanics: elucidating the complex interactions between socio-cultural, neurocognitive and drug use-related factors." |                                 |                              |
| PI: Catalina Lopez-Quintero, Department of Epidemiology, University of Florida  |                                 |                              |
| F31DA047750   | R. Gonzalez (Primary Mentor)    | May 2019 – April 2020        |
| "Exercise, cognition, and cannabis use in adolescents.."  |                                 |                              |
| PI: Ileana Pacheco-Colon, Department of Psychology, Florida International University  |                                 |                              |
| F31 DA044013  | R. Gonzalez (Mentor/Consultant) | April 2018 – May 2021        |
| "7T Functional MRS assessment of pain processing in cannabis users"   |                                 |                              |
| PI: Julio Yanes, Department of Psychology, Auburn University  |                                 |                              |
| K01 DA037819  | R. Gonzalez (Co-Sponsor)        | May 2014 – April 2019        |
| "Impact of HIV and cannabis on brain function: Regions, networks, and the connectome."  |                                 |                              |
| PI: Matthew Sutherland, Department of Psychology, Florida International University  |                                 |                              |
| F31 DA038388  | R. Gonzalez (Mentor/Consultant) | August 2014 – August 2017    |
| "Neurocognitive, affective, and psychosocial correlates of adolescent substance use."   |                                 |                              |
| PI: Natania Crane, Department of Psychology, University of Illinois Chicago   |                                 |                              |
| F31 DA032244  | R. Gonzalez (Co-Sponsor)        | July 2011 – July 2014        |
| "A situational examination of neurocognition and affect with simultaneous cannabis and tobacco use"   |                                 |                              |
| PI: Randi Schuster, Department of Psychology, University of Illinois Chicago  |                                 |                              |

### **Guest Lectures at University Courses, Seminars, & Workshops**

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|-------------|--|
| 2006        | Neuropsychology of Substance Use Lecture: UIC Psychology Graduate Program                        |
|             | Brown Bag Seminar  |
| 2009        | THC & Cannabinoid Receptors: Seminar in Biopsychology, Drug Addiction; UIC Dept. of Psychology   |
| 2007 – 2009 | "Addiction," Brain & Behavior Course; UIC School of Medicine                                     |
| 2011        | Neuropsychology of Cannabis Use and Addiction: UIC Psychology Graduate Program Brown Bag Seminar |
| 2011        | "Substance Use Disorders," UIC Psychiatry Resident Cog Neurosci Seminar                          |
| 2004 – 2012 | "Left-hemisphere Syndromes," Applied Neuropsychology seminar at UIC                              |
| 2004 – 2012 | "Frontal Lobes" Neuroanatomy Review seminar at UIC   |
| 2012        | "Substance Use Disorders," Applied Neuropsychology seminar at UIC                                |
| 2012, Fall  | "Biomarkers and Neuroscience," CLP5470 Evidence Based Treatment I, FIU                           |

2012, Fall	"Substance Use as a Developmental Disorder," PSY5939, Special Topics: Developmental and Learning Disorders, FIU
2014, Spring	"Introduction to Neuropsychological Assessment for Social Work," SOW5379 Interviewing Skills, FIU
2013 - 2017	"Substance Use Disorders," CLP5483 Evidence Based Treatment II, FIU
2014 - P	"Basics of Neuropsychological Assessment and its Applications in Medical Settings," BMS6636 Nervous System: Brain and Behavior, FIU

#### **Courses Taught**

2014, Spring	PSY 5939 – U11 Special Topics in Psychology, Clinical Neuropsychology, FIU
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#### **Clinical Supervision**

2006 – 2008	Neuropsychology Clinical Supervisor, Neuropsychology Service, UIC
2012 – P	Director, Substance Use and HIV Neuropsychology Laboratory, FIU

#### **Undergraduate Students (Research Supervision)**

2009 – 2010	Zandre Labuschagne, Psychology, University of Illinois Chicago
2010	Scott Sherman, Indiana University
2010 – 2011	Maddy Nudelman, Psychology, University of Illinois Chicago
2010 – 2011	Inga Salija, Neuroscience, University of Illinois Chicago
2010 – 2011	Regina Reina, Neuroscience, University of Illinois Chicago
2012 – 2014	Caludine Hernandez, Psychology, Florida International University
2013 – 2014	Jalesa Menzie, Psychology, Florida International University
2013 – 2014	Elizabeth Rodriguez, Psychology, Florida International University
2013 – 2014	Karen Granja, Psychology, Florida International University
2014 – 2015	Maryanne Vaca, Pre-Med, Florida International University
2015 – 2016	Julia Schwarz, Psychology, Florida International University
2012 – 2016	Ingrid Gonzalez, Statistics, Florida International University
2014 – 2016	Ifrah Waheed, Pre-Med, Florida International University
2014 – 2016	William Pulido, Pre-Med, Florida International University
2014 – 2016	Keylanni J. Alvarez, Psychology, Florida International University
2015 – 2016	Carol Sanchez, Biology, Florida International University
2015 – 2016	Angelica Taube, Florida International University
2015 – 2017	Roberto Gonzalez, Biology, Florida International University
2015 – 2017	Mariana Salamanca, Biology, Florida International University

#### **PhD Students, Master's Students, and Post-doctoral Fellows (Clinical Supervision)**

2006 – 2007	Jeff Kazmierczak, PhD Student, Roosevelt College
2006 – 2007	Moir Dux, Graduate PhD, Rosalind Franklin
2006 – 2007	Dalin Pulsipher, PhD Student, Rosalind Franklin
2006 – 2008	Lauren Schwarz, PhD Fellow, University of Illinois Chicago
2006 – 2008	Alona Ramati, Postdoctoral Fellow, University of Illinois Chicago
2007 – 2008	Caitlyn Sparks, PhD Student, Loyola University
2007 – 2008	Michelle Kramer, PhD Student, Adler Professional School
2007 – 2008	Jennifer Veilleux, PhD Student, University of Illinois Chicago
2008	Martin Kim, PhD Student, Illinois Institute of Technology
2008	Elizabeth Geary, Postdoctoral Fellow, University of Illinois Chicago
2013 – 2014	Kathleen Ortuno, Counseling Master's Student, Florida International University
2013 – 2014	Linda Bustos, Counseling Master's Student, Florida International University
2013 – 2014	Erin Hedemann, Clinical Psychology PhD Student, FIU
2014 – 2015	Natalia Guzman, Counseling Master's Student, Florida International University
2014 – 2015	Giovanna Basmagi, Counseling Master's Student, Florida International University
2014 – 2015	Jessica Jaramillo, Counseling Master's Student, Florida International University
2014 – 2015	Kayla Pickarski, Counseling Master's Student, Florida International University
2015 – 2016	Melisa Alonso, Counseling Master's Student, Florida International University
2015 – 2016	Natasha Aurobindo, Counseling Master's Student, Florida International University
2015 – 2016	Kayla Caine, Counseling Master's Student, Florida International University
2015 – 2016	Jose Taque, Counseling Master's Student, Florida International University
2016 – 2017	Rosario Pinto-Lobos, Counseling Master's Student, Florida International University

#### **PhD Students, PhD Candidates, & Medical Students (Research Supervision)**

2006 – 2007	Jason Rodriguez, Medical Student, University of Illinois Chicago
2006 – 2007	Evelyn Fakhouri, Medical Student, University of Illinois Chicago
2007 – 2008	Kara Bagot, Medical Student, University of Illinois Chicago
2007 – 2008	Oliver Chang, Medical Student, University of Illinois Chicago
2007 – 2008	Phillip Quartana, Clinical Psychology Intern, University of Illinois Chicago
2008	Brian Wolf, Medical Student, University of Illinois Chicago
2008 – 2009	Margaret Wardle, Clinical Psychology Intern, University of Illinois Chicago
2008 – 2009	Erin Scheidenmantel, Medical Student, University of Illinois Chicago
2009	Katherine Shannon, Clinical Psychology Intern, University of Illinois Chicago
2009 – 2010	Lindsay Martin, Medical Student, University of Illinois Chicago
2009 – 2010	Jade Pagkas-Bather, Medical Student, University of Illinois Chicago
2010	Tina Dehghan, Medical Student, University of Illinois Chicago
	<i>Jeanne Spurlock Minority Medical Student Fellowship in Substance Abuse and Addiction (supported by NIDA via AACAP)</i>
2009 – 2011	Peter Colvin, Clinical Psychology PhD Student, University of Illinois Chicago
2009 – 2013	Randi Schuster, Clinical Psychology PhD Student, University of Illinois Chicago
2011 – 2013	Natania Crane, Clinical Psychology PhD Student, University of Illinois Chicago
2013 – 2017	J. Megan Ross, Clinical Psychology PhD Student, FIU
2014 – P	Jacqueline Deuperouzel, Clinical Psychology PhD Student, FIU
2015 – P	Ileana Pacheco-Colon, Clinical Psychology PhD Student, FIU

#### **Preliminary Exam Committees**

2010	Vanessa Meyer	Neuroscience PhD Program, University of Illinois Chicago
2011	Randi M. Schuster	Clinical Psychology PhD Program, University of Illinois, Chicago

#### **Master's Thesis Committees**

2009	Peter J. Colvin	Department of Psychology, University of Illinois Chicago "Adolescents' acute emotional responses following smoking: Examining the role of expectancies."
2010	Randi M. Schuster	Department of Psychology, University of Illinois Chicago "Parenting practices as potential moderators of the links between depression, substance use and risky sexual behavior among adolescents."
2012	Natania Crane	Department of Psychology, University of Illinois Chicago "Examining neurocognitive sex differences in young adult cannabis users."
2012	J. Megan Ross	Department of Psychology, University of Illinois Chicago "The moderating effects of cannabis use and decision-making on the relationship between conduct disorder symptoms and risky sexual behavior."

#### **Dissertation Committees**

2008	Justin Greenstein	Department of Psychology, University of Illinois Chicago "The effects of smoking and smoking abstinence on working memory performance."
2008	Margaret Wardle	Department of Psychology, University of Illinois Chicago "Alcohol, emotions, and judgment."
2009	Daniel P. Evatt	Department of Psychology, University of Illinois Chicago "Effects of smoking on affect in adolescent smokers: The influence of attention and arousal."
2011	Peter J. Colvin	Department of Psychology, University of Illinois Chicago "Patterns of anxiety, stress, and substance use during adolescence."
2011	Adrienne Heinz	Department of Psychology, University of Illinois Chicago "The combined effects of alcohol and caffeine on judgments of personal agency, impulsivity, and risk taking behavior."
2012	Ashley Braun	Department of Psychology, University of Illinois Chicago "A multi-definitional investigation of binge drinking's effects on executive function, delay discounting, and mood."
2012	Katie-Lee Elliott	School of Psychology, University of Western Australia "Decision-making in individuals with acquired brain injury and its relationship to psychosocial functioning." (served as Thesis Marker).
2013	Randy M. Schuster	Department of Psychology, University of Illinois Chicago "A situational examination of neurocognitive with simultaneous cannabis and tobacco use."
2013	Ryan Hill	Department of Psychology, Florida International University "The development, open trial, and pilot randomized trial of a novel computer-based intervention to reduce perceived burdensomeness among adolescents."
2014	Natalia Shtompel	School of Social Work, Florida International University

2014	Dainelys Garcia	Department of Psychology, Florida International University	"Home-based dyadic cognitive training for healthy older couples: A randomized controlled trial."
			"Parent-child interaction therapy as a family-focused approach for young children with traumatic brain injury."
2015	Kelly Gough	School of Psychology, University of Western Australia	"Neuropsychological, mood and demographic predictors of substance dependency treatment completion and outcomes." (served as Thesis Marker).
2015	Natania Crane	Department of Psychology, University of Illinois at Chicago	"Neurocognitive, affective, and psychosocial correlates of adolescent substance use."
2015	Anthony Ward	Psychology, Florida International University	"Cognitive Factors and Parasympathetic Regulation as Interacting Mechanisms of Attention-Deficit/Hyperactivity Disorder"
2016	Michelle-Ann Rhoden	Public Health & Social Work. Florida International University	TBD
2016	J. Megan Ross	Psychology, Florida International University	"Risky sexual behavior and the role of decision-making"
2019	Jacqueline Duperrouzel	Psychology, Florida International University	"Associations between adolescent cannabis use trajectories and anxiety"
2019	Ileana Pacheco-Colón	Psychology Florida International University	TBD

### *SERVICE TO THE UNIVERSITY*

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2007 – 2008	Information Technology Steering Committee, Dept. of Psychiatry, UIC
2008 – 2011	UIC Clinical Psychology Predoctoral Internship Website Development Committee
2006 – 2012	UIC Clinical Psychology Predoctoral Internship Training Committee
2011 – 2012	College of Medicine Representative, University of Illinois at Chicago Faculty Senate
2011 – 2012	UIC OVCR Campus Research Board, Clinical Sciences Subcommittee
2012 – 2013	Research Centers in Minority Institutions (RCMI) Planning Committee, FIU
2013 – 2014	Chair, Cognitive Neuroscience Area Faculty Search Committee, Dept. of Psychology, FIU
2012 – 2014	Cognitive Neuroscience Initiative Committee, School of Integrated Science and Humanity (SISH), Florida International University (FIU)
2014	Panelist, "Publishing in peer-reviewed journals," SISH Faculty Mentor Program
2014	Panelist, "Applying for grants," FIU Dept. of Psychology Professional Development Series
2014	Assistant Prof. of Immunology Search Committee, Dept. of Immunology, FIU HWSOM
2014	McNair Fellowship Reviewer
2014	Panelist, "Careers in Cognitive Neuroscience," FIU Undergraduate Conference
2014 – 2015	Chair, Cognitive Neuroscience Area Faculty Search Committee, Dept. of Psychology, FIU
2013 – 2016	Chair, Clinical Science Area, Internship Committee, Dept. of Psychology, FIU
2016	Judge, Graduate Scholarly Forum, FIU
2013 – 2016	Mentor, FIU Faculty Mentor Program, SISH, FIU
2013 – 2017	Advisory Committee, Dept. of Psychology, FIU
2013 – 2018	Chair, Center for Children and Families (CCF) Research Resources Committee
2012 – P	Cognitive Neuroscience Program Committee, Dept. of Psychology, FIU
2012 – P	Clinical Science Program Committee, Dept. of Psychology, FIU
2014 – P	Department of Psychology Bylaws & Merit Criteria Revision Committee
2016 – P	Member, Clinical Science Area, Internship Committee, Dept. of Psychology, FIU
2016 – P	Member, Clinical Science Area, Curriculum Committee, Dept. of Psychology, FIU
2016 – P	Center for Imaging Sciences @ FIU, Steering Committee

### *SERVICE TO THE PROFESSION*

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2007	International Neuropsychological Society Mid-Year Meeting Program Committee
2008	International Neuropsychological Society Annual Meeting Program Committee
2004,'06,'10	American Psychological Association Division 40 Ethnic Minority Affairs Mentor at the 32 <sup>nd</sup> Annual Meeting of the International Neuropsychological Society
2006 – 2012	Continuing Education Committee of the International Neuropsychological Society
2011 – 2013	National Academy of Neuropsychology Conference Program Committee
2011 – 2014	American Psychological Association, Division 40 Program Committee

2012 – 2015 Member, American Psychological Association – Division 40 Public Interest Advisory Committee Ethnic Minority Affairs Subcommittee

2013 – 2015 Mentor, APA – Div40 Ethnic Minority Affairs Subcommittee Mentorship Program

2016 International Neuropsychological Society Mid-Year Meeting Program Committee

2016 Reviewer. National Academy of Sciences Report: “The health effects of cannabis and cannabinoids.”

2012 – 2018 Director of Continuing Education, International Neuropsychological Society

2017-2018 Member, INS Continuing Education Director Search Committee

2018 Member, INS Nominations Committee 2018

2019 – P Member, External Advisory Board, T32 Training in Research on Addictions in NeuroAIDS, UCSD

2019 – P Member, National Advisory Council for UCSD Center for Medicinal Cannabis Research

2019 – P Member, Training Committee for FIU T32 Training Program in Adolescent Substance Use and Mental Health

#### NIH Grant Reviews:

2012/11 F02A, Fellowships: Behavioral Neuroscience

2013/1 AARR-C, Member Conflict: AIDS and AIDS Related Research

2013/3 F02A, Fellowships: Behavioral Neuroscience

2013/3 AARR-G, B/START R03: AIDS and AIDS Related Research

2013/10 AARR-F, B/START R03: AIDS and AIDS Related Research

2013/12 ZDA1 SXC-E, CEBRA: Cutting-Edge Basic Research Awards (R21)

2014/10 ZRG1 RPHB-W, Member Conflict: Psychosocial Development and Behavioral Medicine

2015/5 ZRG1 BBBP-Y, Member Conflict: Biobehavioral Regulation, Learning, and Ethology

2016/7 ZRG1 BBB-P, Member Conflict: Biobehavioral Regulation, Learning, and Ethology

2016/7 – P Biobehavioral Regulation, Learning, and Ethology (BRLE) study section member

#### Other Grant Reviews:

2009 Medical Research Council, Clinician Scientist Fellowships, United Kingdom

2010 Wellcome Trust, United Kingdom

2010 Clinical Infectious Disease Research Initiative, Entry Level Research Award  
University of Capetown, South Africa

2011 HIV Neurobehavioral Research Center Developmental Grant Review  
University of California, San Diego, USA

2012 United States-Israel Binational Science Foundation  
Jerusalem, Israel

2012 Faculty Research Support Program  
Florida International University, Miami, FL, USA

2012 – 2014 HIV Neurobehavioral Research Program Development Grant Review  
University of California, San Diego, USA

#### Journal Editorial Boards:

2011 – 2014 Journal of the International Neuropsychological Society

2013 – 2015 Archives of Clinical Neuropsychology

2013 – P Neuropsychology

#### Ad hoc Journal Reviewer:

Addiction	J of Neuropsychiatry and Clinical Neurosciences
American Journal on Addictions	J of Psychopharmacology
American Journal of Drug and Alcohol Abuse	J of Studies on Alcohol and Drugs
AIDS and Behavior	Lancet Psychiatry
Archives of Clinical Neuropsychology	Neurocase
Clinical Psychology Review	Neuropsychology Review
The Clinical Neuropsychologist	Pharmacopsychiatry
Drug and Alcohol Dependence	PLoS ONE
Experimental and Clinical Psychopharmacology	Proceedings of the National Academy of Sciences
Frontiers in Psychology	Psychiatry Research
Int. J of Neuropsychopharmacology	Psychological Medicine
J of Abnormal Child Psychology	Psychoneuroendocrinology
J of Clinical and Experimental Neuropsychology	Psychopharmacology

## SERVICE TO THE COMMUNITY

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### Community Presentations

- 2013 (5/23/2013). Gonzalez, R. "My brain made me do it" A brief introduction to the neurobiology of risky behavior and the implications for teen drug use and risky sex." *Miami-Dade United Way Annual Symposium*. Miami, FL.
- 2014 (10/9/2014). Gonzalez, R., Ross, J.M., Paula, D. "Risky business: Teen risk-taking, marijuana use, and the brain" *MDCPS TRUST Councilor Drug Prevention and Community Services Program*. Barbara Goleman Senior High School, Hialeah, FL.
- 2014 (10/28, 10/29, 10/31/2014). Gonzalez, R., Ross, J.M., Paula, D. "*The grass and the weeds: Science and facts about marijuana – the things we know and the things we don't know.*" Southwest Miami Senior High School, Miami, FL.
- 2015 (8/14/2015). Gonzalez, R. "The impact of cannabis use on the neurocognitive functioning of individuals with HIV/AIDS." Miami-Dade HIV/AIDS Partnership, Miami, FL.
- 2015 (11/9/15). Gonzalez, R. "Cannabis use and neuropsychological functioning: Current science and its clinical implications." Niklaus Children's Hospital, Miami, FL.
- 2016 (3/11/16). Gonzalez, R. "Cannabis use and neurocognitive functioning." 1<sup>st</sup> Annual South Florida Student Research Symposium. Keynote Speaker. Albizu University. Miami, FL.
- 2016 (6/10/16). Gonzalez, R. Cannabis. FIU Counseling and Psychological Services (CAPS), Intern Training Seminar. Miami, FL.
- 2016 (8/15/16). Gonzalez, R. Marijuana: Update on its effects on cognitive functions. Ransom Everglades Middle School Professional Seminar. Coconut Grove, FL.
- 2017 (5/12/17). Gonzalez, R. "Marijuana: Update on the science of its cognitive effects." Niklaus Children's Hospital, Miami, FL.
- 2018 (4/11/18). Gonzalez, R. "Cannabis and cognition in youth: Medicine or malady." Maternal and Child Health Grand Rounds. Wertheim School of Medicine, FIU, Miami, FL.
- 2018 (4/13/18) Gonzalez, R. "Cannabis and Cognition: Emerging findings." FIU Counseling and Psychological Services (CAPS), Intern Training Seminar. Miami, FL.
- 2018 (11/19/18) Gonzalez, R. "Cannabis and cognition in teens." Niklaus Children's Hospital, Miami, FL.
- 2018 (12/4/18) Gonzalez, R. "Neurocognitive risk factors and consequences of adolescent cannabis use: Preliminary results from a longitudinal study" Florida Atlantic University Neuroscience Seminar Series. Boca Raton, FL.
- 2019 (3/21/2019) Gonzalez, R. "ABCD-FIU, An Introduction and Progress." FIU ABCD Community Liaison Board. Miami, FL.

### PRESS & MEDIA

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- 2013 Quoted in "Science" magazine article, "Painkillers may curb memory loss from medical marijuana." <http://news.sciencemag.org/brain-behavior/2013/11/painkillers-may-curb-memory-loss-medical-marijuana?rss=1>



- 2014 Quoted in "Science" magazine article, "Hardcore pot smoking could damage the brain's pleasure center." <http://news.sciencemag.org/brain-behavior/2014/07/hardcore-pot-smoking-could-damage-brains-pleasure-center>
- 2015 Quoted in "Science" magazine article, "Canadian registry track thousands of pot smokers." <http://news.sciencemag.org/health/2015/05/canadian-registry-track-thousands-pot-smokers>
- 2015 Quoted in "Wired" magazine article, "Researchers are finally studying the other chemical in pot." <http://www.wired.com/2015/06/researchers-finally-studying-chemical-pot/>
- 2015 "University researcher leads 10-year brain study." Florida International University Student Media. <http://fiusm.com/2015/10/18/university-researcher-leads-10-year-brain-study/>
- 2015 "NIH launches landmark study on substance use and adolescent brain development." NIH Press Release, covered in numerous media outlets.
- 2015 "FIU awarded \$12.7M to study substance abuse impact on adolescent brains." FIU Press Release, covered in numerous media outlets (including Miami Herald & CBS Miami).
- 2015 CNN Español TV appearance. "Vive la Salud con la Dra. Azaret" Originally aired Saturday 12/5 at 8pm ET.
- 2017 Quoted in "Science News Magazine" article, "Promise and perils of marijuana deserve more scientific scrutiny" <https://www.sciencenews.org/article/promise-and-perils-marijuana-deserve-more-scientific-scrutiny>
- 2017 CNN Español TV appearance. "Vive la Salud con la Dra. Azaret" Originally aired Saturday 6/16 at 8pm ET.
- 2017 CNN Español TV appearance. "Vive la Salud con la Dra. Azaret" Originally aired Saturday 11/11 at 8pm ET.
- 2017 Work featured in Miami Herald Article, "Miami-Dade children (and their brains) are part of a historic nationwide study." <http://www.miamiherald.com/news/local/education/article164089052.html>
- 2018 WLRN "Sundial" Radio Show: "Miami Beach Police Chief, CNN Reporter Layla Santiago, & FIU Childhood Success Study" Originally aired Wednesday 7/18 at 1PM ET. <http://wlrn.org/post/miami-beach-police-chief-cnn-reporter-leyla-santiago-fiu-childhood-success-study>
- 2018 Univision TV appearance, "Primer Impacto" Originally aired Tuesday, 7/24 at 5PM ET.

## *CLINICAL EXPERIENCE*

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### **NEUROPSYCHOLOGICAL ASSESSMENT**

#### **HIV NEUROBEHAVIORAL RESEARCH CENTER (HNRC), UNIVERSITY OF CALIFORNIA, SAN DIEGO**

1998 – 2003: Graduate Student Trainee / Research Associate

#### **PRE/POST CONCUSSION NEUROPSYCHOLOGICAL TESTING FOR THE NFL SAN DIEGO CHARGERS**

2000 – 2002: Assistant Student Coordinator

2002 – 2003: Student Coordinator

**VETERANS AFFAIRS SAN DIEGO HEALTHCARE SYSTEMS – NEUROPSYCHOLOGY PRACTICUM**

2001 – 2002: Practicum Student

**PEDIATRIC NEUROPSYCHOLOGY SERVICE, UNIVERSITY OF ILLINOIS, CHICAGO**

2004 (6-months): Intern

**NEUROPSYCHOLOGY SERVICE, UNIVERSITY OF ILLINOIS, CHICAGO**

2003 – 2004: Intern

2004 – 2006: Postdoctoral Fellow

2006 – 2008: Attending Neuropsychologist, Clinical Supervisor

**CHICAGO NEUROPSYCHOLOGY GROUP**

2008 – 2012: Associate Neuropsychologist

**PSYCHOTHERAPY**

**UCSD OUTPATIENT PSYCHIATRIC SERVICES**

1999 – 2000: Practicum Student

**SAN DIEGO STATE UNIVERSITY PSYCHOLOGY CLINIC**

2000 – 2001: Practicum Student

**BEHAVIORAL MEDICINE SERVICE, UNIVERSITY OF ILLINOIS, CHICAGO**

2005 (6-months): Intern

***PROFESSIONAL MEMBERSHIPS***

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- Member, International Neuropsychological Society
- Member, College on Problems of Drug Dependence
- Associate Member, American College on Neuropharmacology

***LANGUAGES***

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**ENGLISH** – Write, read, & speak fluently

**SPANISH** – Native speaker and can read/write proficiently

## Angela R. Laird, Ph.D.

### Curriculum Vitae

#### Contact Information

Florida International University  
Modesto Maidique Campus  
Department of Physics AHC-4 310  
11200 SW 8th ST  
Miami, FL 33199

Phone: (305) 348-6737

Fax: (305) 348-6700

Email: [alaird@fiu.edu](mailto:alaird@fiu.edu)

<http://neurolab.fiu.edu>

Citizenship: United States

#### Education

Ph.D. University of Wisconsin, Madison, WI, Physics/Medical Physics, December 2002  
Functional Magnetic Resonance Imaging (fMRI) Analysis Methods

M.S. University of Wisconsin, Madison, WI, Physics/Medical Physics, May 2001

B.S. Florida State University, Tallahassee, FL, Physics, May 1998

#### Employment

2016-present Director, Center for Imaging Science, Florida International University, Miami, FL  
*The CIS is a multidisciplinary research center designed to support an integrated community of researchers at the forefront of imaging science, with an emphasis on functional neuroimaging research. The CIS includes a research-dedicated facility that houses a 3T Siemens MAGNETOM Prisma MRI scanner.* <http://cismri.fiu.edu>

2016-present Professor, Department of Physics, College of Arts, Sciences, & Education, Florida International University, Miami, FL

2012-2016 Associate Professor with Tenure, Department of Physics, College of Arts & Sciences, Florida International University, Miami, FL *courtesy appointments in the Departments of Psychology (College of Arts & Sciences) and Neuroscience (College of Medicine), effective 2014, and in the Department of Psychiatry (College of Medicine), effective 2015*

2011-2012 Associate Professor with Tenure, Department of Radiology, Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX

- 2005-2011 Assistant Professor, Department of Radiology, Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX
- 2004-2005 Instructor, Department of Radiology, Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX
- 2003-2004 Postdoctoral Fellow, Neuroinformatics and Meta-Analysis in Neuroimaging, Advisor: Dr. Peter Fox, Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX

## Honors and Awards

- 2017 Florida International University “*Top Scholar*” Award
- 2015 American Physical Society (APS) Committee on the Status of Women in Physics “*Woman Physicist of the Month*”
- 2014 Invited Attendee at The 2014 White House BRAIN Conference
- 2014 Florida International University, Provost’s Research Excellence Award
- 2014 Florida International University, 1<sup>st</sup> Finalist, Presidential Excellence Award
- 2014 Thomson Reuters “*Highly Cited Researcher*” <http://www.highlycited.com>
- 2013 Florida International University “*Top Scholar*” Award
- 2010 University of Texas System “*Rising STARS*” Award for Faculty Excellence
- 2006 Paper of the Year, Organization for Human Brain Mapping
- 2002 Hirschfelder Award for Academic Excellence in Graduate Level Physics, University of Wisconsin, Madison, WI
- 2002 IEEE EMBS-BMES Special Travel Award for Presenting Authors
- 2001 UW-Madison Graduate Student Council Vilas Travel Award
- 2000 Committee on Institutional Cooperation (CIC) Women in Science and Engineering (WISE) Travel Grant, University of Wisconsin, Madison, WI
- 1998 Chen Distinguished Graduate Fellowship, University of Wisconsin, Madison, WI
- 1998 Van Vleck Fellowship for Graduate Students in Physics, UW-Madison

## Research Support

### Current

NSF DUE 1458425 (PI: Simpson, Raue, A. Laird, Kramer, R. Laird)

#### **“Enhancing Undergraduate Success in Physics”**

06/01/2015 – 05/31/2020 \$609,058 Total Award 0.00 months

The Department of Physics at Florida International University serves over 150 undergraduate majors and is one of the country's largest producers of Physics baccalaureate degrees awarded to Hispanic students. To ensure their timely and successful degree completion, this project offers scholarships to undergraduate physics majors and provides a unique opportunity to increase the success of historically underrepresented groups in physics, as well as to develop deeper understanding of practices that support these groups.

NSF 1631325 (PI: Laird and Turner)

#### **“NCS-FO: Integrative Knowledge Modeling in Cognitive Neuroimaging”**

08/01/2016 – 07/31/2020 \$727,731 Total Award NCE

This BRAIN Initiative project is developing integrative text mining approaches to facilitate controlled vocabulary use in functional neuroimaging, including concepts related to behavioral task and the associated mental function(s) elicited. These tools will allow the cognitive neuroimaging community to collectively address hurdles such as annotating their own data and sharing their data/results via annotation in a public repository, journal, or knowledge discovery platforms, and ultimately lead to long-term strategies for cross-domain, transdisciplinary cognitive model development. Large-scale meta-analytic evaluations of cognitive models within the exemplar domains of executive function, reward processing, and social cognition will be carried out to evaluate the developed tools. Motivated by an emphasis on efficiency, open data sharing, and transdisciplinary collaborations, this project will deliver a new open-source resource, ATHENA (*Automated Text Harvesting and Exploration of Neuroimaging Annotations*), which leverages existing resources in top-down annotation and ontology expertise and in bottom-up semantic extraction and text mining algorithms.

FIU Embrace (PI: Laird)

**“Social processing in High Functioning Autism Spectrum Disorder”**

05/07/2018 – 08/23/2020

\$215,928 Total Direct Costs

0.5 months

This FIU internal award is supported by the Embrace, a university-wide initiative that promotes health, wellness, and overall functioning for adults with developmental disabilities, such as autism spectrum disorder, intellectual disabilities, and other neurodevelopmental disorders. The purpose of this project is to work with local partners to design and develop an approach for examining social processing deficits that most impact clinical and academic outcomes in individuals with mild to moderate autism spectrum disorder. The primary outcome will be a robust psychiatric, behavioral, psychophysiological, and imaging protocol to investigate social processing in high-functioning individuals with ASD.

NSF CNS 1532061 (PI: Adjouadi, Laird, Cabrezio, Rishe)

**“MRI: Development of an Integrated Neuroimaging Instrument with Temporal and Spatial Alignments for Brain Research”**

09/16/2015 – 08/31/2021

\$687,990 Total Annual Costs

NCE

This project seeks to build an integrated neuroimaging instrument with specialized software and unique hardware designs that will elicit new understanding of the functional mappings of the brain in its normal and pathology states focusing on key neurological disorders.

NIH R01 DA041353 (PI: Laird, Sutherland)

**“Neuroimaging meta-analytics for addiction: Nodes, networks, and new heuristics”**

06/01/2017 – 04/30/2021

\$150,000 ADC

NCE

Despite strong theoretical and clinical interest, characterization of the common and distinct neurobiological alterations across drug and behavioral addictions cannot be feasibly addressed within a single neuroimaging study. Our research project will fill this knowledge gap by using neuroimaging meta-analytic tools and a large amalgamated resting state fMRI (rs-fMRI) data set (>1,450 chronic drug users) to rigorously characterize common (addiction-general) and distinct (drug/condition-specific) network-level brain alterations across addictive disorders. Assessment of large-scale brain networks through meta-analytic and rs-fMRI approaches provides a more complete framework to appreciate such addiction-related alterations. As such, the innovative methodological combination offers the ability to inform heuristic frameworks guiding future research, fractionate the addiction phenotype, and identify neurobiological intervention targets.

NIH R01 MH112588 (PI Graziano/Dick)

Role: Co-Investigator

**“Biosignatures of executive function and emotion regulation in young children with ADHD”**

09/10/2016 – 08/31/2021

\$489,282

0.36 months

This project seeks to identify “biosignatures” of psychological and biological variables that can predict responses to interventions for ADHD.

NIH U01 DA041156 (PI: Gonzalez, Laird)

**“ABCD-USA Consortium: Research Project Site at FIU”**

09/30/2015 – 03/31/2027

\$1,940,521 ADC

2.62 months

This U01 funds the Florida International University as a site in NIDA’s Adolescent Brain Cognitive Development (ABCD) Study Consortium, which will follow approximately 10,000 children beginning at ages 9 to 10 to characterize the impact of exposure to drugs of abuse on academic achievement, cognitive abilities, mental health, and brain structure and function. The aims of the study are to establish how diverse patterns of substance use impact the developing brain. The FIU ABCD site will uniquely contribute to achieving these aims and enhance their impact and significance through enrollment of multi-ethnic Latino youth from South Florida.

Completed

NSF EAGER 1805645 (PI: Dick and Comer)

**“RAPID: Leveraging the ABCD Study to Examine the Effects of Hurricane Irma Exposure: The Disaster and Youth, Neural and Affective Maturation in Context (DYNAMIC) Study”**

01/15/2018 – 12/31/2019

Role: Co-Investigator

NSF REAL DRL-1420627 (PI: Laird, Brewe, and Pruden)

**“Exploring the Neural Mechanisms of Physics Learning”**

08/15/2014 – 07/31/2018

Role: Principal Investigator

NIH U24 DA039832 (PI: Martone and Grethe; Sub-award PI: Laird)

**“Operation, Support, and Strategic Enhancement of the Neuroscience Information Framework”**

04/01/2015 – 03/31/2017

Role: Co-Investigator; PI of Sub-Award to FIU

NIH R56 MH097870 (PI: Turner and Laird)

**“BrainMap Tracker: Automated Annotation of Brain Mapping Experiments”**

08/07/2012 – 12/31/2016

Role: Principal Investigator

NIH R01 MH074457 (PI: Fox; Laird)

**“Meta-Analysis in Human Brain Mapping”**

09/01/10 – 05/31/16

Role: Principal Investigator

NIH 1 R01 MH084812 (PI: Laird and Turner)

**“Developing a Cognitive Paradigm Ontology: BrainMap and BIRN Integration”**

08/01/09 – 06/30/13

Role: Principal Investigator

NIH 5 R01 DC001150 (PI: Ramig)

**“Efficacy of Voice Treatment for Parkinson’s Disease”**

09/20/07 – 07/31/12

Role: Co-Investigator

Department of Defense (PI: Fox)

**“STRONGSTAR Neuroimaging Core”**

09/01/08 – 07/31/12

Role: Co-Investigator

NIH 2 R01 DC006243 (PI: Larson)

**“Sensory Mechanisms of Voice Control”**

04/01/09 – 07/31/12

Role: Co-Investigator

Dept. of Army/USAMRAA (PI: Robin and Lewis)

**“Investigation of Chronic Pain Following Traumatic Brain Injury”**

12/15/10 – 07/31/12

Role: Co-Investigator

VA Merit (PI: Lovallo)

**“Neuroimaging in the Oklahoma Family Health Patterns”**

04/01/09 – 07/31/12

Role: Co-Investigator

NIH 1 R01 AA019691 (PI: Lovallo)

**“Neuroimaging in the Oklahoma Family Health Patterns Project”**

12/02/10 – 07/31/12

Role: Co-Investigator

NIH 1 R21 DC009467 (PI: Narayana)

**“Expanding a Neural Model of Speech Using Virtual Lesions and Connectivity Studies”**

12/01/08 – 11/30/11

Role: Co-Investigator

NIH 1 R21 NS065431 (PI: Szabo)

**“Multimodal Evaluation of Networks Underlying Photosensitive Epilepsy in Baboons”**

06/01/09 – 05/31/11

Role: Co-Investigator

Medical Research Fund (MeRF), University of Texas Health Science Center

**“Meta-Analysis in Cognitive Neuroimaging”**

07/01/04 – 06/30/05

Role: Co-Investigator

## **Professional Associations**

Current Member, Organization of Human Brain Mapping (OHBM)  
Current Member, Social and Affective Neuroscience Society (SANS)  
Current Member, Flux: The Society for Developmental Cognitive Neuroscience  
Past Member, Society for Neuroscience (SFN)  
Past Member, International Society of Magnetic Resonance in Medicine (ISMRM)

## Reviewing and Editing

### Grant Reviewing

National Institutes of Health, USA

- 2015 – 2019, Member, **Neuroscience and Ophthalmic Imaging Technologies (NOIT)** transitioned to **Emerging Imaging Technologies in Neuroscience (EITN)** in 2019
- 2019, Special Emphasis Panel **ZMH1 ERB-b (01)** *NIMH Research Education Applications (R25)*
- 2019, Special Emphasis Panel **ZMH1 ERB-Q (08)** *Integration and Analysis of BRAIN Initiative Data (R01)*
- 2019, Special Emphasis Panel **ZMH1 ERB-C (04)** *BRAIN Initiative: Data Archives, Integration, and Standards*
- 2018, Special Emphasis Panel **ZDA1 HXO-H (10)** *Avenir Award Program for Research on Substance Abuse and HIV/AIDS (DP2)*
- 2018, Special Emphasis Panel **ZMH1 ERB-C (07)** *Integration and analysis of BRAIN Initiative data (R24)*
- 2015, Special Emphasis Panel **ZMH1 ERB-I (03)** *Mental Health Research Education Grants*
- 2013, Special Emphasis Panel **ZMH1 ERB-S (03)** *NIMH Research Education Applications (R25)*
- 2013, Special Emphasis Panel **ZNS1 SRB-N (05)** *Stroke Trials Network - NDMC*

National Science Foundation, USA

- Panelist Member: 2009-2011, 2018, 2019
- *Ad hoc* Reviewer: 2013, 2016

International Neuroinformatics Coordinating Facility (INCF) Seed Funding: 2017

Human Brain Project, European Union: 2013

Netherlands Organization for Scientific Research (NWO), Netherlands: 2013

Research Foundation Flanders (FWO), Belgium: 2013

Wellcome Trust, UK: 2012

French National Research Agency, France: 2009-2011

Graduate Women in Science National Fellowship Program, USA: 2010

### Editorial Boards

*Frontiers in Brain Imaging Methods*

*Frontiers in Neuroinformatics*

*GigaScience*



Network Neuroscience  
Neuroinformatics  
PeerJ  
Social Cognitive and Affective Neuroscience

#### Guest Editor

Lancaster JL, Laird AR, Fox PT, Special Issue on Meta-Analysis. Human Brain Mapping, Volume 25, Issue 1, 2005.

#### Journal Reviews

*American Journal of Psychiatry; Australian and New Zealand Journal of Psychiatry, Biological Psychiatry; BMC Neuroscience; Brain Connectivity; Brain Imaging and Behavior; Brain Structure and Function, Cerebral Cortex; Cognitive, Affective, and Behavioral Neuroscience; Frontiers in Neuroinformatics, Human Brain Mapping; Journal of Psychiatric Research, Journal of Psychiatry and Neuroscience; Medical Physics; Nature Methods; Nature Protocols; Neurobiology of Aging; NeuroImage; NeuroImage: Clinical; Neuroinformatics; Neuropsychologia; Neuropsychology Review; Neuropsychopharmacology, Neuroreport; Neuroscience & Biobehavioral Reviews; Open Neurology Journal; PLoS Computational Biology, PLoS ONE; Proceedings of the National Academy of Sciences, Progress in Neuropsychopharmacology & Biological Psychiatry, Psychology and Aging; Royal Society Open Science; The Neuroscientist; Translational Psychiatry, Trends in Cognitive Neurosciences*

#### **External Evaluations for Tenure and/or Promotion**

2020	Yale University
2019	University of Southern California
2019	Case Western Reserve University
2019	New York University School of Medicine
2018	University of Minnesota
2018	Rush University Medical Center
2015	University of California San Diego

#### **Invited Lectures and Workshops**

2019 Study Group Discussion, “*Curating data of interest and required computational resources*”, ABCD Data Use: Challenges and Opportunities for Prospective and Current ABCD Data Users, 58<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology, Orlando, FL, Dec 8

2019 Invited Lecture, “*Meta-analysis and Reproducibility*”, Neurohackademy, University of Washington eScience Institute, Seattle, WA, Aug 1

2019 Invited Lecture, “*Meta-analysis and reproducibility of large-scale brain networks*”, Brain Core Seminar Series, University of Alabama at Birmingham, Birmingham, AL, May 10

2019 Invited Lecture, 7<sup>th</sup> Annual Women in Science Seminar, MARC U\*STAR Program, Florida International University, Miami, FL, Mar 18

- 2019 Invited Lecture, "*Neural mechanisms of physics reasoning and STEM anxiety*", Department of Physics, University of Texas, Austin, TX, Dec 12
- 2018 Invited Lecture, "*Large-scale brain networks supporting science learning and anxiety in undergraduate physics students*", Sixth Biennial Conference on Resting State and Brain Connectivity, Montreal, CA, Sept 26
- 2018 Invited Lecture, "*Large-scale brain networks supporting science learning and anxiety in undergraduate physics students*", Center for the Study of Learning and Performance, University of Quebec at Montreal, Montreal, CA, Sept 27
- 2018 Invited Lecture, "*Data mining and neuroinformatics approaches for understanding functional brain architecture*", Core for Advanced MRI (CAMRI) Neuroscience Seminar Series and Journal Club, Baylor College of Medicine, Houston, TX, Apr 11
- 2018 Invited Lecture, 6<sup>th</sup> Annual Women in Science Seminar, QBIC Club, MARC U\*STAR, NIGMS RISE Programs, Florida International University, Miami, FL, Feb 22
- 2017 Invited Lecture, "*Exploring the brain: An introduction to human brain mapping*", Chapmanville Leadership Development Program, Miami-Dade County Government, Miami, FL, Apr 6
- 2017 Invited Lecture, "*Three challenges professional women face (illustrated with crowd-sourced examples)*", 6<sup>th</sup> Annual Women in Science Seminar, QBIC Club, MARC U\*STAR, NIGMS RISE Programs, Florida International University, Miami, FL, Apr 5
- 2017 Invited Lecture and Event Organizer, "*Career development discussion*", BrainHack Global, Florida International University, Miami, FL, Mar 3
- 2016 Invited Lecture, "*Exploring the neural mechanisms of physics learning*", School of Science, Technology, and Engineering Management, St. Thomas University, Miami Gardens, FL, Jul 14
- 2016 Educational Course, "*Neuroimaging Meta-Analysis*", Organization for Human Brain Mapping, Geneva, Switzerland, Jun 26
- 2016 Invited Panelist, "*Curious Vault Collaborations 003: Neural Networks*", Frost Art Museum, Miami, FL, Jun 18
- 2016 Invited Lecture, "*Neuroinformatics and 'big data' approaches for developing cognitive models of human brain function*", Department of Psychiatry, University of Florida, Gainesville, FL, Jun 15
- 2016 Symposium Lecture, "*Representing Knowledge in Psychology: Challenges and Perspectives*", Association for Psychological Science (APS), Chicago, IL, May 28
- 2015 Keynote Speaker, "*'Big data' approaches for developing neurocognitive models of brain function*", Annual Psychology Undergraduate Research Conference (PURC), Department of Psychology, Georgia State University, Atlanta, GA, Oct 30

- 2015 Invited Lecture, "*Cognitive Neuroimaging Research*", National Mentoring Community & Bridge Program Conference, American Physical Society (APS), Florida International University, Miami, FL, Oct 9
- 2015 Educational Course, "*Neuroimaging Meta-Analysis*", Organization for Human Brain Mapping, Honolulu, HI, Jun 14
- 2015 Invited Lecture, "*New heuristics for integrating cognitive models with neuroimaging 'big data'*", Department of Psychology, Auburn University, Auburn, AL, Jun 1
- 2015 Continuing Education Workshop, "*Neurocognitive networking: Modern neuroimaging methods for understanding neurocognition*", International Neuropsychological Society, Denver, CO, Feb 4
- 2015 Invited Lecture, "*What can computational approaches and databases tell us about big data in cognitive neuroscience?*", Department of Computer Science, University of Miami, Miami, FL, Jan 21
- 2014 Educational Course, "*Neuroimaging Meta-Analysis*", Organization for Human Brain Mapping, Hamburg, Germany, Jun 8
- 2014 Invited Lecture, "*Meta-Analysis of Neuroimaging Data Using the BrainMap Database*", Neuroimaging Workshop, University of Miami's College of Arts & Sciences/SEEDS You Choose Award, Miami, FL, Apr 28
- 2014 Invited Lecture, "*Understanding Intrinsic Connectivity Networks: A Meta-Analytic Approach*", The 2<sup>nd</sup> Whistler Scientific Workshop on Brain Functional Organization, Connectivity, and Behavior, Whistler-Blackcomb, Canada, Mar 12
- 2013 Invited Lecture, "*Data-driven approaches for deriving a semantic framework for cognitive paradigms*", Annual International Neuroinformatics Coordinating Facility (INCF) Congress, Stockholm, Sweden, Aug 28
- 2013 Educational Course, "*The Connectome*", Organization for Human Brain Mapping, Seattle, WA, Jun 16
- 2013 Educational Course, "*Neuroimaging Meta-Analysis*", Organization for Human Brain Mapping, Seattle, WA, Jun 16
- 2012 Educational Course, "*The Connectome*", Organization for Human Brain Mapping, Beijing, China, Jun 10
- 2012 Invited Lecture, College of Engineering & Computer Science, University of Central Florida, Orlando, FL, Mar 13
- 2012 Invited Lecture, Department of Physics, College of Arts & Sciences, Florida International University, Miami, FL, Mar 7

- 2012 Invited Lecture, Department of Bioengineering, George Mason University, Fairfax, VA, Mar 2
- 2012 Invited Lecture, Department of Physics, University of South Florida, Tampa, FL, Feb 27
- 2012 Invited Lecture, College of Engineering, University of Georgia, Athens, GA, Feb 22
- 2012 Invited Lecture, Thayer School of Engineering, Dartmouth College, Hanover, NH, Feb 13
- 2012 Invited Lecture, Department of Physics, Rowan University, Glassboro, NJ, Feb 2
- 2012 Invited Lecture, Department of Physics, Miami University, Oxford, OH, Jan 30
- 2011 Invited Lecture, Olin Neuropsychiatry Research Center, Institute of Living & Yale University, Hartford, Connecticut, Aug 23
- 2011 Educational Course, "*The Connectome*", Organization for Human Brain Mapping, Quebec City, Canada, Jun 26
- 2010 Invited Lecture, Translational Science Institute, Wake Forest University, Winston-Salem, NC, Oct 27
- 2010 Invited Lecture, Mind Research Network, Albuquerque, New Mexico, Jul 14
- 2010 Morning Workshop, "*BrainMap Networks: Meta-Analytic Regional Parcellation and Functional Characterization*", Organization for Human Brain Mapping, Barcelona, Spain, Jun 9
- 2009 Invited Lecture, Department of Neurology, University at Buffalo SUNY, Buffalo, NY, Oct 8
- 2009 Invited Lecture, "*Methodological Advances in Functional Neuroimaging: The State of the Science*", American Psychological Association, Toronto, Canada, Aug 9
- 2009 Morning Workshop, "*Neurocognitive ontologies: Methods for sharing and integration of human brain data*", Organization for Human Brain Mapping, San Francisco, CA, Jun 20
- 2008 Invited Lecture, "*Mathematics in Brain Imaging*", Institute for Pure and Applied Mathematics Summer School, University of California, Los Angeles, CA, Jul 24
- 2008 Invited Lecture, Bio-Imaging Research Center, University of Georgia, Athens, GA, Mar 18
- 2007 Invited Lecture, Institute of Imaging Science, Vanderbilt University, Nashville, TN, Dec 14
- 2006 Invited Lecture, Biology and Physics Departments Seminar Series, Texas Lutheran University, Seguin, TX, Apr 28

- 2003 Invited Lecture, Physics Department, Trinity University, San Antonio, TX, Oct
- 2003 Invited Lecture, Radiological Sciences Laboratory, Stanford University, Palo Alto, CA, Sept

### **Service**

- 2017-present Member, FIU Research Center in Minority Institutions (RCMI) Advisory Committee
- 2016-present Chair, Steering Committee, FIU Center for Imaging Science
- 2017, 2018 Reviewer, Organization for Human Brain Mapping (OHBM) Replication Award
- 2016-2017 Co-Chair, Diversity and Gender Task Force, Organization for Human Brain Mapping (OHBM)
- 2015-2016 Member, Scientific Committee, 13<sup>th</sup> Annual Conference of the Society for Brain Mapping and Therapeutics
- 2014-2017 Member, Program Committee, Organization for Human Brain Mapping (OHBM)
- 2014-2015 Member, Strategic Plan Committee on *Faculty Development*, College of Arts & Sciences, Florida International University, Miami, FL
- 2014-2015 Member, FIU Health's 2015-2020 Strategic Planning Committee, Florida International University, Miami, FL
- 2014-2015 Member, Aging Initiative Steering Committee, Herbert Wertheim College of Medicine, Florida International University, Miami, FL
- 2014-2015 Member, Neuroscience Initiative Committee, Herbert Wertheim College of Medicine, Florida International University, Miami, FL
- 2013 Member, iREAL (integrating Research, Engagement, Assessment, and Learning) Commission on *Health*, Florida International University, Miami, FL
- 2013-present Chair, Undergraduate Curriculum Committee, Department of Physics, Florida International University, Miami, FL
- 2013-present Member, Graduate Curriculum Committee, Department of Physics, Florida International University, Miami, FL
- 2012-present Co-Chair, Cognitive Neuroscience Committee, Florida International University; Member, Sub-Committee on Curriculum; Member, Sub-Committee on MRI
- 2012-present Mentor, Faculty Mentor Program, Florida International University, Miami, FL

2012	Evaluator, External Academic Program Review of the Department of Physics, Texas Lutheran University, Seguin, Texas
2010-2012	Member, UTHSCSA Student Health Advisory Committee
2010-2012	Admissions Coordinator, Neuroscience Imaging Track, Radiological Sciences Graduate Program, Department of Radiology, UTHSCSA
2010-2012	Member, Scientific Review Panel, Institute for Integration of Medicine & Science (IIMS) for the UTHSCSA Clinical and Translational Science Award (CTSA) Project Proposals
2007-2012	Member, Committee on Graduate Studies, Radiology, University of Texas Health Science Center, San Antonio, TX
2007-2012	Member, Ph.D. Neuroscience Imaging Track Admissions Committee, Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX
2008 March	Panelist on Women's Forum, "Flourishing in a Competitive World", Texas Lutheran University, Seguin, TX
2005 Nov	Collaborator on the Inside Story: Physics in Medicine, Einstein Year Outreach Program, Institute of Physics and Medical Research Council, London, UK

### **Community Outreach**

2019	Speaker, LIVE@Frost Science: <i>Unlocking the Brain</i> , Phillip and Patricia Frost Museum of Science, Miami, FL
2018	Speaker, Science National Honor Society, Doral Academy, Doral, FL
2017	Speaker, " <i>Professor and Neuroscientist</i> ", Knowledge of Careers (KOC) Program, Booker T. Washington High School, Miami, FL
2015-2016	Scientist, <i>Curious Vault Collaborations</i> , Frost Science Museum, Miami, FL: Pairs of artists and scientists collaborate to co-create table-based displays that represent a 'conceptual collision' of art and science, intended to inspire curiosity, provoke thought, and generate questions
2015	Host, Field Trip for Kindergarten and 1 <sup>st</sup> Grade students from Key Point Academy, Miami, FL; Students participated in an interactive group lecture on neuroscience and neuroimaging, then were divided into smaller groups in which they were led through a "Brain Hat" activity in which they cut/colored/assembled paper hats that showcased brain regions covered in the presentation
2015	Exhibitor, <i>Brain Fair</i> , Frost Science Museum, Miami, FL
2015	Featured Guest and Discussion Facilitator, <i>Science Up Close</i> , Frost Science Museum, Miami, FL

- 2015 Speaker, “*What Does A Neuroscientist Do?*”, Career Day, Indian Trace Elementary School, Weston, FL
- 2014 Speaker, “*Neuroscience & Hollywood*”, Geekiwood 2014: A conference for middle and high school girls interested in STEM <http://www.geekigirl.org>
- 2010 March Judge, UTHSCSA Women’s Faculty Association Special Award, Alamo Regional Science and Engineering Fair, San Antonio, Texas
- 2006 Feb Educational outreach to students in the gifted/talented program at Carlos Coon Elementary School
- 2005-2007 Meals on Wheels, weekly meal delivery to homebound citizens in the local community, San Antonio, TX

## Teaching

“*Understanding the Physical World*” (PHY 1020), Department of Physics, Florida International University, Instructor: 2015, 2016

“*Cognitive Neuroimaging Methods II*” (PSB 6351), Department of Psychology and “*Physics of Cognitive Neuroimaging Methods II*” (PHZ 6707), Department of Physics, Florida International University, Instructor: 2015

“*Cognitive Neuroimaging Methods I*” (PSB 6350), Department of Psychology and “*Physics of Cognitive Neuroimaging Methods I*” (PHZ 6706), Department of Physics, Florida International University, Co-Instructor: 2014

“*Physics I with Calculus*” (PHY 2048), Department of Physics, Florida International University, Instructor: 2012, 2013

“*Mind & Brain: Meta-Analysis in Cognitive Neuroimaging*” (INTD 5046), University of Texas Health Science Center San Antonio, Instructor: 2006, 2007, 2010, 2011, 2012, 2013

“*Mind & Brain: Meta-Analysis in Cognitive Neuroimaging*” (BIO 5046/PSY 6093), University of Texas San Antonio, Co-Instructor: 2004, 2005

“*Introduction to Functional Neuroscience Imaging*” (PHY 3325-B), Department of Physics, St. Mary’s University, Co-Instructor, 2010, 2011

“*Introduction to Human Neuroscience*” (HON 3253), Honors College, University of Texas San Antonio, Co-Instructor: 2008

## Faculty Supervised

### K23 MH117280 (Sponsor)

March 2019 – February 2023

“*Emotional systems in Attention-Deficit/Hyperactivity Disorder*”

PI: Erica D. Musser, Department of Psychology, Florida International University

**K01 DA037819 (Co-Sponsor)**

May 2014 – April 2020

*“Impact of HIV and cannabis on brain function: Regions, networks, and the connectome.”*

PI: Matthew T. Sutherland, Department of Psychology, Florida International University

**Graduate Students Supervised**

Mentor	2019-present	<b>Donisha Smith</b> , PhD Student Department of Psychology Graduate Program, FIU
Mentor	2019-present	<b>Ariel Gonzalez</b> , PhD Student Department of Psychology Graduate Program, FIU
Mentor	2019-present	<b>Brianna Pankey</b> , PhD Student Department of Psychology Graduate Program, FIU
Mentor	2015-present	<b>Katherine Bottenhorn</b> , PhD Student Department of Psychology Graduate Program, FIU
Mentor	2015-present	<b>Taylor Salo</b> , PhD Student Department of Psychology Graduate Program, FIU
Mentor	2013-2018	<b>Jessica Bartley</b> , PhD Student “Exploring the Neural Mechanisms of Physics Learning” Department of Physics Graduate Program, FIU
Mentor	2012-2015	<b>Michael Cody Riedel</b> , Diagnostic Imaging Track “Hierarchical Perspectives in Intrinsic Brain Organization” Radiological Sciences Graduate Program, UTHSCSA
Mentor	2009-2014	<b>Kimberly Ray</b> , Neuroscience Imaging Track “Graph Theoretical Analysis of Human Intrinsic Connectivity Networks” Radiological Sciences Graduate Program, UTHSCSA
Co-Mentor	2010-2012	<b>Reese McKay</b> , Neuroscience Imaging Track “Genetic and Neural Correlates of Executive Function” Radiological Sciences Graduate Program, UTHSCSA
Committee Member	2020-present	<b>Patricio Viera Perez</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2020-present	<b>Katharine Crooks</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2019-present	<b>Rosario Pintos-Lobo</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2019-present	<b>Stephanie Morris</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2019-present	<b>Puck Reeders</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2019-present	<b>Lauren Hill-Bowen</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2018-present	<b>Ileana Pacheco-Colon</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2016-present	<b>Jessica Flannery</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2016-present	<b>Ranjita Poudel</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2016-present	<b>Carolina Vias</b> , PhD Student Department of Psychology Graduate Program, FIU
Committee Member	2015-2018	<b>Michele Bechor</b> , PhD Student



Committee Member	2014-2016	<p>"Neural Correlates of Attention Training in Children with Anxiety Disorders" Department of Psychology Graduate Program, FIU</p> <p><b>Iris Broce</b>, PhD Student "Brain Networks Supporting Literacy in Typically Developing Children" Department of Psychology Graduate Program, FIU</p>
Committee Member	2013-2015	<p><b>Alina Nazareth</b>, PhD Student "Sex differences in mental rotation ability" Department of Psychology Graduate Program, FIU</p>
Committee Member	2010-2016	<p><b>Karl Li</b>, Diagnostic Imaging Track "Modeling Effective Connectivity of Brain Networks Using SEM" MD/PhD Program, UTHSCSA</p>
Committee Member	2009-2014	<p><b>Sabina Gonzales</b>, Neuroscience Imaging Track "Sensory Motor Voice Control in Parkinson's Disease" Radiological Sciences Graduate Program, UTHSCSA</p>
Committee Member	2011-2013	<p><b>Claudia Huerta</b>, Diagnostic Imaging Track "Functional Neuroimaging of Appetite and Craving" Radiological Sciences Graduate Program, UTHSCSA</p>
Dissertation Juror	2019	<p><b>Jérôme Dockès</b>, PhD Student "Statistical Models for Comprehensive Meta-Analyses of Neuroimaging Studies" Université Paris-Saclay</p>
Res Rotation Supervisor	2011	<p><b>Rachel Smallwood</b>, PhD Student Biomedical Engineering Program, UTHSCSA/UTSA</p>
Res Rotation Supervisor	2008	<p><b>Jacob Robbins</b>, Neuroscience Imaging Track Radiological Sciences Graduate Program, UTHSCSA</p>

### Undergraduate Students Supervised

- 2013-current I supervised a total of **39 undergraduate students** at FIU in research rotations and summer internships in structural and functional brain imaging: Andrea Abad, Over Acuna, Toma Afra, Erica Arcuri, Daniela Arevelo, Alfonso Boza, Karina Falcone, Oscar Fernandez, Chelsy Fraga, Gregory Gandarillas, Ilan Garcia, Jose Garcia, Kevin Garcia, Nathaline Germain, Samantha Green, Tiana Lanier, Christian Lopes, Abigail Martinez, Teresa Milan, Carolina Padron, Gabriella Perdomo, Aleyami Perez, Javier Perez, Luis Rendon, Vanessa Rodriguez, Diego Sanchez, Sharielka Savage, Dax Sotero, Benjamin Sturman, Daphne Toggia, Jorge Torres, Camila Uzcategui, Javier Valdez, Amelia Vega, Kathleen Won, Daniela Zapata, Salman Zubair
- 2003-2010 I supervised a total of **26 undergraduate students** at UTHSCSA in research rotations and summer internships in structural and functional brain imaging: Joseph Whitehouse (UTSA), Krysten Chapa (University of Incarnate Word), Daniel Hallare (Northwest Vista), Franchezca Rodriguez (St. Mary's University), Rene Soliz (UTSA), Michael Scott (Texas A&M), Siddarth Reddy (University of Michigan), Steven Lien (Trinity University), Harry Pollock (Duke University), Jonathan Trejo (Trinity University), Taylor Triana (Vanderbilt University), Wyatt Gleichauf (Harvard University), Abigail Dill (Middlebury College), Juan Saenz (St. Mary's University), Zachary Harrell (St. Mary's University), Sarah Chavez (UTSA), Carly Hanson (Texas Lutheran University), Chad Waxler (Texas

Lutheran University), Jacob Robbins (Texas Lutheran University), Karl Li (University of California-Berkeley), Christopher Morton (Clemson University), Heather Gates (UTSA), Kevin Gooden (UTSA), Miranda Martin (Trinity University), Penny Whetstone (Trinity University), Tanya Gonzalez (Swarthmore University)

### **Medical Students Supervised**

2007-2009 I supervised a total of **6 medical students** at UTHSCSA. These students were funded from a NIH/NINDS T35 project designed to train medical students in imaging research techniques (T35-NS051166): Jeremy Bass, Catherine Harris, Anna Petersen, Alicia Salamone, Daniel Barron, Virendra Desai

### **High School Teachers and Students Supervised**

2009-2010 I supervised a total of **5 San Antonio high school teachers** at UTHSCSA in summer internships to learn functional neuroimaging techniques to enhance curriculum in their Anatomy and Physiology courses: Nnenna Wilson (Teacher, John Jay High), Dustin Ford (Teacher, John Jay High), Kristin Pahl (Teacher, O'Connor High), Dawn Valdez (Holmes High), Phillip Gutierrez (Clark High)

2003-2010 I supervised a total of **19 San Antonio high school students** in neuroscience imaging research rotation and summer internships: Lauren Slattery (Churchhill High), Ryan Brown (Communication Arts High), Jake Feldman (Churchhill High), Alice Swanner (Churchhill High), Karl Li (Communication Arts High), Sean Sandolowski (St. Mary's Hall), Wesley Williams (Health Careers High), Abhishek Reddy, Katawnya Morgan (Alpha Academy), Kaira Church (Warren High), Gail Tan (Keystone School), Aviana Alvarado (Antonion), Mackinze White (TMI), Joy Tan (Keystone School), Paige Peterson (Brandeis High), Matthew Forster (O'Connor High), Zachary Cozzi (O'Connor High), Priscila Cortez (Taft High), Ariel Penny (Warren High)

### **Software Development**

2003-2013 Supervision of the development, maintenance, and support of the software packages and databasing tools distributed through the BrainMap project on neuroinformatics in neuroimaging (<http://brainmap.org>)

### **National/International Media Coverage**

Interviewed for "*Miami-Dade children (and their brains) are part of a historic nationwide study*", Miami Herald, Published 28 July 2017.

<http://www.miamiherald.com/news/local/education/article164089052.html>

Interviewed for "*FIU researchers embark on national landmark study of adolescent brain development*", Miami's Community Newspapers, Published 15 September 2016.

<http://communitynewspapers.com/florida-international-university/fiu-researchers-embark-national-landmark-study-adolescent-brain-development/>

Interviewed for “*El ‘mapa del cerebro’ deberá incluir perspectiva hispana, dice investigadora*”, Fox News Latino, Published 01 Oct 2014.

Interviewed for “*The Collective Good: Pooling Data to Boost Brain Imaging Research*”, Pain Research Forum Newsletter, Published 6 Feb 2014.

Interviewed for “*Depressed patients may process hate feelings differently*”, Top Story on MyHealthNewsDaily.com, Published 4 Oct 2011.

Interviewed for “*Peering Inside the Brain Leads to Genetic Clues to Psychiatric and Neurological Disorders*”, Aired 12 Feb 2010, KENS 5 San Antonio CBS Affiliate

Contributed artwork for “*Trawling the brain: New findings raise questions about reliability of fMRI as gauge of neural activity*”, Feature Article in Science News: Magazine of the Society for Science & the Public, Published 19 Dec 2009, Vol. 176 #13

## FIU News Coverage

<https://news.fiu.edu/2018/08/5-ways-to-be-more-creative/125428>  
<http://news.fiu.edu/2016/09/fiu-receives-nsf-grant-for-neuroscience-big-data-research/103726>  
<http://news.fiu.edu/2016/09/stick-figure-drawings-can-help-you-understand-the-world/104264>  
<http://news.fiu.edu/2016/09/researchers-convene-in-d-c-to-urge-congress-for-support-of-landmark-brain-study/104210>  
<http://news.fiu.edu/2016/09/researchers-embark-on-national-landmark-study-of-adolescent-brain-development/103974>  
<http://news.fiu.edu/2016/06/architect-physicist-create-art-from-brain-images/101865>  
<http://news.fiu.edu/2015/05/preschoolers-go-to-college/88484>  
<http://news.fiu.edu/2015/03/fiu-scientists-light-up-the-brain-at-science-museum/86523>  
<http://news.fiu.edu/2014/12/happy-holidays-2014/83766>  
<http://news.fiu.edu/2014/11/provost-excellence-award-recognizes-outstanding-faculty-research/83028>  
<http://news.fiu.edu/2014/10/geekiwood-conference-promotes-stem-education-innovation-at-fiu/81791>  
<https://sish.fiu.edu/news/2014/prof-angie-laird-was-invited-to-the-white-house-brain-conference>  
<http://news.fiu.edu/2014/10/the-white-house-comes-to-campus/81713>  
<http://news.fiu.edu/2014/08/physicist-recognized-as-one-of-the-worlds-most-influential-scientists/80438>  
<https://sish.fiu.edu/news/2014/angela-laird-named-as-one-of-florida-most-influential-scientists/>  
<http://news.fiu.edu/2014/10/brainhack-movement-comes-to-fiu-promotes-global-collaboration-in-neuroscience-research/82247>

## Staff Supervised

2019-present	Aleymi Perez, Research Assistant
2018-present	Jenna Silva, Senior Program Coordinator
2018-present	Alexandra Moor, Research Assistant
2018-present	Diamela Arencibia, Research Assistant
2018-present	Veronica Del Prete, Postdoctoral Fellow
2017-present	Michael Cody Riedel, Senior Research Scientist
2017-2019	Ariel Gonzalez, Research Assistant
2016-present	Chelsea Greaves, Research Coordinator
2016-present	Laura Ucros, Research Assistant
2017-2018	Jennifer Foreman, Research Assistant
2016-2018	Rosario Pintos Lobo, Research Assistant
2015-2017	Michael Cody Riedel, Postdoctoral Research Scientist

2014-2016	Karina Falcone, Program Assistant
2014-2016	Stephanie Rosas, Administrative Coordinator
2013-2015	Julio Yanes, Research Coordinator
2013-2014	Jonathan Mahadeo, Research Assistant
2012-2013	Zachery Hernandez, Research Assistant
2004-2012	Mick Fox, Programmer Analyst III
2004-2012	Angela Uecker, Programmer Analyst III
2010-2012	Juan Saenz, Research Assistant
2008-2010	Sabina Gonzales, Research Assistant
2007-2009	Sarah Thelen, Research Assistant
2007-2008	Jacob Robbins, Research Assistant
2006-2007	Justin Clemens, Research Assistant

### Peer-Reviewed Journal Articles (Google Scholar h-index = 70)

1. Hawes SW, Waller R, Byrd AL, Bjork JM, Dick AS, Sutherland MT, Riedel MC, Tobia MJ, Thomson N, **Laird AR**, Gonzalez R. Reward Processing Among Children with Disruptive Behavior Disorders and Callous-Unemotional Traits in the ABCD Study. Am J Psych, In Press.
2. Waller R, Hawes SW, Byrd AL, Dick AS, Sutherland MT, Riedel MC, Tobia MJ, Bottenhorn KL, **Laird AR**, Gonzalez R. Disruptive Behavior Problems, Callous-Unemotional Traits, and Regional Gray Matter Volume in the ABCD Study. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, In Press.
3. Bolt T, Nomi JS, Arens R, Vij SG, Riedel MR, Salo T, **Laird AR**, Eickhoff SB, Uddin LQ. Ontological dimensions of cognitive-neural mappings. Neuroinformatics, In Press.
4. Poudel R, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, Eickhoff SB, **Laird AR**, Sutherland MT. Common and distinct brain activity associated with risky and ambiguous decision-making. Alcohol Depend 209, 107884, 2020. PMCID: PMC7127964
5. Schnellbacher GJ, Hoffstaedter F, Eickhoff SB, Caspers SB, Nickl-Jockschat T, Fox PT, **Laird AR**, Schulz JB, Reetz K, Dogan I. Functional characterization of atrophy patterns in mild cognitive impairment. Frontiers in Neurology 11, 18, 2020. PMCID: PMC6993791
6. Flannery JS, Riedel MC, Bottenhorn KL, Poudel R, Salo T, Hill-Bowen LD, **Laird AR**, Sutherland MT. Meta-analytic clustering dissociates brain activity and behavior profiles across reward processing paradigms. Cogn Affect Behav Neurosci 20, 215-235, 2020. PMCID: PMC7117996
7. Saeed F, Eslami T, Mirjalili V, Fong A, **Laird A**. ASD-DiagNet: A hybrid learning approach for detection of Autism Spectrum Disorder using fMRI data. Frontiers in Neuroinformatics 13, 70, 2019. PMCID: PMC6890833
8. Bartley JE, Riedel JC, Salo T, Boevig ER, Bottenhorn KL, Bravo EI, Odean R, Nazareth A, Laird RW, Sutherland MT, Pruden SM, Brewe E, **Laird AR**. Brain activity links performance in science reasoning with conceptual approach. npj Science of Learning 4, 20, 2019. PMCID: PMC6890833

9. Plachti A, Eickhoff SB, Hoffstaedter F, Patil, KR, **Laird AR**, Fox PT, Amunts K, Genon S. Multimodal parcellations and extensive behavioral profiling tackling hippocampus' gradient. *Cerebral Cortex* 29, 4595-4612, 2019. PMCID: PMC6917521
10. Gonzalez A, Bottenhorn KL, Bartley JE, Hayes T, Riedel MC, Salo T, Bravo EI, Odean R, Nazareth A, Laird RW, Sutherland MT, Brewster E, Pruden SM, **Laird AR**. Sex differences in brain correlates of STEM anxiety. *npj Science of Learning* 4, 18, 2019. PMCID: PMC6825125
11. Flannery JS, Riedel MC, Poudel R, **Laird AR**, Ross TJ, Salmeron BJ, Stein EA, Sutherland MT. Striatal and habenular activity during performance feedback is differentially linked with state-like and trait-like aspects of tobacco use disorder. *Sci Adv* 5, eaax2084, 2019. PMCID: PMC6785263
12. Hagler DJ, Hatton SN, Cornejo MD, Makowski C, Fair DA, Dick AS, Sutherland MT, Casey BJ, Barch DM, Harms MP, Watts R, Bjork JM, Garavan HP, Hilmer L, Pung CJ, Sicat CS, Kuperman J, Bartsch H, Xue F, Heitzeg MM, **Laird AR**, Trinh TT, Gonzalez R, Tapert SF, Riedel MC, Squeglia LM, Hyde LW, Rosenberg MD, Earl EA, Howlett KD, Baker FC, Soules M, Diaz J, Ruiz de Leon O, Thompson WK, Neale MC, Herting M, Sowell ER, Alvarez RP, Hawes SW, Sanchez M, Bodurka J, Breslin FJ, Sheffield Morris A, Paulus MP, Simmons WK, Polimeni JR, van der Kouwe A, Nencka AS, Gray KM, Pierpaoli C, Matochik JA, Noronha A, Aklin WM, Conway K, Glantz M, Hoffman E, Little R, Lopez M, Pariyadath V, Weiss SRB, Wolff-Hughes DL, Del Carmen-Wiggins R, Feldstein Ewing SW, Oscar Miranda-Dominguez O, Nagel BJ, Perrone AJ, Sturgeon DT, Goldstone A, Pfefferbaum A, Pohl KM, Prouty D, Uban K, Bookheimer SY, Dapretto M, Galvan A, Bagot K, Giedd J, Infante MA, Jacobus J, Patrick K, Shilling PD, Desikan R, Li Y, Sugrue L, Banich MT, Friedman N, Hewitt JK, Hopfer C, Sakai J, Tanabe J, Cottler LB, Nixon SJ, Chang L, Cloak C, Ernst T, Reeves G, Kennedy DN, Heeringa S, Peltier S, Schulenberg J, Sripada C, Zucker RA, Iacono WG, Luciana M, Calabro FJ, Clark DB, Lewis DA, Luna B, Schirda C, Brima T, Foxe JJ, Freedman EG, Mruzek DW, Mason MJ, Huber R, McGlade E, Prescott A, Renshaw PF, Yurgelun-Todd DA, Allgaier NA, Dumas JA, Ivanova M, Potter A, Florsheim P, Larson C, Lisdahl K, Charness ME, Fuemmeler B, Hettema JM, Maes HH, Steinberg J, Anokhin AP, Glaser P, Heath AC, Madden PA, Baskin-Sommers A, Constable RT, Grant SA, Dowling GJ, Brown SA, Jernigan TL, Dale AM. Image processing and analysis methods for the Adolescent Brain Cognitive Development Study. *Neuroimage* 202, 116091, 2019. PMCID: PMC6825125
13. Karrer T, Bassett D, Derntl B, Gruber O, Aleman A, Jardri R, **Laird AR**, Fox P, Eickhoff SB, Grisel O, Varoquaux G, Thirion B, Bzdok D. Brain-based ranking of cognitive domains to predict schizophrenia. *Hum Brain Mapp* 40, 4487-4507, 2019.
14. Dick AS, Garcia NL, Pruden SM, Thompson WK, Hawes SW, Sutherland MT, Riedel MC, **Laird AR**, Gonzalez R. No evidence for a bilingual executive function advantage in the ABCD Study. *Nature Hum Behav* 3, 692-701, 2019. PMCID: PMC6825125
15. Javaheipour N, Shahdipour N, Noori K, Zarei M, Camilleri JA, **Laird AR**, Fox PT, Eickhoff SB, Eickhoff CR, Rosenzweig I, Khazaie H, Tahmasian M. Functional brain alterations in

acute sleep deprivation: An activation likelihood estimation meta-analysis. *Sleep Med Rev* 46, 64-73, 2019.

16. Riedel MC, Salo T, Hays J, Turner MD, Sutherland MT, Turner JA, **Laird AR**. Automated, efficient, and accelerated knowledge modeling of the cognitive neuroimaging literature using the ATHENA toolkit. *Frontiers Neurosci* 13, 494, 2019. PMCID: PMC6530419
17. Poepl TB, Langguth B, **Laird AR**, Eickhoff SB. Meta-analytic evidence for neural dysactivity underlying sexual dysfunction. *J Sex Medicine* 16, 614-617, 2019. PMCID N/A
18. Poepl TB, Donges M, Mokros A, Rupprecht R, Fox PT, **Laird AR**, Bzdok D, Langguth B, Eickhoff SB. A view behind the mask of sanity: meta-analysis of aberrant brain activity in psychopaths. *Mol Psychiatry* 24, 463-470, 2019. PMCID: PMC6344321
19. Bottenhorn K, Flannery J, Riedel MC, Eickhoff SB, Sutherland MT, **Laird AR**. Cooperating yet distinct brain networks engaged during naturalistic paradigms: A meta-analysis of functional neuroimaging data. *Network Neurosci* 3, 27-48, 2018. PMCID: PMC6326731
20. Bartley JE, Boevig ER, Riedel MC, Bottenhorn KL, Salo T, Eickhoff SB, Brewe E, Sutherland MT, **Laird AR**. Meta-analytic evidence for a core problem solving network across multiple representational domains. *Neurosci Biobehav Rev* 92, 318-337, 2018. PMCID: PMC6425494
21. Brewe E, Bartley JE, Riedel MC, Sawtelle V, Salo T, Boevig ER, Bravo EI, Odean R, Nazareth A, Bottenhorn KL, Laird RW, Sutherland MT, Pruden SM, **Laird AR**. Toward a neurobiological basis for understanding learning in University Modeling Instruction physics courses. *Frontiers ICT* 5, 10, 2018. PMCID PMC6519462
22. Riedel MC, Yanes JA, Ray KL, Eickhoff SB, Fox PT, Sutherland MT, **Laird AR**. Dissociable meta-analytic networks contribute to coordinated emotional processing. *Hum Brain Mapp* 39, 2514-2531, 2018. PMCID: PMC5951754
23. Rosen AC, Soman SC, Bhat J, **Laird AR**, Stephens J, Eickhoff SB, Fox PM, Long B, Dinishak D, Ortega M, Lane B, Wintermark M, Hitchner E, Zhou W. Convergence analysis of micro-lesions (CAML): An approach to mapping of diffuse lesions from carotid revascularization. *Neuroimage Clin* 18, 553-559, 2018. PMCID: PMC5984594
24. Yanes JA, Riedel MC, Ray KL, Kirkland AE, Bird RT, Boevig ER, Reid MA, Gonzalez R, Robinson JL, **Laird AR**, Sutherland MT. Neuroimaging meta-analysis of cannabis-use studies reveals convergent functional alterations in brain regions supporting cognitive control and reward processing. *J Psychopharmacology* 32, 283-295, 2018. PMCID: PMC5858977
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### Manuscripts In Progress

1. Bartley JE, Riedel MC, Salo T, Bottenhorn KL, Boeving ER, Laird RW, Sutherland MT, Pruden SM, Brewe E, **Laird AR**. Sex and pedagogy influences in physics learning-related reorganization of brain activation. Under Review.
2. Hannan J, Musser E, Ward-Peterson M, Azttillo E, Goldin D, Luna A, **Laird AR**, Lok B, Galynker, Foster A. The role of empathy in the perception of medical errors during patient encounters: A preliminary study. Under Review.
3. Forscher PS, Jones Taylor V, Cavagnaro D, Lewis Jr NA, Moshontz H, Appleby SC, Bennett-Day B, Buchanan EM, Chopik WJ, Damian RI, Faas C, Gaither SE, Hall BF, Howell JL, Kung FYH, **Laird AR**, Levitan CA, Li M, Maddox KB, Murry Parker LR, Perry SP, Remedios JD, Schmidt K, Serrano S, Steltenpohl CN, Storage D, Urry HL, Wasmuth SC, Westgate EC, Wilson JP, Wynn S, Zimmerman DM, Musser ED, Chartier CR. A multi-site examination of stereotype threat in Black college students across varying operationalizations. Under Review.
4. Hill-Bowen LD, Riedel MC, Poudel R, Camilleri JA, Fox PT, Eickhoff SB, **Laird AR**, Sutherland MT. The cue-reactivity paradigm: An ensemble of networks driving attention and cognition when viewing drug-related and natural-reward stimuli. In Preparation.
5. Morawetz C, Riedel MC, Salo T, Eickhoff SB, **Laird AR**, Kohn N. Multiple large-scale neural networks underlying emotion regulation. In Preparation.

### Book Chapters

1. **Laird AR**, Ray K. Meta-Analysis in Neuroimaging. In: Jaeger D, Jung R. (Ed). *Encyclopedia of Computational Neuroscience*: SpringerReference. Springer-Verlag Berlin Heidelberg, 2013.
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### Peer-Reviewed Conference Abstracts

1. Riedel MC, Hawes S, Duperrouzel J, Laird AR, Gonzalez R, Sutherland MT. Cannabis use among emerging adults is linked with altered insula activity during effort-based decision-making. 82<sup>nd</sup> Annual Scientific Meeting of the College on Problems of Drug Dependence, Hollywood, FL, USA, 2020. (Submitted)
2. Poudel R, Riedel MC, Salo T, Flannery J, Hill-Bowen LD, Eickhoff SB, Laird AR, Sutherland MT. The impact of substance abuse on brain activity during risky-decision making: A neuroimaging meta-analysis. 82<sup>nd</sup> Annual Scientific Meeting of the College on Problems of Drug Dependence, Hollywood, FL, USA, 2020. (Submitted)
3. Hill-Bowen L, Riedel M, Salo T, Flannery J, Poudel R, Laird AR, Sutherland M. Convergent network-level brain alterations across drugs of abuse: A meta-analysis of structural MRI studies. 82<sup>nd</sup> Annual Scientific Meeting of the College on Problems of Drug Dependence, Hollywood, FL, USA, 2020. (Submitted)
4. Poudel R, Tobia MJ, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, **Laird AR**, Parra CM, Dick AS, Sutherland MT. Neural correlates of risky decision-making and its relation to risk and reward related behaviors. Society for Neuroscience 49<sup>th</sup> Annual Meeting, Chicago, IL, USA, 2019.
5. Hill-Bowen LD, Tobia MJ, **Laird AR**, Salmeron BJ, Ross TJ, Stein EA, Sutherland MT. (June 2019) Nicotine alters intra- and inter-regional resting-state fMRI of the vmPFC and hippocampus. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
6. Flannery JS, Tobia MJ, Riedel MC, Poudel R, Hill-Bowen LD, **Laird AR**, Gonzalez R, Sutherland MT. Interactive effects of cannabis and HIV infection on striatal-cortical functional connectivity. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
7. Bottenhorn K, Bartley J, Riedel M, Salo T, Bravo E, Odean R, Nazareth A, Laird R, Pruden S, Sutherland M, Brewe E, **Laird AR**. Large-scale brain networks underlying domain-specific memory, intelligence, and academic performance. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
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9. Yanes J, Bottenhorn K, Salo T, Riedel M, **Laird AR**, Robinson J. Data mining reveals discrete neurobiological systems that contribute to pain processing. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
10. Salo T, Bottenhorn KL, Nichols TE, Gorgolewski C, Riedel MC, Sutherland MT, Yarkoni T, **Laird AR**. NiMARE: Neuroimaging Meta-Analysis Research Environment. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.

11. Bartley J, Riedel M, Salo, Bottenhorn K, Bravo E, Odean, R, Nazareth A, Laird R, Sutherland M, Pruden S, Brewe E, **Laird AR**. Brain networks underlying sex and pedagogy differences in physics learning. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
12. Van Ettinger-Veenstra H, Witt S, Salo T, Riedel M, **Laird AR**. What executive function network is that? An image-based meta-analysis into consistency and overlap. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
13. Plachti A, Eickhoff S, Hoffstaedter F, Patil K, Laird AR, Fox P, Amunts K, Genon S. Multimodal parcellations and extensive behavioral profiling tackling hippocampus' gradient. 25<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy, 2019.
14. Poudel R, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, **Laird AR**, Sutherland MT. Common and distinct neurobiological network associated with risky and ambiguous decision making. Annual Meeting of the Social and Affective Neuroscience Society, Miami, FL, USA, 2019.
15. Flannery JS, Riedel MC, Poudel R, **Laird AR**, Ross TJ, Salmeron BJ, Stein EA, Sutherland MT. Nicotinic modulation of habenula responsivity to positive feedback among abstinent cigarette smokers. Annual Meeting of the Social and Affective Neuroscience Society, Miami, FL, USA, 2019.
16. Hill-Bowen LD, Tobia MJ, **Laird AR**, Salmeron BJ, Ross TJ, Stein EA, Sutherland MT. Local and remote resting-state functional alterations in the VMPFC, hippocampus, and middle temporal gyrus among abstinent cigarette smokers. Annual Meeting of the Social and Affective Neuroscience Society, Miami, FL, USA, 2019.
17. Bottenhorn KL, Robinson JL, Yanes JA, Flannery JS, Sutherland MT, **Laird AR**. Intrinsic connectivity of the human habenula and its relation to negative affect. Annual Meeting of the Social and Affective Neuroscience Society, Miami, FL, USA, 2019.
18. Bottenhorn KL, Riedel MC, Sutherland MT, Gonzalez R, **Laird AR**. Uncovering a latent factor structure underlying pre-adolescent self-regulation and its neural substrates. Annual Meeting of the Social and Affective Neuroscience Society, Miami, FL, USA, 2019.
19. Salo T, Bottenhorn KL, Nichols TE, Riedel MC, Sutherland MT, Yarkoni T, **Laird AR**. NiMARE: Neuroimaging Meta-Analysis Research Environment. Fifth Annual BRAIN Initiative Investigator's Meeting, Washington, DC, USA, 2019.
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21. Riedel MC, Salo T, Hays J, Sutherland MT, Turner JA, **Laird AR**. Automated annotations of the cognitive neuroimaging literature using ATHENA. Fifth Annual BRAIN Initiative Investigator's Meeting, Washington, DC, USA, 2019.

22. Dick AS, Comer J, Silva K, Gonzalez R, Sutherland MT, **Laird AR**, Gurwitch R, L Greca A, Squelgia L, Gray K, Nixon SJ, Cottler L, Tapert S. Leveraging the ABCD Study to examine the effects of hurricane Irma exposure. Biennial Meeting of the Society for Research in Child Development, Baltimore, MD, USA, 2019.
23. Dick AS, Garcia N, Pruden SM, Thompson W, Hawes S, Sutherland MT, Riedel MC, **Laird AR**, Gonzalez R. No bilingual advantage for executive function: Evidence from the ABCD Study. Biennial Meeting of the Society for Research in Child Development, Baltimore, MD, USA, 2019.
24. Sutherland MT, Flannery J, Riedel MC, **Laird AR**, Ross T, Salmeron BJ, Stein E. Nicotine reduces habenula activity among abstinent cigarette smokers during performance feedback. 57<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology, Hollywood, FL, USA, 2018.
25. Turner MD, Haynes KS, Tannahill A, **Laird AR**, Turner JA. Literature keyword recommendations without negative examples: Semi-supervised learning with multiple views of negative feature space. International Neuroinformatics Coordinating Facility (INCF) Congress, Montreal, Canada, 2018.
26. Salo T, Bottenhorn KL, Nichols TE, Riedel MC, Sutherland MT, Yarkoni T, **Laird AR**. NiMARE: Neuroimaging Meta-Analysis Research Environment. International Neuroinformatics Coordinating Facility (INCF) Congress, Montreal, Canada, 2018.
27. Riedel MC, Salo T, Turner MD, Sutherland MT, Turner JA, **Laird AR**. Automated, efficient, and accelerated knowledge modeling of the cognitive neuroimaging literature using the ATHENA toolkit. International Neuroinformatics Coordinating Facility (INCF) Congress, Montreal, Canada, 2018.
28. Bottenhorn KL, Salo T, Sutherland MT, **Laird AR**. Quantitative comparison of functional decoding approaches across meta-analytic frameworks. International Neuroinformatics Coordinating Facility (INCF) Congress, Montreal, Canada, 2018.
29. Kohn N, Riedel MC, Salo T, **Laird AR**, Eickhoff SB, Morawetz C. Meta-analytic brain networks underlying emotion regulation. 24<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Singapore, Hong Kong, Poster Presentation, 2018.
30. Karrer TM, Bassett DM, Derntl B, Gruber O, Aleman A, Jardri R, **Laird AR**, Fox PT, Eickhoff SB, Grisel O, Varoquaux G, Thirion B, Bzdok D. Automated ranking of relevant mental domains in schizophrenia. 24<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Singapore, Hong Kong, Poster Presentation, 2018.
31. Riedel MC, Flannery JS, Gonzalez R, **Laird AR**, Sutherland MT. Combined impact of HIV and cannabis use on insular functional connectivity. Society for Neuroscience 48<sup>th</sup> Annual Meeting, San Diego, CA, USA, 2018.
32. Poudel R, Tobia MJ, Riedel MC, **Laird AR**, Ross TJ, Salmeron B, Stein EA, Sutherland MT. Resting state functional connectivity of human striatum during smoking abstinence and

- pharmacologic administration. Society for Neuroscience 48<sup>th</sup> Annual Meeting, San Diego, CA, USA, 2018.
33. Flannery JS, Sutherland MT, Riedel MC, **Laird AR**, Salmeron B, Ross TJ, Stein EA. Abstinent smokers show reduced brain responses to positive feedback and enhanced responses to negative feedback. Society for Neuroscience 48<sup>th</sup> Annual Meeting, San Diego, CA, USA, 2018.
  34. Baum MK, Zarini G, Ehman R, Sherman KE, Liu Q, Chen J, Laird R, **Laird A**, Greer PJ, Seminario L, Jasmin J, Hernandez J, Teeman C, Johnson A, Martinez SS, Campa A. MR elastography detects higher liver fibrosis in HIV infected cocaine users in the Miami Adult Studies on HIV (MASH) cohort. The Liver Meeting 2018, American Association for the Study of Liver Diseases, San Francisco, CA, USA, 2018.
  35. Martinez SS, Campa A, Sherman KE, Greer PJ, Chen J, Ehman R, Zarini G, Liu Q, Laird R, **Laird A**, Seminario L, Jasmin J, Hernandez J, Teeman C, Johnson A, Baum MK. Higher liver fibrosis and iron status with magnetic resonance elastography in HIV. The Liver Meeting 2018, American Association for the Study of Liver Diseases, San Francisco, CA, USA, 2018.
  36. Baum MK, Martinez SS, Ehman RL, Sherman KE, Greer PJ, Chen J, Laird RW, **Laird AR**, Seminario L, Johnson A, Alohaly A, Mudgal M, Sneij A, Tamargo J, Campa A. MR elastography detects higher liver fibrosis in uncontrolled HIV infection. Conference on Retroviruses and Opportunistic Infections (CROI), Boston, MA, USA, 2018.
  37. Bartley J, Pruden SM, Brewe E, Sutherland MT, **Laird AR**. Understanding the neural substrates of physics problem solving: Brain mechanisms and behavior correlates. Florida Statewide Graduate Student Research Symposium, Tampa, FL, USA, Poster Presentation: Education Category, 2017. Poster Presentation: Education Category, 2017.
  38. Bravo E, Odean R, Bartley J, Boevig E, Foreman J, Gonzalez A, Brewe E, **Laird A**, Pruden, SM. Do spatial activity experiences influence spatial anxiety? Society for Study of Human Development Biennial Conference (SSHD), Providence, RI, USA, 2017.
  39. Marquez S, Bollat P, Bravo E, Odean R, Nazareth A, Bartley JE, Brewe E, Laird A, Pruden SM. Math and Science Anxiety: Establishing a connection within physics undergraduate students. Committee on Equality of Professional Opportunity (CEPO) / Psi Chi Undergraduate Student Research Conference, Atlanta, GA, USA, 2017.
  40. Flannery JS, Sutherland MT, Riedel MC, **Laird AR**, Salmeron BJ, Ross TJ, Stein EA. Abstinent smokers show reduced brain responses to position feedback and enhanced responses to negative feedback, Society for Neuroscience 47<sup>th</sup> Annual Meeting, Washington, DC, USA 2017.
  41. Riedel MC, Flannery JS, Gonzalez R, **Laird AR**, Sutherland MT. Combined effects of HIB and cannabis use on insular functional connectivity, Society for Neuroscience 47<sup>th</sup> Annual Meeting, Washington, DC, USA, 2017.

42. Poudel R, Riedel MC, Hill L, Flannery JS, Salo T, **Laird AR**, Sutherland MT. Behavioral decoding of functionally related brain areas consistently linked to drug cue reactivity. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 1098, 2017.
43. Flannery JS, Riedel MC, Poudel R, Salo T, Bottenhorn KL, Hill L, **Laird AR**, Sutherland MT. Meta-analytic clustering dissociates activation and behavior profiles across reward processing data. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Oral Presentation 1428, 2017.
44. Salo T, Riedel MC, Bartley JE, Bottenhorn KL, Yarkoni T, Turner MD, Turner JA, Sutherland MT, **Laird AR**. A quantitative evaluation of Neurosynth's annotation methods. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Oral Presentation 1674, 2017.
45. Samartidis P, Fox PT, **Laird AR**, Johnson T, Nichols TE. Estimating the file drawer effect in neuroimaging. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 1849, 2017.
46. Bottenhorn KL, Robinson JL, Flannery JS, Salo T, Riedel MC, Eickhoff SB, Yanes JA, Sutherland MT, **Laird AR**. Connectivity of the human habenula using 7T resting state and meta-analytic coactivation modeling. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 1942, 2017.
47. Genon S, Reid A, Langner R, **Laird AR**, Fox PT, Eickhoff SB. Profiling inferior left dorsal premotor cortex: when area 55b meets premotor eye-field. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 2000, 2017.
48. Camilleri J, Muller V, Fox PT, **Laird AR**, Hoffstaedter F, Eickhoff SB. Characterization of sub-networks within an extended multiple demand network. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 3355, 2017.
49. Bartley JE, Riedel MC, Salo T, Boevig ER, Odean R, Bravo E, Laird RW, Prduen S, Brewe E, Sutherland MT, **Laird AR**. Uncovering the neural substrates of physics problem solving: A new paradigm with behavior correlates. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 3415, 2017.
50. Alcala-Lopez D, Smallwood J, Jeffries E, Van Overwalle F, Vogeley K, Mars R, **Laird AR**, Fox PT, Eickhoff SB, Bzdok D. Learning the neurobiology of social behavior from data: Four networks underlying social cognition. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Oral Presentation 4203, 2017.
51. Boevig ER, Toma A, Riedel MC, Bartley JE, Bottenhorn KL, Bzdok D, Eickhoff SB, Sutherland MT, Glahn DC, **Laird AR**. Social neuroimaging meta-analysis through the RDoC lens yields distinct context-driven cliques. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Oral Presentation 4226, 2017.



52. Poeppel, Donges M, Rupprecht R, Fox PT, **Laird AR**, Bzdok D, Langguth B, Eickhoff SB. Meta-analysis of aberrant brain activity in psychopathy. 23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada, Poster Presentation 4251, 2017.
53. Bartley J, Riedel MC, Falcone K, MacNamara K, Pruden SM, Brews E, Sutherland MT, **Laird AR**. Physics classroom learning promotes posterior medial cortex activity during problem-solving. Summer 2016 National Meeting of the American Association of Physics Teachers (AAPT), Sacramento, CA, USA, FE06, 2016.
54. Bartley J, Riedel MC, Falcone K, MacNamara K, Pruden SM, Brews E, Sutherland MT, **Laird AR**. Physics classroom learning promotes posterior medial cortex activity during problem-solving. 19<sup>th</sup> Annual Meeting of the Physics Education Research Conference (PERC), Sacramento, CA, USA, 2016.
55. Bartley J, Riedel M, Falcone K, MacNamara K, Pruden S, Brews E, Sutherland M, **Laird A**. Physics classroom learning promotes posterior medial cortex activity during problem-solving. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1523, 2016.
56. Boevig E, Bartley J, Riedel M, Sutherland M, **Laird A**. Meta-analytic co-activation modeling of posterior medial cortex: Beyond the default mode. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1526, 2016.
57. Falcone K, Poudel R, **Laird A**, Sutherland M. Functional and structural neurobiological impact of mindfulness meditation: An ALE meta-analysis. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1727, 2016.
58. Li H, Fan L, Zhuo J, Zhang Y, Wang J, Chen L, Yang Z, Chu C, Xie S, **Laird A**, Fox P, Eickhoff S, Yu C, Jiang T. The Human Brainnetome Atlas: A new brain atlas based on connective architecture. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1842, 2016.
59. Eickhoff C, Nichols T, **Laird A**, Hoffstaedter F, Bzdok D, Amunts K, Fox PT, Eickhoff S. Behavior, sensitivity, and power of activation likelihood estimation characterized by massive empirical simulation. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1857, 2016.
60. Bottenhorn K, Sutherland M, **Laird A**. Naturalistic paradigms in fMRI research: An ALE meta-analysis. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 1869, 2016.
61. Riedel M, Poudel R, Salo T, Eickhoff S, Fox P, **Laird A**, Sutherland M. Co-activation based parcellation of the human insula. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 2209, 2016.
62. Flannery J, Sutherland M, Riedel M, **Laird A**, Salmeron B, Ross T, Stein E. Habenula activity following positive and negative feedback among abstinent cigarette smokers. 22<sup>nd</sup>

Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 3102, 2016.

63. Yanes J, Riedel M, Ray K, Robinson J, **Laird A**, Sutherland M. Neurobiological impacts of long-term cannabis use: An ALE meta-analysis of neuroimaging studies. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 3116, 2016.
64. Reid A, Bzdok D, Langner R, Fox P, **Laird A**, Amunts K, Eickhoff S, Eickhoff C. Multimodal connectivity mapping of the human left anterior and posterior lateral prefrontal cortex. 22<sup>nd</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland, 3894, 2016.
65. Bartley J, Riedel MC, Falcone K, MacNamara K, Pruden SM, Brewe E, Sutherland MT, **Laird AR**. Physics classroom learning promotes posterior medial cortex activity during problem-solving: An fMRI investigation of physics learning. The 4<sup>th</sup> Biennial Meeting of Neuroscience and Education: The Special Interest Group (SIG) 22 of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, the Netherlands, 9, 2016.
66. Nazareth A, Odean R, Bartley J, Brewe E, **Laird A**, Pruden SM. Role of physics pedagogy in mental rotation performance: Lecture versus modeling classes. Spatial Cognition 2016, Philadelphia, PA, USA, 2016.
67. Odean R, Nazareth A, Bartley J, Brewe E, **Laird A**, Pruden S. Does experience with physics concepts improve mental rotation performance? The Annual Meeting of the Cognitive Science Society, Philadelphia, PA, USA, 2016.
68. Schroeter M, Meyer S, Neumann J, **Laird A**, Mueller K, Otto M. Behavioral variant frontotemporal dementia can be conceptualized and individually predicted with meta-analyses & pattern classification of imaging data. 10<sup>th</sup> International Conference on Frontotemporal Dementias, Munich, Germany, 2016.
69. Yanes JA, Riedel MC, Ray KL, Robinson JL, **Laird AR**, Sutherland MT. Neurobiological impacts of chronic cannabis use: A meta-analysis of functional neuroimaging studies. NIH Marijuana and Cannabinoids: A Neuroscience Research Summit, Bethesda, MD, USA, 2016.
70. Yanes JA, Riedel MC, Ray KL, Fox PT, Sutherland MT, **Laird AR**. Large-scale data mining reveals distinct neural networks supporting emotional processing: A meta-analytic study. 9<sup>th</sup> Annual Meeting of the Social and Affective Neuroscience Society, New York, NY, USA, 2016.
71. Cieslik EC, Muller VI, Grefkes C, **Laird AR**, Fox PT, Eickhoff SB. Functional connectivity and characterization of subregions within left intraparietal sulcus. Annual Congress for the Richard-Jung-Kolleg im Rahmen der DGKN-Jahrestagung, Deutsche Sektion Der International Federation of Clinical Neurophysiology, Dusseldorf, Germany, 2016.

72. Muller VI, Cieslik EC, Palomer-Gallagher N, **Laird AR**, Fox PT, Eickhoff SB. Coactivation-based parcellation of the posterior medial frontal cortex. Annual Congress for the Richard-Jung-Kolleg im Rahmen der DGKN-Jahrestagung, Deutsche Sektion Der International Federation of Clinical Neurophysiology, Dusseldorf, Germany, 2016.
73. Burrows C, **Laird AR**, Uddin LQ. Neural representations of self- and other-evaluation: An ALE meta-analysis. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 4360, 2015.
74. Samartsidis P, **Laird AR**, Fox PT, Johnson TD, Nichols TE. Estimating the prevalence of “file drawer” studies. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 4038, 2015.
75. Genon S, Muller V, Cieslik E, Hoffstaedter F, Langer R, Grefkes C, **Laird AR**, Fox PT, Eickhoff SB. A connectivity-based parcellation of the left dorsal premotor cortex. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 4009, 2015.
76. Ray KL, Riedel MC, Fox PM, Uecker AM, Yanes J, Fox PT, **Laird AR**. Functional specificity of rest and task based modules: A graph theoretical analysis. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3868, 2015.
77. Yanes J, Riedel MC, Ray KL, Fox PT, Sutherland MT, **Laird AR**. Cognitive control of emotion: A meta-analytic network approach to understanding emotion. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3533, 2015.
78. Turner M, **Laird AR**, Sunderraman R, Turner J. OpenWeb architectures for the annotation of fMRI papers. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3532, 2015.
79. Reid A, Bzdok D, Genon S, Langner R, Muller V, Eickhoff C, Hoffstaedter F, Cieslik E, Fox PT, **Laird AR**, Amunts K, Eickhoff SB. The Neuroimaging Meta-Analysis Database: A datasharing initiative for neuroimaging meta-analyses. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3525, 2015.
80. Bartley J, Sutherland MT, Falcone K, Nazareth A, Riedel MC, Laird RW, Marguglio D, MacNamara K, Pruden SM, Brewe E, **Laird AR**. Physics learning facilitates enhanced resting state connectivity in problem solving network. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3487, 2015.
81. Sutherland MT, Ray KL, Riedel MC, Yanes J, Stein E, **Laird AR**. NACHR agonists induce heterogeneous functional alterations across the brain: An ALE meta-analysis. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 3125, 2015.
82. Muller V, Cieslik E, Palomero-Gallagher N, **Laird AR**, Fox PT, Eickhoff SB. Coactivation-based parcellation of the posterior medial frontal cortex. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 1495, 2015.

83. Cieslik E, Muller V, Grefkes C, **Laird AR**, Fox PT, Eickhoff SB. Functional connectivity and characterization of subregions within left intraparietal sulcus. 21<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Honolulu, HI, USA, 1481, 2015.
84. Ren D, Ma L, Zhang Y, Sunderraman R, Fox PT, **Laird AR**, Turner JA, Turner MD. Online biomedical publication classification using multi-instance multi-label algorithms with feature reduction. 14th IEEE International Conference on Cognitive Informatics & Cognitive Computing, Beijing, China, Paper 164, 2015.
85. Almeida J, Wegbreit E, Cushman GK, Weissman AB, Kim KL, **Laird A**, Dickstein DP. Fronto-amygdalar alterations during emotional face processing may differentiate children with bipolar disorder from those with major depressive disorder: A functional neuroimaging meta-analysis. 61<sup>st</sup> Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Phoenix, AZ, 2014.
86. Ren D, Ma L, Zhang Y, Sunderraman R, Fox PT, **Laird AR**, Turner MD, Turner JA. Publication classification using multi-instance multi-label algorithm with feature selection. International Conference on Web-Age 16<sup>th</sup> Information Management (WAIM), Qingdao, Shandong, China, 2015.
87. Almeida JRC, Wegbreit E, Cushman GK, Weissman AB, Kim KL, **Laird AR**, Dickstein DP. Hyper amygdala and hypo pre-frontal corte activation during facial emotional processing differentiates bipolar disorder from major depressive disorder during childhood: Neuroimaging meta-analysis. 53<sup>rd</sup> Annual Meeting, American College of Neuropsychopharmacology, Phoenix, AZ, USA, 2014.
88. Sutherland M, Frangou S, Rasgon A, Glahn D, **Laird AR**. Common and distinct functional alterations across anxiety disorders: An ALE meta-analysis. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1366, 2014.
89. Bartley J, Ray K, Riedel M, Yanes J, Fox P, Brewe E, **Laird AR**. A meta-analysis of problem solving within mathematical and verbal domains. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1555, 2014.
90. Ray K, Damaraju E, Riedel M, Calhoun V, Uecker A, Eickhoff S, Fox P, Turner J, **Laird AR**. Towards a prediction of cognitive deficits via underlying connectivity differences in schizophrenia. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1613, 2014.
91. Clos M, Rottschy C, **Laird AR**, Fox P, Eickhoff S. Comparison of structural covariance with functional connectivity in the left anterior insula. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1745, 2014.
92. Seidler I, Eickhoff S, Fox P, **Laird AR**, Cieslik EC. Differential functional connectivity of regions associated with saccade and antisaccade performance. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1801, 2014.

93. Reid A, Gong G, **Laird AR**, Fox P, Evans A, Amunts K, Eickhoff S. Cross-modal comparison of seed-based structural and functional covariance. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, MT-1802, 2014.
94. Riedel M, Ray K, Fox P, **Laird AR**. Representational similarity analysis reveals functional connectivity disruptions in schizophrenia. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, WTh-3514, 2014.
95. Riedel M, Ray K, Eickhoff S, Fox P, **Laird AR**. Transition between parcellation regions within the anterior cingulate: A meta-analytic approach. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, WTh-3585, 2014.
96. Hensel L, Bzdok D, **Laird AR**, Fox P, Eickhoff S. Subdifferentiation in the human dorsomedial prefrontal cortex. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg, Germany, WTh-4293, 2014.
97. Wegbreit E, Cushman GK, Puzia ME, Weissman AB, Kim KL, Greenberg BD, **Laird AR**, Dickstein DP. Developmental meta-analyses of the functional neural correlates of bipolar disorder. 69<sup>th</sup> Annual Conference, Society for Biological Psychiatry, New York, NY, USA, 2014.
98. Robinson JL, Busler J, **Laird AR**. Activation and deactivation of the social brain. 53<sup>rd</sup> Annual Meeting of the Society for Psychophysiological Research, Florence, Italy, 2013.
99. Chakrabarti C, Jones TB, **Laird AR**, Xu J, Luger G, Turner JA, Turner MD. Naively successful: Naïve Bayes with and without decision trees for automated annotation of human neuroimaging abstracts. International Neuroinformatics Coordinating Facility (INCF) Congress, Stockholm, Sweden, 2013.
100. Bartley JE, **Laird AR**, Brewe E. A meta-analysis of brain-behavior correlations in problem solving. Annual Summer Meeting of the American Association of Physics Teachers, Portland, OR, 2013.
101. Bartley JE, Brewe E, **Laird AR**. A meta-analysis of brain-behavior correlations in problem solving. Physics Education Research Conference, Portland, OR, 2013.
102. Chakrabarti C, Jones TB, Xu JF, Luger GF, **Laird AR**, Turner MD, Turner JA. A probabilistic framework for ontology-based annotation in neuroimaging literature. 15<sup>th</sup> Bio-Ontologies Special Interest Group Meeting (SIG), 21<sup>st</sup> Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) / 12<sup>th</sup> European Conference on Computational Biology (ECCB), Berlin, Germany, 2013.
103. Bzdok D, Langner R, **Laird AR**, Fox PT, Eickhoff SB. Antagonistic activation patterns underlie multi-functionality of the right temporo-parietal junction. 3<sup>rd</sup> International Workshop on Pattern Recognition in NeuroImaging (PRNI), Philadelphia, PA, 2013.
104. Nickl-Jockschat T, Thommes J, Rottschy C, **Laird AR**, Fox PT, Eickhoff SB. Neural networks related to dysfunctional face processing in autism spectrum disorder (ASD). 19<sup>th</sup>

- Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1077, 2013.
105. Jones T, Chakrabarti C, Xu J, Turner MD, Luger GF, **Laird AR**, Turner JA. Modeling ontology-based annotation processes for neuroimaging abstracts using a stochastic framework. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1443, 2013.
  106. Turner MD, Xu J, Jones T, Chakrabarti C, **Laird AR**, Luger GF, Turner JA. (2013). Automated annotation of fMRI abstracts: Comparison of text mining methods. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1436, 2013.
  107. Hernandez Z, Ray KL, Riedel MC, Fox PM, Eickhoff SB, Fox PT, Turner JA, **Laird AR**. Data-driven refinement of cognitive paradigm classifications: A face discrimination meta-analysis. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1439, 2013.
  108. Flagmeier S, Ray KL, Parkinson A, **Laird AR**, Larson C, Robin DA. Neural connectivity of voice control using structural equation modeling. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1525, 2013.
  109. Müller V, Cieslik EC, **Laird AR**, Fox PT, Eickhoff SB. Connectivity and characterization of a left IPC region disturbed in schizophrenia and depression. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1784, 2013.
  110. Ray KL, Bludau S, Riedel MC, Hernandez Z, Zald D, Fox PT, Eickhoff SB, **Laird AR**. Connectivity-based parcellation of the frontal pole. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1787, 2013.
  111. Dogan I, Rottschy C, Fox PT, **Laird AR**, Schulz J, Eickhoff SB, Reetz K. Functional connectivity modeling of cortico-striatal alterations in Huntington's disease. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1814, 2013.
  112. Riedel MC, Ray KL, Hernandez Z, Fox PM, Eickhoff SB, Fox PT, **Laird AR**. Intrinsic connectivity and behavioral parcellation of the cerebellum through meta-analytic modeling. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1838, 2013.
  113. Langner R, Rottschy C, **Laird AR**, Fox PT, Eickhoff SB. Making meta-analytic co-activation mapping more specific. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1842, 2013.
  114. Eickhoff SB, **Laird AR**, Fox PM, Uecker AM, Lancaster JL, Bzdok D, Langner R, Rottschy C, Turkeltaub PE, Fox PT. Activation likelihood estimation meta-analyses: Recent developments and future perspectives. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-1938, 2013.

115. Amft M, Schilbach L, **Laird AR**, Fox PT, Eickhoff SB. Definition and characterization of the extended default mode network (eDMN). 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, MT-2003, 2013.
116. Schroeter M, **Laird AR**, Chwiesko C, Deuschl C, Schneider E, Bzdok D, Eickhoff SB, Neumann J. Conceptualizing frontotemporal dementia with data-driven multimodal imaging meta-analyses. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-3055, 2013.
117. Cieslik EC, Clos M, Müller V, **Laird AR**, Fox PT, Grefkes C, Eickhoff SB. Co-activation based parcellation and functional characterization of the intraparietal sulcus. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-3754, 2013.
118. Clos M, Amunts K, **Laird AR**, Fox PT, Eickhoff SB. Parcellation of the multifunctional left area 44 using meta-analytic co-activation modeling. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-3764, 2013.
119. Bzdok D, Langer R, **Laird AR**, Fox PT, Eickhoff SB. Reciprocal anti-correlation underlies multi-functionality of the temporo-parietal junction. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-3958, 2013.
120. Smallwood R, Clauw D, Farrell M, Lewis J, Schmidt-Wilcke T, Williams D, **Laird AR**, Ramage A, Parkinson A, Eickhoff SB, Robin DA. Gray matter volume changes in chronic pain disorders: A voxel-based morphometry meta-analysis. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-3982, 2013.
121. Bzdok D, **Laird AR**, Fox PT, Eickhoff SB. Segregation of the human medial prefrontal cortex in social cognition. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Seattle, WA, WTh-4088, 2013.
122. Chakrabarti C, Luger GF, **Laird A**, Turner JA. Textmining for cognitive paradigm annotation. International Neuroinformatics Coordinating Facility (INCF) Congress, Munich, Germany, 2012.
123. Chakrabarti C, Luger GF, **Laird AR**, Turner JA. Automated annotation of neuroimaging abstracts for cognitive experiments. Bio-ontologies Special Interest Group (SIG), ISMB, Long Beach, CA, 2012.
124. Narayana S, Li K, **Laird AR**, Franklin C, Salinas FS, Leland MM, Fox PT, Szabo CA. Modeling the effective connectivity of the visual network in healthy and photosensitive, epileptic baboons. Annual Meeting of the American Epilepsy Society, San Diego, CA, 2012.
125. Huerta C, **Laird AR**, Fox PT, DeFronzo R, Abdul-Ghani M, Duong T. Multimodal food perception: Meta-analysis of neuroimaging studies of food cues. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.

126. Lin AL, **Laird AR**, Ramage A, Duong T, Fox PT. Metabolic and hemodynamic differences among resting state brain networks. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
127. Ray KL, McKay DR, Fox PM, Beckmann C, Smith SM, Fox PT, **Laird AR**. Cognitive implications of component fractionation across BrainMap task-based ICA networks. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
128. Ray KL, Glahn DC, Blangero J, **Laird AR**. Converging hub identification: Evidence from resting state graph theory and BrainMap ICA analyses. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
129. Barron DS, PM Fox, **Laird AR**, Robinson JL, Fox PT. Thalamic medial dorsal nucleus atrophy in medial temporal lobe epilepsy: A VBM meta-analysis. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
130. Eickhoff SB, Bzdok D, **Laird AR**, Roski C, Caspers S, Zilles K, Fox PT. Co-activation patterns distinguish cortical modules, their connectivity and functional differentiation. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
131. Caspers S, Eickhoff SB, Schleicher A, Palomero-Gallagher N, Bacha-Trams M, **Laird AR**, Fox PT, Amunts K, Zilles K. Receptor-based parcellation of the human inferior parietal lobule and its implication for function. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
132. Bzdok D, Schilbach L, Vogeley K, **Laird AR**, Langner R, Eickhoff SB. Decomposing neural networks of moral cognition: ALE meta-analysis on morality, theory of mind, and empathy. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
133. Rottschy C, **Laird AR**, Fox PT, Eickhoff SB. Connectivity between the left anterior lateral prefrontal cortex and other regions implicated in working-memory processes. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
134. Roski C, Caspers S, **Laird AR**, Fox PT, Zilles K, Eickhoff SB. Functional connectivity of cognitive and motor processing in healthy aging. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
135. Bzdok D, **Laird AR**, Zilles K, Fox PT, Eickhoff SB. Structural, connectional, and functional segregation in the human amygdala. 18<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Beijing, China, 2012.
136. Turner JA, Frishkoff G, Laird AR. Ontology harmonization between fMRI and ERP: CogPO and NEMO. 41<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington D.C., USA, 2011.



137. Turner JA, Fox PT, Beckmann CF, Smith SM, **Laird AR**. Do ontological concepts stand up to a meta-analysis of neuroimaging data? The Annual INCF Neuroinformatics Congress, Boston, MA, USA, 2011.
138. Schroeter ML, **Laird AR**, Chwiesko C, Deuschl C, Schneider E, Neumann J. Towards a cognitive neuropsychiatry of frontotemporal dementia. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 61MT, 2011.
139. Ray KL, Fox PM, McKay DR, Beckmann CF, Smith SM, Fox PT, **Laird AR**. Estimating BrainMap-based ICA dimensionality using cluster-based methods. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (HBM), Quebec City, Canada, 659MT, 2011.
140. McKay R, Ray K, Fox M, Beckmann C, Smith S, Fox P, **Laird A**. Persistent and stable BrainMap-based ICA networks. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 736WTh, 2011.
141. Lancaster JL, **Laird AR**, Fox PM, Martinez M, Fox PT. BrainMap behavior profiles. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 352WTh, 2011.
142. Nickl-Jockschat T, Pagel A, **Laird AR**, Schneider F, Fox P, Eickhoff S. Brain structure changes in schizophrenia patients: Correlation with disease duration and functional. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 92WTh, 2011.
143. Flagmeier SG, **Laird AR**, Ballard KJ, Null M, Fox PT, Robin DA. Neural control of speech versus nonspeech oral movements: A meta-analytic approach. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 824WTh, 2011.
144. Cieslik EC, Zilles K, Caspers S, Roski C, Kellermann T, Jakobs O, Pomjanski W, Langner R, **Laird AR**, Fox P, Eickhoff S. Is there “one” DLPFC in motor control? Evidence from connectivity-based parcellation. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 367MT, 2011.
145. Eickhoff S, Jbabdi S, Caspers S, **Laird AR**, Fox P, Zilles K, Behrens T. Anatomical and functional connectivity of cytoarchitectonic areas on the human parietal operculum. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 727WTh, 2011.
146. Robin D, Eickhoff S, Manes J, Fox P, **Laird AR**. The functional connectivity of Broca’s and Wernicke’s areas: A meta-analytic approach. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 747WTh, 2011.
147. Schilbach L, Vogeley K, Fox P, **Laird AR**, Eickhoff S. Minds at rest – revisited. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 1077MT, 2011.
148. Rottschy C, Roski C, Caspers S, Reetz K, Dogan I, Schulz J, Zilles K, **Laird AR**, Fox P, Eickhoff S. Differentiated parietal connectivity of frontal regions for “what” and “where”

- memory. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 842WTh, 2011.
149. Hoffstaedter F, Grefkes C, Caspers S, Roski C, **Laird AR**, Fox P, Zilles K, Eickhoff S. Functional connectivity reveals the mid-cingulate cortex as center axis of intentional motor control. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 919 WTh, 2011.
  150. Narayana S, **Laird AR**, Lancaster J, Fox P. Functional connectivity of the supplementary motor area parceled by domain specific meta-analysis. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 933WTh, 2011.
  151. Zald DH, Ray K, McHugo M, Eickhoff S, Glahn D, **Laird AR**. Differential functional connectivity of the medial and lateral orbitofrontal cortex. 17<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Quebec City, Canada, 966WTh, 2011.
  152. Ramage AE, **Laird AR**, Eickhoff SB, Acheson A, Williamson DE, Fox PT. A coordinate-based meta-analysis of trauma processing in PTSD: Associations with pain processing. 66<sup>th</sup> Annual Conference, Society for Biological Psychiatry, San Francisco, CA, USA, 2011.
  153. Glahn DC, Olvera RL, McKay DR, Winkler AM, Kochunov P, Almasy L, Duggirala R, Carless MA, Curran JC, **Laird AR**, Fox PT, Blangero J. Common genetic factors influence risk for major depression and default mode brain connectivity. 66<sup>th</sup> Annual Conference, Society for Biological Psychiatry, San Francisco, CA, USA, 2011.
  154. Wey HY, Kochunov P, Fox PT, **Laird AR**, Duong TQ. Resting-state functional connectivity across primate species: Implications of evolutionary hemispheric asymmetry. 19<sup>th</sup> Annual Meeting & Exhibition of the International Society of Magnetic Resonance in Medicine, Montreal, Canada, 2011.
  155. Wey HY, **Laird AR**, Fox PT, Duong TQ. Functional interpretations of the resting-state networks in nonhuman primate. 19<sup>th</sup> Annual Meeting & Exhibition of the International Society of Magnetic Resonance in Medicine, Montreal, Canada, 2011.
  156. Rottschy C, Reetz K, Dogan I, Langer R, **Laird AR**, Schulz JB, Fox PT, Eickhoff SB. Effects of phase, property, and contrast on the cortical activation patterns in working memory tasks. 44<sup>th</sup> Annual Winter Conference on Brain Research, Keystone, CO, USA, 2011.
  157. Glahn DC, **Laird AR**, Winkler AM, Carless MA, Curran JE, Almasy L, Duggirala R, Olvera RL, Fox PT, Blangero J. Identifying Genes Influencing Gray Matter Reductions in Schizophrenia: An Endophenotypic Strategy. 13<sup>th</sup> International Congress on Schizophrenia Research, Colorado Springs, CO, USA, 2011.
  158. Turner JA, **Laird AR**. The cognitive paradigm ontology (CogPO): Experimental conditions and contrasts. 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, USA, 2010.

159. **Laird AR**, Fox PM, Eickhoff SB, Turner JA, Ray KL, McKay DR, Glahn DC, Beckmann CF, Smith SM, Fox PT. Functional assessment of intrinsic connectivity networks. 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, USA, 2010.
160. Niedam TA, **Laird AR**, Ray KL, Dean YM, Glahn DC, Carter CS. Executive functions: Unitary construct or separable domains? A quantitative meta-analysis of functional neuroimaging studies of healthy executive functioning. 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, USA, 2010.
161. Turner JA, **Laird AR**. Cognitive paradigm ontology: Representing cognitive behavioral experiments. Bio-ontologies: Knowledge in Biology, Intelligent Systems for Molecular Biology (ISMB), Boston, MA, USA, 2010.
162. Nickl-Jockschat T, Habel U, Michel TM, **Laird AR**, Fox PT, Schneider F, Eickhoff SB. Brain structure anomalies in autism spectrum disorder and their relation to age: A meta-analysis of VBM studies using anatomic likelihood estimation. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 395 WTh-AM, 2010.
163. Kleiman A, Nickl-Jockschat T, **Laird AR**, Fox PT, Schulz JB, Eickhoff SB, Reetz K. Structural changes associated with mild cognitive impairment: A quantitative meta-analysis. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 345 WTh-AM, 2010.
164. Dogan I, Eickhoff SB, Fox PT, **Laird AR**, Schulz JB, Shah JN, Reetz K. Meta-analysis of VBM imaging studies in Huntington's disease. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 472 MT-PM, 2010.
165. Rottschy C, Eickhoff SB, Dogan I, **Laird AR**, Fox PT, Schulz JB, Reetz K. Modeling neural correlates of working memory and discrepancies of studies investigating it. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 930 MT-PM, 2010.
166. Langner R, Kurth F, Zilles K, Fox PT, **Laird AR**, Schneider F, Eickhoff SB. ALE meta-analysis of brain activity patterns during sustained attention. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 59 WTh-AM, 2010.
167. Eickhoff SB, **Laird AR**, Kurth F, Fox PT. New developments in coordinate-based meta-analysis of functional neuroimaging studies. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1068 MT-PM, 2010.
168. Salimi-Khorshidi R, Nichols T, **Laird AR**, Fox PT, Smith SM. Meta-analytic causal interference: Extracting brain regions' nonlinear/modulatory interactions. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1013 MT-AM, 2010.

169. Smith SM, **Laird AR**, Woolrich MW, Fox PT, Beckmann CF. Hierarchies of resting and activation networks. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1160 MT-PM, 2010.
170. Robinson JL, **Laird AR**, Sanghera MK, Glahn DC, Fox PT. Meta-analytic connectivity modeling of the human caudate: Evidence for behavioral specificity. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1041 MT-AM, 2010.
171. Acheson A, **Laird AR**, Fox PT, Lovallo W. Differences in resting state activity in young adults with or without a family history of alcoholism. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 281 WTh-AM, 2010.
172. Narayana S, **Laird AR**, Li K, Franklin C, Zhang W, Xiong J, Fox PT. Neural signatures of proficiency: Evidence from the human primary motor cortex. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1296 MT-PM, 2010.
173. Fox PM, **Laird AR**, Uecker AM, Lancaster JL, Fox PT. BrainMap: A coordinate-based functional neuroimaging data. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1301 WTh-AM, 2010.
174. Caspers S, Zilles K, **Laird AR**, Eickhoff SB. ALE meta-analysis of action observation and imitation: Influence of effector, object, and instruction. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 991 WTh-AM, 2010.
175. **Laird AR**, Fox PM, Eickhoff SB, Ray KL, Turner JA, Glahn DC, Beckmann CF, Smith SM, Fox PT. Functional assessment of intrinsic connectivity networks. 16<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain, Poster 1140 MT-PM, 2010.
176. Karlsgodt KH, Kochunoc P, Winkler AM, **Laird AR**, Almasy L, Duggirala R, Olvera RL, Fox PT, Blangero J, Glahn DC. A multi-modal assessment of the genetic control over working memory. 65<sup>th</sup> Annual Conference, Society for Biological Psychiatry, New Orleans, LA, USA, 2010.
177. **Laird AR**, Li K, Narayana S, Laird RW, Price L, Xiong J, Fox PT. Modeling motor learning connectivity using coordinate-based meta-analysis and TMS/PET. 43<sup>rd</sup> Asilomar Conference on Signals, Systems and Computers, Pacific Grove, CA, USA, 2009.
178. Ragland JD, **Laird AR**, Ranganath CS, Blumenfeld RS, Gonzales SM, Glahn DC. Quantitative meta-analysis of episodic memory in schizophrenia reveals prominent prefrontal dysfunction. 64<sup>th</sup> Annual Conference, Society for Biological Psychiatry, Vancouver, Canada, 2009.
179. Smith SM, **Laird AR**, Glahn D, Fox PM, Mackay CE, Filippini N, Toro R, Fox PT, Beckmann CF. fMRI resting state networks match BrainMap activation networks. 15<sup>th</sup>

Annual Meeting of the Organization for Human Brain Mapping (OHBM), San Francisco, CA, USA, 2009.

180. Price L, **Laird AR**, Fox PT. Deriving optimal neuroimaging models using Bayesian model averaging. 15<sup>th</sup> International Meeting of the Psychometric Society, Durham, New Hampshire, USA, 2008.
181. Glahn DC, **Laird AR**, Ellison-Wright I, Thelen SM, Robinson JL, Lancaster JL, Bullmore E, Fox PT. Meta-analysis of gray matter anomalies in schizophrenia: Application of anatomic likelihood estimation and network analysis. 63<sup>rd</sup> Annual Conference, Society for Biological Psychiatry, Washington, D.C., USA, 2008.
182. Minzenberg MJ, **Laird AR**, Thelen SM, Glahn DC, Carter CS. Meta-analysis of 41 functional neuroimaging studies of executive cognition reveals dysfunction in a general-purpose, frontal cortex-dependent cognitive control network in schizophrenia. 63<sup>rd</sup> Annual Conference, Society for Biological Psychiatry, Washington D.C., USA, 2008.
183. **Laird AR**, Fox PT. Meta-analysis of the default mode network: Connectivity patterns for activations and deactivations. 14<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Melbourne, Australia, Poster 582 TH-PM, 2008.
184. Robinson JL, **Laird AR**, Glahn DC, Fox PT. Modeling functional connectivity of the amygdala: A meta-analytic approach. 14<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Melbourne, Australia, Poster 546 TH-PM, 2008.
185. Robinson JL, Laird RW, **Laird AR**, McMillan KM, Tordesillas-Gutiérrez D, Thelen SM, Ray KL, Glahn DC, Fox PT, Lancaster JL. Comparison of Talairach and MNI coordinates in functional neuroimaging data: Validation of the icbm2tal transform. 14<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Melbourne, Australia, Poster 508 T-PM, 2008.
186. **Laird AR**, Glahn DC, Thelen SM, Fox PM, Uecker AM, Lancaster JL, Fox PT. Meta-analysis of functional and structural neuroimaging data using the BrainMap database. 41<sup>st</sup> Annual Winter Conference on Brain Research, Snowbird, Utah, USA, 2008.
187. Minzenberg MJ, **Laird AR**, Thelen SM, Glahn DC, Carter CS. Meta-analysis of 41 functional neuroimaging studies of executive cognition reveals dysfunction in a general-purpose frontal cortex-dependent cognitive control network in schizophrenia. 46<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology (ACNP), Boca Raton, FL, USA, 2007.
188. **Laird AR**, Witt ST, Meyerand ME, Fox PT. Finger tapping meta-analysis reveals segregations based on stimulus modality and complexity of tapping: Results from activation likelihood estimation (ALE) and fractional similarity network analysis (FSNA). 13<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Chicago, USA, Poster 142 M-PM, 2007.
189. McMillan KM, **Laird AR**, Li K, Robbins JM, Laird RW, Fox PT. ALE meta-analysis and behavioral domain profile analysis reveal functional dissociations in letter fluency and verb

- generation tasks. 13<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Chicago, USA, Poster 149 T-AM, 2007.
190. **Laird AR**, Robbins JM, Li K, Narayana S, Laird RW, Franklin C, Price L, Fox PT. Structural equation modeling of the efference copy network using TMS/PET. 13<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Chicago, USA, Poster 274 M-PM, 2007.
  191. Tordesillas-Gutierrez D, **Laird AR**, Robinson J, Glahn DC. Brain imaging studies of declarative memory: A meta-analysis of the pair-associated task. 13<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Chicago, USA, 2007.
  192. Quinones MP, Mayberg H, **Laird AR**. Coordinate-based meta-analyses of the neuro-circuitry of sadness and happiness using activation likelihood estimation (ALE). 13<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Chicago, USA, 2007.
  193. Tordesillas-Gutierrez D, **Laird AR**, Robinson J, Glahn DC. Brain imaging studies of declarative memory: A meta-analysis of the pair-associated task. 62<sup>nd</sup> Annual Conference, Society for Biological Psychiatry, San Diego, CA, USA, 2007.
  194. Turner JA, Fennema-Notestine C, Martone ME, **Laird AR**, Grethe JS, Bug W, Gupta A, Bean C. You say potato, I say potahto: Ontological engineering applied within the Biomedical Informatics Research Network. Annual Meeting of the Society for Neuroscience, Atlanta, Georgia, USA, 2006.
  195. Fox PT, **Laird AR**, Fox PM, Lancaster JL. Consensus imaging: Emerging methods for coordinate-based, voxel-wise meta-analysis in human functional brain mapping. 39<sup>th</sup> Annual Winter Conference on Brain Research, Steamboat Springs, Colorado, USA, 2006.
  196. **Laird AR**, Fox M, Price CJ, Glahn DC, Uecker AM, Lancaster JL, Turkeltaub PE, Kochunov P, Fox PT. Controlling the false discovery rate in activation likelihood estimation (ALE) meta-analyses. 11<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Toronto, Canada, Poster 729, 2005.
  197. McMillan KM, **Laird AR**, Meyerand ME. N-back: Self-paced design and ALE meta-analysis comparisons. 11<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Toronto, Canada, Poster 370, 2005.
  198. **Laird AR**, McMillan KM, Lancaster JL, Kochunov P, Turkeltaub PE, Pardo JV, Fox PT. Somatotopic mapping within the cingulate motor area: Evidence from an ALE meta-analysis of the Stroop task. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Miami, FL, USA, 13:775, 2005.
  199. McMillan KM, **Laird AR**, Marquez EC, Meyerand ME. Working memory using n-back: Self-paced paradigm and meta-analysis comparisons. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Miami, FL, USA, 13:1445, 2005.
  200. McMillan KM, Rogers BP, Field AS, **Laird AR**, Hayes LL, Mehta MP, Meyerand ME. Prediction of recurrence for glioblastoma multiforme using MRI-based hypoxia mapping,

- perfusion and diffusion maps. Workshop on Advances in Experimental and Clinical MR in Cancer Research, 134-135, 2004.
201. McMillan KM, Field AS, Rowley HA, Rogers BP, **Laird AR**, Meyerand ME. Utility of physiologic parameters in the diagnosis of GBM recurrence. Workshop on Advances in Experimental and Clinical MR in Cancer Research, 136-137, 2004.
  202. **Laird AR**, Lancaster JL, Fox PT. BrainMap: An environment for meta-analysis in functional neuroimaging research. 10<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Budapest, Hungary, Poster WE218, 2004.
  203. **Laird AR**, McMillan KM, Castillo R, Lancaster JL, Fox PT. A comparison of tabular-based meta-analysis and activation likelihood estimation in the Stroop task. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Kyoto, Japan, 12:1157, 2004.
  204. McMillan KM, **Laird AR**, Castillo R, Lancaster JL, Fox PT. Functional localization of working memory: Activation likelihood estimation of the n-back task. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Kyoto, Japan, 12:401, 2004.
  205. McMillan KM, Rogers BP, Field AS, **Laird AR**, Hayes LL, Mehta MP, Jaradat HA, Tome WA, Meyerand ME. Physiologic characterization of glioblastoma multiforme using MRI-based hypoxia mapping, chemical shift imaging, perfusion, and diffusion maps. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Kyoto, Japan, 12: 2061, 2004.
  206. **Laird AR**, Rogers BP, Meyerand ME. Computation of coupling direction between motor cortex and cerebellum in fMRI motor task. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Toronto, Canada, 2003.
  207. **Laird AR**, Rogers BP, Bach-y-Rita P, Meyerand ME. Synchronization in active voxels during functional magnetic resonance imaging. Society For Neuroscience Annual Meeting, Orlando, FL, USA, 2002.
  208. **Laird AR**, Rogers BP, Meyerand ME. Investigating the nonlinearity of fMRI activation data. 2<sup>nd</sup> Joint Meeting of the IEEE EMBS and the BMES, Houston, Texas, USA, 2002.
  209. **Laird AR**, Rogers BP, Meyerand ME. Cluster synchronization in functional magnetic resonance imaging. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu, Hawaii, USA, 306, 2002.
  210. **Laird AR**, Rogers BP, Meyerand ME. Preserving autocorrelations in fMRI with resampling techniques. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu, Hawaii, USA, 309, 2002.
  211. **Laird AR**, Rogers BP, Meyerand ME. Testing for nonlinearity in fMRI with surrogate data. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu, Hawaii, USA, 1389, 2002.

212. Rogers BP, Carew JD, **Laird AR**, Meyerand ME. Path analysis of fMRI in bilateral language processing. 8<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping (OHBM), Sendai, Japan, Poster 10156, 2002.
213. **Laird AR**, Carew JD, Meyerand ME. Analysis of the instantaneous phase signal of an fMRI time series via the Hilbert transform. Conference Record of the 35<sup>th</sup> Asilomar Conference on Signals, Systems, and Computers, Vol. 2, 1677-1681, 2001.
214. **Laird AR**, Rogers BP, Carew JD, Arfanakis K, Moritz CH, Meyerand ME. Characterizing phase synchronization in whole-brain fMRI activation. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Glasgow, Scotland, 1716, 2001.
215. **Laird AR**, Rogers BP, Carew JD, Arfanakis K, Moritz CH, Meyerand ME. Phase synchronization: A method of detecting functional connectivity. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Glasgow, Scotland, 1721, 2001.
216. Rogers BP, Carew JD, Quigley MA, **Laird AR**, Arfanakis K, Moritz CH, Meyerand ME. Comparison of hybrid independent component analysis and simple regression of an event-related fMRI experiment. Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM), Glasgow, Scotland, 1731, 2001.
217. **Laird AR**, Rogers BP, Carew JD, Arfanakis K, Moritz CH, Meyerand ME. Characterizing phase synchronization in whole-brain fMRI activation. UW-Madison/Promega Symposium on Biological Imaging, 2001.



## Curriculum Vitae

### Robert Lickliter Ph.D.

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April, 2020

Professor of Psychology  
Director, Developmental Psychobiology Lab

Department of Psychology  
Florida International University  
Miami, Florida 33199

305/348-3441 (office)  
305/348-1230 (lab)  
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#### Education:

Post-doc	University of North Carolina, Greensboro (1983-1986) Developmental Psychobiology (Dr. Gilbert Gottlieb)
Ph.D.	University of California, Davis (1983) Animal Behavior/Psychobiology (Dr. Edward Price)
M.S.	University of California, Davis (1979) (Dr. Lawrence Harper) Human Development
B.S.	University of California, Davis (1975) Human Development

#### Academic and Research Positions:

2001-	Professor [Developmental Science; Cognitive Neuroscience] Department of Psychology Florida International University
2015-	Secondary Faculty Appointment, Department of Biological Sciences Florida International University
2001-	Adjunct Research Professor Department of Pediatrics University of Miami Medical School
2010	Lorry Lokey Visiting Professor Program in Human Biology Stanford University
1996-2001	Professor Department of Psychology Virginia Polytechnic Institute & State University

- 1994            Visiting Research Scientist  
                   Infant Perception Lab  
                   New York Institute for Basic Research in Developmental Disabilities
- 1991-1996     Associate Professor  
                   Department of Psychology  
                   Virginia Polytechnic Institute & State University
- 1986-1991     Assistant Professor  
                   Department of Psychology  
                   Virginia Polytechnic Institute & State University

#### **Administrative Positions:**

- 2013 -           Chair, Institutional Animal Care and Use Committee (IACUC)  
                   Florida International University
- 2013- 2018     Program Director, NIGMS-RISE (NIH R25 award)  
                   Florida International University
- 2007- 2013     Director of Graduate Studies (Clinical, Developmental, I/O, and Legal  
                   Ph.D. programs)  
                   Department of Psychology  
                   Florida International University
- 2003- 2012     Co-Director, Infant Development Research Center  
                   Department of Psychology  
                   Florida International University
- 1994-1996     Director, Psychological Sciences Graduate Program  
                   Department of Psychology  
                   Virginia Polytechnic Institute & State University
- 1992-1994     Director, Developmental Psychology Graduate Program  
                   Department of Psychology  
                   Virginia Polytechnic Institute & State University
- 1989-1992     Director of Graduate Studies (Clinical, Developmental, I/O, and Experimental  
                   Ph.D. programs)  
                   Department of Psychology  
                   Virginia Polytechnic Institute & State University

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#### **Awards and Honors:**

- Senior Investigator Award, International Society for Developmental Psychobiology (2018)
- J.R. Kantor Lecturer in Psychology, Denison University (2018)
- College of Arts, Science, and Education Service Award, Florida International University (2017)

Spiker Memorial Lecturer, University of Iowa (2010)

Excellence in Research Award, Faculty Senate, Florida International University (2009)

Fellow, Association for Psychological Science (2009)

Excellence in Faculty Scholarship ("Top Scholar"), Florida International University (2008)

Fellow, American Psychological Association (2007) Division 6 (*Behavioral Neuroscience and Comparative Psychology*)

Frank Beach Comparative Psychology Award (1997)  
Division 6, American Psychological Association

Independent Scientist Career Development Award (1996-2001)  
National Institute of Mental Health/NIH

Certificate of Teaching Excellence (1992)  
Virginia Polytechnic Institute & State University

Distinguished Alumnus Lecturer (1991)  
Division of Biological Sciences, University of California, Davis

Elected to Sigma Xi, the Scientific Research Society (1985)

NIH Postdoctoral Research Fellowship (1983-1986)  
Department of Psychology, University of North Carolina, Greensboro

Chancellor's Research Fellowship, University of California Davis (1980-1982)

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### **Current University Service**

Chair, Institutional Animal Care and Use Committee (2013- present)

University Lab Safety Committee (2018 - present)

Tenure and Promotion Committee, College of Arts, Sciences, and Education (2018- present)

Developmental Science Program Committee, Department of Psychology

Cognitive Neuroscience Program Committee, Department of Psychology

### **Professional Service:**

Chair, Section on Biology and Development, Council of Human Development (2002-2009)

Member, Committee on Animal Care and Ethics, American Psychological Association (2006-08)

President-Elect, President, Past-President, International Society for Developmental Psychobiology (2003-2005)

Secretary, International Society for Developmental Psychobiology (1996-1999)

### **Professional Affiliations:**

American Psychological Association (APA) *Fellow*  
Association for Psychological Science (APS) *Fellow*  
International Society for Developmental Psychobiology (ISDP) *Past-President*  
International Congress for Infancy Studies (ICIS)  
Jean Piaget Society (JPS)  
Society for Research in Child Development (SRCD)  
Society for the Study of Human Development (SSHD)

### **Editorial Activities:**

#### ***Co-Editor***

Special Issue *International Journal of Comparative Psychology* (2006)  
Special Issue *Developmental Psychobiology* (2007)  
Special Issue *Human Development* (2017)

#### ***Associate Editor***

*Developmental Science* (2005-2012)

#### ***Editorial Boards***

*Developmental Psychobiology*  
*Developmental Science*  
*Frontiers in Comparative Psychology*  
*Integrative Psychological and Behavioral Science*  
*Journal of Developmental Processes* (2006-2009)  
*Infancy* (1999-2004)  
*Journal of Comparative Psychology* (1994-2002)

#### ***Ad Hoc Reviewer***

*American Psychologist; Animal Behaviour; Animal Cognition; Animal Learning and Behavior; Behavioral Neuroscience; Behaviour; Behavioral and Brain Research; Behavioral and Brain Sciences (BBS Associate); Biology Letters; Biological Theory; Child Development; Child Development Perspectives; Chronobiology International; Cognitive, Affective, and Behavioral Neuroscience; Current Biology; Developmental Neurobiology; Developmental Psychology; Developmental Review; Ecological Psychology; Ethology; Frontiers in Psychology; Infancy; Infant Behavior and Development; International Journal of Comparative Psychology; Journal of Comparative Psychology; Journal of Experimental Biology; Journal of Experimental Child Psychology; Journal of Neonatal Nursing; Journal of Perinatology; Journal of Theoretical and Philosophical Psychology; Nature: Human Behaviour; Non-Genetic Inheritance; Pediatrics; Perspectives on Psychological Science; Philosophical Transactions of the Royal Society; Physiology & Behavior; PLoS ONE; Progress in Biophysics and Molecular Biology;*

*Psychological Bulletin; Psychological Review; Psychological Science; Psychonomic Bulletin and Review; Review of General Psychology; Review of Philosophy and Psychology.*

**Grant Reviewer:**

National Science Foundation (Developmental Science College of Reviewers, 2014 - present)  
US-Israel Bi-National Science Foundation  
March of Dimes Research Foundation  
Wellcome Trust (United Kingdom)  
Biotechnology and Biological Sciences Research Council (United Kingdom)  
National Sciences Research Council of Canada

**External Reviewer / Academic Promotion and Tenure**

Department of Psychology, Idaho State University  
Department of Psychology, Simon Fraser University  
Department of Psychology, Wright State University  
Department of Psychology, University of Kansas  
Department of Psychology, Bridgewater College  
Department of Psychology, Wayne State University  
Department of Psychology, University of California, Davis  
Department of Psychology, Pitzer College / Claremont Graduate School  
Department of Psychology, Yeshiva University  
Department of Psychology, Hunter College, City University of New York  
Department of Psychology, Florida Gulf Coast University  
Department of Psychiatry, SUNY Health Science Center, Brooklyn

---

**Funded Extramural Grants:**

*Current:*

Prenatal Maternal Determinants of Neonatal Social Development

National Science Foundation (BCS-1525371 / 2015-2019, \$575,000 total costs)  
P.I.: Robert Lickliter

*Completed:*

Florida International University NIGMS-RISE Program

National Institute of General Medical Sciences (R25 GM061347-13 / 2012-2018, \$4,814,230 total costs)  
P.I.: Robert Lickliter

Prenatal Origins of Infant Social Responsiveness

National Science Foundation (BCS-1057898 / 2011-2015, \$435,122 total costs)  
P.I.: Robert Lickliter

Perinatal Determinants of Intersensory Perception

National Institute of Child Health and Human Development (RO1 HD048423 / 2005-2010, \$898,891 total costs)

P.I.: Robert Lickliter

Science of Learning Initiative Catalyst Grant: South Florida Research Consortium

National Science Foundation (SBE-0350201 / 2004-2007, \$250,000 total costs)

Co-P.I.: Lorraine Bahrack and Robert Lickliter

Perinatal Determinants of Intersensory Perceptual Development

National Institute of Mental Health (RO1 MH62225 / 2000-2005, \$822,304 total costs)

P.I.: Robert Lickliter

Research Scientist Career Development Award

National Institute of Mental Health (KO2 MH01210 / 1996-2001, \$480,400 total costs)

P.I.: Robert Lickliter

Mechanisms of Perinatal Perceptual Organization II.

National Institute of Mental Health (RO1 MH48949 / 1995-2000, \$603,001 total costs)

P.I.: Robert Lickliter

Mechanisms of Perinatal Perceptual Organization I.

National Institute of Mental Health (RO1 MH48949 / 1991-1994, \$219,303 total costs)

P.I.: Robert Lickliter

**Funded Intramural Grants:**

Florida International University, Division of Sponsored Research and Training, Research Award for establishment of the Infant Development Research Center (2003-2006, \$50,000)

Virginia Tech, College of Arts and Sciences, Faculty Research Initiative (1990, \$10,000)

---

**Research Interests:**

Development of intersensory perception in animal and human infants, with a focus on the role of selective attention in perceptual processing, learning, and memory; the influence of prenatal sensory stimulation on behavioral development, particularly the prenatal origins of infant perceptual and social biases and predispositions; the effects of hormones of maternal origin on perceptual and social development. Theoretical efforts address the assumptive base of the nature-nurture debate, the role of experience in development, the origins of phenotypic variation, psychobiological systems theory, the relations between developmental and evolutionary theory, and the history of developmental thinking in biology and psychology.

**Refereed Publications: (\* denotes student author)**

**2020**

**Lickliter, R., & Honeycutt, H.** (2020). Epigenesis without preformationism: Taking development seriously. In: M. Mascolo & T. Bidell (Eds.), *Handbook of integrative psychological development: Essays in honor of Kurt W. Fischer* (pp. 191-207). Routledge.

Bahrack, L.E., **Lickliter, R.**, & J. Todd (2020). The development of multisensory attention skills: Individual differences, developmental outcomes, and applications. In: J. Lockman & C. Tamis-LeMonda (Eds.), *Cambridge Handbook of Infant Development* (pp. 305-340). Cambridge University Press.

## **2019**

Belnap, S.C.\*, & **Lickliter, R.** (2019). Prenatal light exposure influences gait performance and body composition in bobwhite quail chicks. *Physiology & Behavior*, 212.

Curtindale, L., Bahrack, L.E., **Lickliter, R.**, & Colombo, J. (2019). Effects of multimodal synchrony on infant attention and heart rate during events with social and nonsocial stimuli. *Journal of Experimental Child Psychology*, 178, 283-294.

Belnap, S.C.\*, Currea, J.P.\*, & **Lickliter, R.** (2019). Prenatal incubation temperature affects neonatal precocial birds' locomotor behavior. *Physiology & Behavior*, 206, 51-58.

## **2018**

Witherington, D.C., Overton, W.F., **Lickliter, R.**, Marshall, P.T., & Narvaez, D. (2018). Metatheory and the primacy of conceptual analysis in developmental science. *Human Development*, 61, 181-198.

**Lickliter, R.** (2018). The influence of prenatal experience on behavioral and social development: The benefits and limitations of an animal model. *Development and Psychopathology*, 30, 871-880.

**Lickliter, R.** (2018). An intelligent guide to human intelligence: It's all about development. *Human Development*, 61, 126-129.

**Lickliter, R.** (2018). Biological processes and psychological development. In: A.S. Dick & U. Muller (Eds.), *Advancing developmental science: Philosophy, theory, and methods* (pp. 53-64). Psychology Press.

## **2017**

Witherington, D.C., & **Lickliter, R.** (2017). Transcending the nature-nurture debate through epigenetics: Are we there yet? *Human Development*, 60, 65-68.

**Lickliter, R.**, & Witherington, D.C. (2017). Towards a truly developmental epigenetics. *Human Development*, 60, 124-138.

**Lickliter, R.**, Bahrack, L. E., & Vaillant-Mekros, J.\* (2017). The intersensory redundancy hypothesis: Extending the principle of unimodal facilitation to prenatal development. *Developmental Psychobiology*, 59, 910-915.

Belnap, S.C.\* & **Lickliter, R.** (2017). Coordinated movement is influenced by prenatal light exposure in bobwhite quail chicks. *Behavioural Brain Research*, 327, 103-111.

**Lickliter, R.** (2017). Developmental evolution: Rethinking stability and variation in

biological systems. In: N. Budwig, E. Turiel, & P.D. Zelazo (Eds.), *New perspectives on human development* (pp. 88-105). Cambridge University Press.

**Lickliter, R.** (2017). Anagenesis. In: J. Vonk & T. K. Shackelford (Eds.), *Encyclopedia of Animal Cognition and Behavior*. Springer. (doi10.1007/978-3-319-47829-6\_1037-1)

## **2016**

Witherington, D. C., & **Lickliter, R.** (2016). Integrating development and evolution in psychological science: Evolutionary developmental psychology, developmental systems, and explanatory pluralism. *Human Development*, 59, 200-234.

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## **Colloquia and Invited Addresses**

Department of Psychology, Denison University (*J.R. Kantor Lectures*)

Department of Psychology, University of Tennessee, Knoxville

Pitzer College (*Neuroscience Lecture Series*)

Department of Psychology, University of the Pacific, Stockton, CA

Program in Human Biology, Stanford University

Department of Psychology, University of Iowa (*Spiker Memorial Lecture*)

Center for the Ecological Study of Perception and Action, University of Connecticut

*Plenary Speaker*, International Ethological Conference, Rennes, France

Department of Psychology, New York University

Center for Developmental Science, University of North Carolina, Chapel Hill (4)

Otterbein College, Westerville, OH (*Science Lecture Series*)

Department of Psychology, Denison University, Granville, OH

Department of Pediatrics, University of Miami Medical School, Miami, FL (2)

Department of Psychology, Florida International University, Miami, FL

Department of Pediatrics, University of Colorado Health Sciences Center, Denver, CO

Department of Psychology, University of Miami, Miami, FL

Department of Psychology, Florida Atlantic University, Boca Raton, FL

Department of Pediatrics, New Hanover Regional Medical Center, Wilmington, NC

Department of Psychology, Indiana University, Bloomington, IN

Department of Human Development, University of Kansas, Lawrence, KA

Department of Psychology, Concordia University, Montreal, Canada

Department of Psychology, Rutgers University, New Brunswick, NJ

Graduate Center of the City University of New York

Department of Psychology, Pitzer College, Claremont, CA

Division of Research, National Zoological Park, Washington, D.C.

Department of Biology, Virginia Tech, Blacksburg, VA

Department of Biology, University of Groningen, The Netherlands  
Division of Biological Sciences, University of California, Davis, CA  
Department of Psychology, University of North Carolina, Greensboro, NC

**Presentations at Scientific Conferences** (*selected from last 10 years, over 225 total*)

Martinez, A., Belnap, S., & Lickliter, R. (2019). Amount of late incubation light exposure influences social motivation in bobwhite quail neonates. International Society for Developmental Psychobiology, Chicago, IL.

Garcia, D., Belnap, S., & Lickliter, R. (2019). Effect of prenatal light exposure during and presentation pattern on body composition and gait performance in bobwhite quail chicks. International Society for Developmental Psychobiology, Chicago, IL.

Ahmad, A., Belnap, S., & Lickliter, R. (2019). Prenatal incubation temperature affects social motivation and emotional reactivity in 1-day-old bobwhite quail chicks. International Society for Developmental Psychobiology, Chicago, IL.

Reynolds, G.D., Bahrick, L.E., Lickliter, R., Todd, J.T., & Roth, K. (2019). Infant selective attention and perceptual learning of multimodal face stimuli. Society for Research in Child Development, Baltimore, MD.

Belnap, S.C., & Lickliter, R. (2018). Incubation temperature influences fall frequency in bobwhite quail neonates. Society for Integrative and Comparative Biology, Tampa, FL.

Lickliter, R. (2018). Exploring the prenatal origins of perceptual and social development. International Society for Developmental Psychobiology, San Diego, CA.

Roth, K., Bahrick, L.E., Lickliter, R., & Reynolds, G. (2018). Intersensory redundancy, selective attention, and neural correlates of perceptual processing in infancy. International Society for Developmental Psychobiology, San Diego, CA.

Belnap, S.C., & Lickliter, R. (2018). Incubation temperature influences fall frequency in bobwhite quail neonates. International Society for Developmental Psychobiology, San Diego, CA.

Govea, M., Gramajo, D., Belnap, S.C., & Lickliter, R. (2018). Prenatal incubation temperature affects fear-related behavior in 1-day-old bobwhite quail chicks. International Society for Developmental Psychobiology, San Diego, CA.

Obrer, C., Belnap, S.C., & Lickliter, R. (2017). Bobwhite quail neonates can use olfactory cues to direct spatial exploration. International Society for Developmental Psychobiology, Washington, D.C.

Velasquez, P., Belnap, S.C., & Lickliter, R. (2017). Audio-visual synchrony influences bobwhite quail chicks' preference for a robotic hen. International Society for Developmental Psychobiology, Washington, D.C.

- Belnap, S.C., & Lickliter, R. (2017). Maternally regulated prenatal light exposure effects social motivation in bobwhite quail chicks. International Society for Developmental Psychobiology, Washington, D.C.
- Lickliter, R. (2017). Misconceptions in contemporary development science: Epigenesis. *Invited Symposium Speaker*, Society for Research in Child Development, Austin, TX.
- Belnap, S.C., & Lickliter, R. (2016). Coordinated movement is influenced by prenatal light exposure in bobwhite quail hatchlings. International Society for Developmental Psychobiology, San Diego, CA.
- Velasquez, P., & Lickliter, R. (2016). Robotic hens: Movement influences social preferences in bobwhite quail chicks. International Society for Developmental Psychobiology, San Diego, CA.
- Lickliter, R. (2016). Exploring the patterns that connect: The inspiring intellectual curiosity of Gerald Turkewitz. *Invited Symposium Speaker*, International Congress on Infancy Studies, New Orleans, LA.
- Belnap, S.C. Velasquez, P., & Lickliter, R. (2015). Effects of lateralization on the development of motor coordination. Society for the Study of Human Development, Austin, TX.
- Belnap, S.C., & Lickliter, R. (2015). Behavioral lateralization scale: A new method for characterizing multiple lateralization preferences in bobwhite quail chicks. International Society for Developmental Psychobiology, San Sebastian, Spain.
- Lickliter, R. (2015). Perinatal perceptual development and organization: Insights from behavioral embryology. *Invited Plenary Address*, 28<sup>th</sup> Annual Conference on the Physical and Developmental Environment of the High Risk Infant, Clearwater Beach, FL.
- Lickliter, R. (2015). Prenatal determinants of neonatal perceptual development. 28<sup>th</sup> Annual Conference on the Physical and Developmental Environment of the High Risk Infant, Clearwater Beach, FL.
- Herrington, J., Rodriguez, Y., & Lickliter, R. (2014). Elevated progesterone levels modifies prenatal and postnatal auditory learning in bobwhite quail. International Society for Developmental Psychobiology, Washington, D.C.
- Suarez, M., Logan, M., Ceballos, N., & Lickliter, R. (2014). Fear of novelty is reduced by early postnatal exposure to novel stimuli in bobwhite quail. International Society for Developmental Psychobiology, Washington, D.C.
- O'Dowd, B., & Lickliter, R. (2014). Prenatal auditory enrichment modifies perceptual narrowing in bobwhite quail neonates. International Society for Developmental Psychobiology, Washington, D.C.

- Suarez, M., & Lickliter, R. (2013). Decreasing fearfulness through prenatal and postnatal exposure to fear-inducing auditory stimuli. International Society for Developmental Psychobiology, San Diego, CA.
- Martinez, E.J., Herrington, J.A., & Lickliter, R. (2013). Differential rearing conditions affect emotional reactivity in bobwhite quail chicks. International Society for Developmental Psychobiology, San Diego, CA.
- Herrington, J., Vallin, C., & Lickliter, R. (2013). Elevation of prenatal progesterone enhances postnatal auditory learning in bobwhite quail neonates. International Society for Developmental Psychobiology, San Diego, CA.
- Raju, N., Bahrick, L.E., & Lickliter, R. (2013). Prenatal visual stimulation interferes with contingency learning in bobwhite quail neonates. International Society for Developmental Psychobiology, San Diego, CA.
- Lickliter, R. (2013). Taking development seriously: Three brief arguments against nativism. International Society for Developmental Psychobiology, San Diego, CA.
- Lickliter, R. (2013). New methods and new insights: Rethinking the study of infant development. Society for the Study of Human Development, Ft. Lauderdale, FL.
- Lickliter, R., & Bahrick, L.E. (2013). Selective attention and multisensory perception: Comparative evidence for four principles of the intersensory hypothesis. Society for Child Development, Seattle, WA
- Raju, N., Bahrick, L.E., & Lickliter, R. (2013). The effects of atypical perinatal sensory stimulation on contingency learning in bobwhite quail neonates. Society for Child Development, Seattle, WA.
- Jefferson, J.P., & Lickliter, R. (2012). The role of ecological enrichment in facilitating perceptual learning and memory in bobwhite quail chicks. International Society for Developmental Psychobiology, New Orleans, LA.
- Martinez, B.S., & Lickliter, R. (2012). Intersensory facilitation of perceptual learning in dark vs. light incubated bobwhite quail chicks. International Society for Developmental Psychobiology, New Orleans, LA.
- Raju, N., Bahrick, L.E., & Lickliter, R. (2012). Social contingency enhances postnatal memory in bobwhite quail chicks. International Society for Developmental Psychobiology, New Orleans, LA.
- Suarez, M., & Lickliter, R. (2012). Predicting explorative behavior by level of emotional reactivity in bobwhite quail neonates. International Society for Developmental Psychobiology, New Orleans, LA

- Herrington, J.A., Vallin, C., & Lickliter, R. (2012). Elevated prenatal progesterone increases emotional reactivity and interferes with prenatal learning in bobwhite quail. International Society for Developmental Psychobiology, New Orleans, LA
- Bahrnick, L. E., Lickliter, R., & Castellanos, I. (2012). The effectiveness of intersensory vs. intrasensory redundancy in facilitating discrimination of tempo in 2-month-old infants. International Conference on Infancy Studies, Minneapolis, MN
- Guy, M. W., Reynolds, G. D., Bahrnick, L.E., Lickliter, R., & Zhang, D. (2012). Neural correlates of redundant and non-redundant multimodal stimulus processing in 5-month-old infants. International Conference on Infancy Studies, Minneapolis, MN
- Lickliter, R. (2012). Development as explanation: Exploring the dynamics of development and evolution. *Invited symposium speaker*, Jean Piaget Society, Toronto, Canada.
- Herrington, J., & Lickliter, R. (2011). Elevated prenatal progesterone affects postnatal emotional reactivity in bobwhite quail neonates. International Society for Developmental Psychobiology, Washington, D.C.
- Vaillant, J., Bahrnick, L.E., & Lickliter, R. (2011). Testing the intersensory redundancy hypothesis during early postnatal development. International Society for Developmental Psychobiology, Washington, D.C.
- Bahrnick, L.E., Lickliter, R., & Castellanos, I. (2011). Intersensory redundancy educates infants' attention to the amodal property of tempo. International Society for Developmental Psychobiology, Washington, D.C.
- Lickliter, R. (2011). Timing, experience, and the developmental dynamics of sensory organization. *Invited speaker*, International Perinatal Brain and Behavior Network, Washington, D.C.
- Lickliter, R. & Bahrnick, L.E. (2011). Development across the life-span: The case of intersensory perception. *Invited speaker*, NSF sponsored workshop on "Exploring the Concept of Homology in Developmental Psychology", Halifax, Nova Scotia.
- Lickliter, R. (2011). Prenatal experience and postnatal perceptual preferences. *Invited symposium speaker*, joint meeting of the International Ethological Conference and the Animal Behavior Society, Bloomington, IN.
- Curtindale, L., Bahrnick, L.E., Lickliter, R., & Colombo, J. (2011). Infant attention to multimodal synchrony in social and non-social stimuli. Society for Research in Child Development, Montreal, Canada.
- Lickliter, R. (2011). Exploring the developmental dynamics of phenotypic stability and variability. Society for Research in Child Development, Montreal, Canada.

- Lickliter, R. (2011). Biased embryos: How prenatal experience shapes postnatal preferences and predispositions. *Invited speaker*, Evolution and Child Development Workshop, Montreal, Canada.
- Vaillant, J., Harshaw, C., Jaime, M., Bahrick, L.E., & Lickliter, R. (2010). Selective attention during prenatal development: Redundancy across auditory and vibro-tactile stimulation facilitates learning in quail embryos. International Society for Developmental Psychobiology, San Diego, CA.
- Bechor, M., Herrington, J., & Lickliter, R. (2010). Amount of enriched rearing effects bobwhite quail chicks' spatial exploration of a novel environment. International Society for Developmental Psychobiology, San Diego, CA.
- Lickliter, R. (2010). Development as explanation: Exploring the dynamics of development and evolution. *Invited symposium speaker*, Human Behavior and Evolution Society, Eugene, OR.
- Reynolds, G.D., Bahrick, L.E., Lickliter, R., & Riggs, M. (2010). Intersensory redundancy and infant event-related potentials. International Conference on Infancy Studies, Baltimore.
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## **Teaching Specializations**

Undergraduate: Introduction to Biopsychology; Developmental Psychology; Psychology of Consciousness

Graduate: Theoretical Perspectives of Development; Biological Bases of Behavior; History and Systems of Psychology

## **Post-Doctoral Supervision**

Susan Schneider, Ph.D. (2003- 2009). Currently Visiting Associate Professor, University of Pacific.

Aline Bertin, Ph.D. (2007- 2008). Currently Research Scientist, INRA-CNRS, University of Tours, France

## **Graduate Student Supervision**

Chair, Doctoral Dissertation (20)

Anna Marshall-Baker, *The effect of a visual stimulus on behavioral state and visual responsiveness in preterm human infants*. Ph.D., Virginia Tech (September, 1991). Currently Professor, College of Human Resources, University of North Carolina, Greensboro.



- Thomas McBride, *The role of stimulus matching in intersensory development in precocial birds*. Ph.D., Virginia Tech (April, 1994). Currently Neuropsychologist, Department of Clinical Neuroscience, Children's Specialized Hospital, New Jersey.
- Michael Casey, *The role of prenatal sensory experience in the development of turning bias and spatial orientation in bobwhite quail*. Ph.D., Virginia Tech (May, 1995). Currently Associate Professor, Department of Psychology, College of Wooster.
- Merry Sleigh, *The effects of differential amounts of specific prenatal auditory stimulation on postnatal perceptual responsiveness in bobwhite quail*. Ph.D., Virginia Tech (January, 1996). Currently Professor, Department of Psychology, Winthrop University, South Carolina.
- Rebecca (Columbus) Foushee, *Auditory-visual interactions: The effects of timing of visual experience on auditory learning in bobwhite quail chicks*. Ph.D., Virginia Tech (October, 1998, winner of APA Dissertation Award). Currently Professor, Department of Psychology, Lindenwood University, St. Louis.
- Lisa Daleo, *Relations among adolescent motherhood, caregiving experience, and perceptual and caregiving responses to infant cries*. Ph.D., Virginia Tech (December, 1998).
- Robert Carlsen, *Neural plasticity and perceptual responsiveness in bobwhite quail chicks*. Ph.D., Virginia Tech (September, 1999).
- Pia Strunk, *The effects of augmented auditory stimulation on behavioral state in preterm infants*. Ph.D., Virginia Tech (December, 2001). Currently NICU Nurse, Children's Hospital, St. Paul, MN.
- Hunter Honeycutt, *The influence of enhanced tactile and vestibular sensory stimulation on subsequent auditory and visual responsiveness: A matter of timing*. Ph.D., Virginia Tech (May 2002). Currently Associate Professor, Department of Psychology, Bridgewater College.
- Greg Reynolds, *Effects of prenatal sensory-evoked arousal on postnatal behavior and perceptual learning in bobwhite quail*. Ph.D., Virginia Tech (May 2002). Currently Professor, Department of Psychology, University of Tennessee, Knoxville.
- Rebecca Markham, *Augmented prenatal auditory stimulation and visual system development: Timing and intersensory organization*. Florida International University (June, 2006).
- Mark Jaime, *The role of temporal synchrony in the facilitation of perceptual learning during prenatal development*. Florida International University (December, 2007). Currently Associate Professor, Department of Psychology, Indiana- Purdue University, Columbia, IN.
- Chris Harshaw, *Contingency, contiguity, and the development of auditory preferences in bobwhite quail chicks*. Florida International University (August, 2009). Currently Assistant Professor, Department of Psychology, University of New Orleans.
- Jimena Vaillant, *Tests of the intersensory redundancy hypothesis across early development*. Florida International University (July, 2012). Currently Program Director, Behavior Analysis Inc., Miami, FL.

Joshua Herrington, *Elevated prenatal progesterone mediates postnatal perceptual learning in bobwhite quail chicks*. Florida International University (July, 2014). Currently Instructor, Mt. Hood Community College, Portland, OR.

Michael Suarez, *Effects of prenatal and early postnatal exposure to aversive stimuli on fearfulness and exploratory behavior in bobwhite quail neonates*. Florida International University (October, 2014). Currently Senior Supervisor, Behavior Analysis, Inc. Miami.

Briana O'Dowd, *Effects of prenatal sensory stimulation on perceptual narrowing in bobwhite quail neonates*. Florida International University (October, 2014). Currently high school biology and psychology teacher, Miami-Dade Public Schools.

Namitha Raju, *Effects of prenatal visual stimulation on contingency learning in bobwhite quail neonates*. Florida International University (November, 2014).

Starlie Belnap, *The influence of prenatal sensory experience on postnatal motor coordination in neonatal bobwhite quail*. Florida International University (October, 2019). Currently Research Coordinator, Baptist Health System, Miami, FL.

John Pablo Currea, *Understanding the developmental plasticity of fruit fly vision*. Florida International University (current, expected 2020)

**Chair, Master's Thesis** (18)

Pratima Virkar, *Auditory and visual determinants of maternal preference in bobwhite quail neonates*. M.S., Virginia Tech (December, 1988).

Julia Stoumbos, *Effects of altered prenatal auditory experience on bobwhite quail chicks*. M.S., Virginia Tech (January, 1990).

Heather Banker, *The influence of early and delayed visual experience on perceptual organization in bobwhite quail neonates*. M.S., Virginia Tech (November, 1991).

Michael Casey, *Social context affects behavioral responsiveness to maternal alarm calls in bobwhite quail chicks*. M.S., Virginia Tech (November, 1992).

Merry Sleight, *The effects of augmented prenatal visual stimulation on postnatal perceptual responsiveness in bobwhite quail chicks*. M.S., Virginia Tech (August, 1994).

Rebecca (Columbus) Foushee, *The role of modified social experience on intersensory development in bobwhite quail chicks*. M.S., Virginia Tech (September, 1996).

Hunter Honeycutt, *Prenatal perceptual experience and postnatal perceptual preferences: evidence for attentional bias in perceptual learning*. M.S., Virginia Tech (Dec. 2000).

Matthew McCusker, *The effects of social experience on snapping intensity in Equus caballus foals*. M.S., Virginia Tech (March, 2003).

- Mark Jaime, *Prenatal exposure to temporal synchrony affects postnatal responsiveness to spatial contiguity in bobwhite quail chicks*. M.S., Florida International University (March, 2005).
- Chris Harshaw, *The effects of stimulus contingency on perinatal auditory learning in bobwhite quail chicks*. M.S., Florida International University (November, 2005).
- Jimena Vaillant, *Detection of modality-specific properties in unimodal and bimodal events during prenatal development*. M.S., Florida International University (September, 2010).
- Briana O'Dowd, *The interaction between the social and physical environment on early cognitive development*. M.S., Florida International University (March, 2012).
- Joshua Herrington, *Effects of elevated prenatal progesterone on emotional reactivity in bobwhite quail neonates*. M.S., Florida International University (July, 2012).
- Namitha Raju, *The role of intersensory redundancy in memory retention in bobwhite quail chicks*. M.S., Florida International University (October, 2012).
- Michael Suarez, *Predicting exploratory behavior by level of emotional reactivity in bobwhite quail neonates*. M.S., Florida International University (October, 2012).
- Brittany Yusko, *Influence of elevated prenatal mesotocin on postnatal individual recognition and stress responsiveness in Northern bobwhite quail*. M.S., Florida International University (February, 2014).
- Starlie Belnap, *The effect of prenatal light exposure on coordinated movement in bobwhite quail chicks (Colinus virginianus)*. M.S., Florida International University (December, 2016).
- John Pablo Currea, *Trade-offs between larval feeding and adult vision in the fruit fly*. M.S. Florida International University (Co-chair, March, 2018)
- Chair, Undergraduate Honors Thesis** (17)
- Gabriella Toth, *Effects of elevated prenatal arousal on perceptual learning in bobwhite quail embryos*. Florida International University (April, 2004).
- Juan Pablo Lopez, *Bobwhite quail chicks can use human gaze to direct their avoidance behavior*. Florida International University (April, 2008).
- Kathleen Crum, *Individual recognition in bobwhite quail chicks*. Florida International University (April, 2009).
- Cassie Barasch Ford, *Lateralization of intersensory functioning in bobwhite quail chicks*. Florida International University (December, 2009).
- Astrid Salazar, *Gaze tracking of bobwhite quail chicks is affected by increased prenatal levels of testosterone*. Florida International University (December, 2010)

Karina Saravia, *Distribution of sensory stimulation influences prenatal learning in Northern bobwhite quail chicks*. Florida International University (December, 2010)

Michele Bechor, *Varying amounts of enriched rearing affects spatial exploration in Northern bobwhite chicks*. Florida International University (April, 2011)

Brandy Martinez, *Effects of embryonic light deprivation on the development of lateralized functioning of intersensory facilitation in bobwhite quail hatchlings*. Florida International University (April, 2012)

Jay Jefferson, *The role of ecological enrichment in facilitation of perceptual learning and memory in bobwhite quail chicks*. Florida International University (April, 2012)

Claudia Vallin, *Influence of elevated yolk progesterone on prenatal auditory learning in Northern bobwhite quail*. Florida International University (August, 2013).

Yvette Rodriguez, *Elevated prenatal progesterone increases heart rate in Northern bobwhite quail embryos*. Florida International University (April, 2016).

Stephanie Cortina, *Effects of prenatal light exposure on lateralization and motor coordination in bobwhite quail chicks*. Florida International University (April, 2016).

Cesar Barbari, *Prenatal light exposure influences hatching success in bobwhite quail*. Florida International University (April, 2016).

Pablo Velasquez, *Robotic quail: Movement influences social preferences in bobwhite quail chicks*. Florida International University (August, 2016).

Diana Gonzalez, *The effects of prenatal light levels on hemispheric lateralization in bobwhite quail chicks*. Florida International University (April, 2017).

Chelsey Obrer, *Prenatal chemosensory experience alters bobwhite quail neonates' use of olfactory cues in directing spatial exploration*. Florida International University (April, 2018).

Laura Valdiva, *Effects of elevated prenatal testosterone on postnatal social motivation in bobwhite quail chicks*. Florida International University (April, 2018)

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## Community Service

Scientific Advisory Board, Dumond Conservancy (Monkey Jungle), Miami, FL. (2012 - present)

## Media Coverage of Research

National Geographic  
 BBC  
 WLRN Radio / Miami (NPR affiliate)  
 Channel 10 / Miami (ABC affiliate)  
 Miami Herald  
 FIU Magazine  
 Journal of Experimental Biology

**CURRICULUM VITAE**  
**OF**  
**Dr. Aaron T. Mattfeld**  
**Department of Psychology**  
 11200 SW 8<sup>th</sup> Street  
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 Fourth Floor, Room 462  
 Florida International University  
 Miami, FL 33199  
 Email: [amattfel@fiu.edu](mailto:amattfel@fiu.edu)  
 Website: [madlab.fiu.edu](http://madlab.fiu.edu)

## EDUCATION

Degree	Institution	Field	Dates
PhD	University of California, Irvine	Neurobiology and Behavior	2008 – 2012
MA	Johns Hopkins University	Cognitive Neuroscience	2006 – 2008
BS	Montana State University	Biomedical Sciences	1995 – 2000

## FULL-TIME ACADEMIC EXPERIENCE

Institution	Rank	Field	Dates
Florida International Univ.	Assistant Professor	Psychology	08/14 – current
Massachusetts Institute of Technology	Postdoc. Scientist	Cognitive Neuroscience	01/12 – 08/14
Johns Hopkins Univ.	Research Coord.	Cognitive Neurology	08/04-08/06
Johns Hopkins Univ.	Research Assistant	Cognitive Neurology	08/01-08/04

## PUBLICATIONS IN DISCIPLINE

### PEER-REVIEWED JOURNAL ARTICLES

14. Hamm, A.G., **Mattfeld, A.T.** (2019) Distinct neural circuits underlie prospective and concurrent memory-guided behavior. *Cell Reports*, 28: 2541-2553.e4.
13. Stark, S., Frithsen, A., **Mattfeld, A.T.**, Stark, C.E.L. (2018) Modulation of associative learning in the hippocampal-striatal circuit based on item-set similarity. *Cortex*, 109: 60-73.
12. Garic, D., Broce, I., Graziano, P., **Mattfeld, A.T.**, Dick, A.S. (2018) Laterality of the frontal aslant tract (FAT) explains externalizing behaviors through its association with executive function. *Developmental Science*, e12744.
11. Geddes, M.R., **Mattfeld, A.T.**, de los Angeles, C., Keshavan, A., Gabrieli, J.D.E. (2018) Human aging reduces the neurobehavioral influence of motivation on episodic memory. *Neuroimage*, 171: 296-310.
10. Anteraper, S.A., Guell, X., Whitfield-Gabrieli, S., Triantafyllou, C., **Mattfeld, A.T.**, Gabrieli, J.D., Geddes, M.R. (2018) Resting-state functional connectivity of the subthalamic nucleus to limbic associative, and motor networks. *Brain Connectivity*, 8: 22-32.

9. **Mattfeld, A.T.**, Whitfield-Gabrieli, S., Biederman, J., Spencer, T., Brown, A., Fried, R., Gabrieli, J.D.E. (2016) Dissociation of working memory impairments and attention-deficit/hyperactivity disorder in the brain. *Neuroimage Clinical*, 10: 274-282.
8. **Mattfeld, A.T.**, Stark, C.E.L. (2015) Functional contributions and interactions between the human hippocampus and subregions of the striatum during arbitrary associative learning and memory. *Hippocampus*. DOI: 10.1002/hip.22411.
7. Allen, T.A., Morris, A.M., **Mattfeld, A.T.**, Stark, C.E.L., Fortin, N.J. (2014) A sequence of events model of episodic memory shows parallels in rats and humans. *Hippocampus*. 24: 1178-1188.
6. **Mattfeld, A.T.**, Gabrieli, J.D.E., Biederman, J., Spencer, T., Brown, A., Kotte, A., Kagan, E., & Whitfield-Gabrieli, S. (2014) Brain differences between persistent and remitted attention-deficit hyperactivity disorder. *Brain*. 137: 2423-2428.
5. LePort, A.K.R., **Mattfeld, A.T.**, Anson, H., Fallon, J.H., Stark, C.E.L., Kruggel, F.R., Cahill, L., McGaugh, J.L. (2012). Behavioral and neuroanatomical investigation of highly superior autobiographical memory (HSAM). *Neurobiology of Learning and Memory*, 98, 78-92.
4. Hargreaves, E.L., **Mattfeld, A.T.**, Stark, C.E.L., Suzuki, W. (2012). Conserved fMRI and LFP signals during new associative learning in the human and macaque monkey medial temporal lobe. *Neuron*. 74, 743-752.
3. **Mattfeld, A.T.**, Gluck, M.A., Stark, C.E.L. (2011). Functional specialization within the striatum along both the dorsal/ventral and anterior/posterior axes during associative learning via reward and punishment. *Learning and Memory*, 18, 703-711.
2. Yassa M.A., **Mattfeld, A.T.**, Stark S.M., Stark C.E.L. (2011). Age-related memory deficits to circuit-specific disruptions in the hippocampus. *Proceedings of the National Academy of Sciences USA*, 108(21), 8873-8878.
1. **Mattfeld, A.T.**, Stark, C.E.L. (2010). Striatal and medial temporal lobe functional interactions during visuomotor associative learning. *Cerebral Cortex*, 21, 647-658.

#### **PATENTS**

1. Allen, T.A., **Mattfeld, A.T.**, Draper, A. (2018; US Patent Application 16/133,268). Stereotaxic brain implant system for large animals (claims allowed 2019).

#### **PRESENTED PAPERS, AND LECTURES**

##### **PRESENTATIONS**

15. Distinct patterns of cerebellar activation reflect memory guided decisions and choice executions during conditional associative learning task. 33<sup>rd</sup> Annual Winter Conference on Neural Plasticity, St. Kitts.
14. Hippocampal, striatal, and neocortical contributions to conditional memory-guided behavior. Memory and Decision Making. 43<sup>rd</sup> Annual Winter Conference, Neurobiology of Learning and Memory, Session 8: Memory and Decision Making. Park City, UT, January 2019. (Session Chair)
13. Memories are for actions. Florida Consortium on the Neurobiology of Cognition Annual Meeting, May 2018
12. Memories are for actions. University of California, Davis, Memory Group, April 2018
11. Memories are for actions. University of California, Irvine, April 2018
10. A tutorial on 'Advanced Normalization Tools (ANTs)'. BrainHack Global. Florida International University, Miami, FL, March 2017.
9. The impact of loss aversion on learning and memory. Discipline-Based Education Research Seminar Series. Florida International University, Miami, FL, February 2017.

8. Identification of the nucleus reuniens in humans. 41<sup>st</sup> Annual Winter Conference, Neurobiology of Learning and Memory, Session 6: Critical role of the nucleus reuniens in hippocampus and medial prefrontal cortex dependent memory systems. Park City, UT, January 2017.
7. Functional interactions between the hippocampus and nucleus accumbens: Gating associative memories. International Conference on Memory, Budapest, Hungary, July 2016.
6. Dissociation of working memory impairments and diagnostic status of attention-deficit/hyperactivity disorder (ADHD) in the brain. 3<sup>rd</sup> Annual Personalized NanoMedicine Symposium. Miami, FL, May 2016.
5. Neuroimaging and attention-deficit/hyperactivity disorder. 13<sup>th</sup> Annual Conference of Society for Brain Mapping and Therapeutics. Miami, FL, April 2016
4. Identification of the nucleus reuniens in humans with probabilistic tractography. 40<sup>th</sup> Annual Winter Conference, Neurobiology of Learning and Memory. Park City, UT, January 2016
3. Something old, something new: Neuroimaging, executive functions and ADHD. Neurology Lecture Series. Miami Children's Hospital, Miami, FL, November 2014.
2. Resting-state fMRI as a tool for studying psychopathology. Pediatric Psychopharmacology Lecture Series. Massachusetts General Hospital, Cambridge, MA, January 2014.
1. Assessing functional interactions with the medial temporal lobes during learning and memory. 36<sup>th</sup> Annual Winter Conference, Neurobiology of Learning and Memory, Session 7: Exploring interregional dynamics of memory systems across species and levels. Park City, UT, January 2012.

#### ABSTRACTS AND POSTER PRESENTATIONS

30. Renfro, A., **Mattfeld, A.T.** (2019). Learning related changes in hippocampal and caudate activations for conditional associations. *Society for Neuroscience Annual Meeting*.
29. Kimbler, A., McMakin, D., **Mattfeld, A.T.** (2019). Valence specific discrimination/generalization bias evident with increasing hippocampal and amygdala-hippocampal maturity. *Society for Neuroscience Annual Meeting*.
28. Sollenberger, N., **Mattfeld, A.T.**, Kimbler, A., Pettit, J., McMakin, D. (2019). The role of sleep in emotional adaptation in anxious and healthy youth. *FLUX*.
27. Jusko, M.L., Raiker, J.S., **Mattfeld, A.T.**, Timmons, A.C., Fosco, W.D., Campeze, M., Little, K., Smith, J., Sanchez, G. (2019). Mechanisms underlying reaction time variability in ADHD: The use of Hidden Markov Modeling to isolate on- and off-task states in reaction time distributions. *Society for Research on Child and Adolescent Psychopathology (ISRCAP)*.
26. Campeze, M., Raiker, J.S., Little, K., Sanchez, G., **Mattfeld, A.T.**, Gnagy, E.M., Greiner, A.R., Coles, E.K., Pelham, W.E. (2019). Bilingualism and executive functioning in children with ADHD. *Society for Research on Child and Adolescent Psychopathology (ISRCAP)*.
25. Fosco, W.D., **Mattfeld, A.T.**, Raiker, J.S., Campeze, M., Little, K., Jusko, M.L., Smith, J., Sanchez, G. (2019). An examination of the neurobiological mechanisms driving increased reaction time variability in ADHD. *Society for Research on Child and Adolescent Psychopathology (ISRCAP)*.
24. Kimbler, A., McMakin, D.L., **Mattfeld, A.T.** (2019). Hippocampal maturity differentially impacts pattern separation/completion bias in negative and neutral images. *43<sup>rd</sup> Annual Winter Conference on the Neurobiology of Learning and Memory*.
23. Renfro, A.G., **Mattfeld, A.T.** (2019). Learning-related changes in hippocampal and caudate activations for conditional associations. *43<sup>rd</sup> Annual Winter Conference on the Neurobiology of Learning and Memory*.
22. Draper, A., **Mattfeld, A.T.**, Allen, T. (2018). A domestic pig model for large-scale electrophysiological recordings during conditional associative memory tasks. *Society for Neuroscience Annual Meeting*.

21. Renfro, A., **Mattfeld, A.T.** (2018). Memories for decisions: Increased correlation between hippocampus and medial prefrontal cortex support conditional associative behavior. *International Conference on the Neurobiology of Learning and Memory*.
20. Kimbler, A., **Mattfeld, A.T.** (2017). Changes in community structure in early versus late associative learning. *Society for Neuroscience Annual Meeting*.
19. **Mattfeld, A.T.**, Pettit, J.W., Vazquez, A., Kimbler, A., Yeguez, C., McMakin, D.L. (2017). Neural and behavioral correlates of negative overgeneralization. *Society for Neuroscience Annual Meeting*.
18. Renfro, A., **Mattfeld, A.T.** (2017). Beyond spatial mapping: Unique mechanisms of visuomotor associative learning. *Society for Neuroscience Annual Meeting*.
17. Anteraper, S.A., Whitfield-Gabrieli, S., **Mattfeld, A.T.**, Joshi, N., Patil, K., Joshi, G. (2017). Resting-state functional connectivity of ventral tegmental area in the context of social functioning. *Organization of Human Brain Mapping Annual Meeting*.
16. Allen T.A., Reeders, P., Vertes, R.P., **Mattfeld, A.T.** (2016). Identification of the nucleus reuniens in humans using probabilistic tractography. *Society for Neuroscience Annual Meeting*.
15. Reeders, P., Allen, T.A., **Mattfeld, A.T.** (2016) Sequence memory predicts temporal reward discounting and activates prefrontal cortex and medial temporal lobe regions. *Society for Neuroscience Annual Meeting*.
14. Sinha, P.C., **Mattfeld, A.T.**, Gluck, M.A. (2016). Dopaminergic modulation of reward learning across the lifespan. *Pavlovian Society Annual Meeting*.
13. Anteraper S., Whitfield-Gabrieli S., Geddes M.R., Triantafyllou C., Gabrieli J.D.E., **Mattfeld A.T.** (2014). Functional connectivity differences of the anterior and posterior entorhinal cortex in humans. *Society for Neuroscience Annual Meeting*.
12. Marin-Garcia E., **Mattfeld A.T.**, Gabrieli J.D.E. (2014). Resting state connectivity related with retrieval practice. *Society for Neuroscience Annual Meeting*.
11. **Mattfeld, A.T.**, Whitfield-Gabrieli, S., Biederman, J., Spencer, T., & Gabrieli, J. (2014). Dissociation of working memory and attention-deficit/hyperactivity disorder in the brain. *Society for Neuroscience Annual Meeting*.
10. **Mattfeld, A.T.**, Gabrieli, J.D.E., Biederman, J., Spencer, T., Brown, A., Kotte, A., Kagan, E., & Whitfield-Gabrieli, S. (2014) Resting-state functional connectivity in a longitudinal study of ADHD children grown-up reflects persistent diagnostic status. *Annual Resting State Conference*.
9. Shermohammed, M., **Mattfeld, A.T.**, Gabrieli, J.D.E. (2013). Distinct resting-state functional networks related to motivated learning behavior in adults compared to adolescents. *Cognitive Neuroscience Annual Meeting*.
8. Marin, E. **Mattfeld, A.T.**, Candon, K.C., Gabrieli, J.D.E. (2013) The “testing effect”: retrieval related functional neuroimaging differences after a week delay. *Cognitive Neuroscience Annual Meeting*.
7. **Mattfeld, A.T.**, Marin, E., Candon, K.C., Gabrieli, J.D.E. (2013) Transfer of “testing effect”: generalization of memory benefits derived from testing practice of studied only items. *Cognitive Neuroscience Annual Meeting*.
6. Morris, A.M., Allen, T.A., **Mattfeld, A.T.**, Stark, C.E.L., Fortin, N.J. (2013) A cross-species approach to investigating the memory for sequences of events. *Society for Neuroscience Annual Meeting*.
5. **Mattfeld, A.T.**, Shermohammed, M., Gabrieli, J.D.E. (2013) fMRI examination of motivated learning and memory of scenes in adults and adolescents. *Society for Neuroscience Annual Meeting*.
4. Allen T.A., **Mattfeld, A.T.**, Fortin N.J., Stark C.E.L. (2011) Non-spatial sequence memory in humans and rats. *Pavlovian Society Meeting*.



3. **Mattfeld, A.T.**, Stark, C.E.L (2011) fMRI examination of the functional specialization of the striatum and medial temporal lobes during the learning and expression of arbitrary associations. *Society for Neuroscience Annual Meeting*.
2. **Mattfeld, A.T.**, Gluck, M.A., Stark, C.E.L. (2010). A high-resolution fMRI investigation of probabilistic reward and loss-based learning in the basal ganglia. *Society for Neuroscience Annual Meeting*.
1. **Mattfeld, A.T.**, Stark, C.E.L (2008) An fMRI investigation of striatal activity during learning and expression of arbitrary associations. *Society for Neuroscience Annual Meeting*.

## WORKS IN PROGRESS

### UPCOMING MANUSCRIPTS FOR PEER REVIEW

1. Cummings, L., **Mattfeld, A.T.**, Pettit, J., McMakin, D. (*accepted pending revision*). A developmental psychopathology account of nonsuicidal self-injury in adolescences: the role of socio-affective pain and reward sensitivity. *Developmental Cognitive Neuroscience*.
2. Reeders, P.C., Renfro, A.G., Allen, T.A., **Mattfeld, A.T.** (*in prep*). Hippocampus BOLD activations reflect temporal contexts while medial prefrontal cortex activations reflect ordinal positions during sequence memory in humans. *Journal of Neuroscience*.
3. McMakin, D., Kimbler, A., Pettit, J., **Mattfeld, A.T.** (*submitted*). Negative overgeneralization supported by pattern completion in peripubertal youth. *Nature Neuroscience*.
4. Sollenberger, N., **Mattfeld, A.T.**, Kimbler, A., Pettit, J., McMakin, D. (*in prep*). The role of sleep in emotional adaptation in youth across a continuum of anxiety symptoms. *Journal of Child Psychology and Psychiatry*.
5. Kimbler, A., McMakin, D., Pettit, J., **Mattfeld, A.T.** (*in prep*). Hippocampal maturity differentially impacts pattern separation/completion in negative and neutral images. *Journal of Neuroscience*.
6. Farruggia, M.C., Laird, A.R., **Mattfeld, A.T.** (*in prep*). Common default mode network dysfunction across psychopathologies: A neuroimaging meta-analysis of the n-back working memory paradigm. *Biological Psychiatry*.

## FUNDED RESEARCH

### GRANTS AS PRINCIPLE INVESTIGATOR DURING FIU TENURE

3. Sleep-dependent negative overgeneralization in peri-pubertal anxiety. National Institute of Mental Health (NIMH). R01 MH116005-01 (**co-PI**).
2. A novel examination of the neurobiological deficits underlying increased reaction time variability in children with ADHD. National Institute of Mental Health (NIMH). R21 MH112002-01A1. (**co-PI**)
1. Loss and gain motivated learning in young adults and adolescents. CCF Intramural Awards for Investigators. 2016-2017. (**PI**)

### GRANTS AS CO-INVESTIGATOR DURING FIU TENURE

2. Individual differences in development of spatial skills: role of hippocampal function and structure. National Institute of Child Health and Human Development (NICHD), R01 HD098152-01 (**co-I**).
1. Utility of Cognitive Subgroups in Predicting Treatment Response to Methylphenidate in Children with ADHD. Bran & Behavior Research Foundation. 2016-2018. (**co-I**)

### PROPOSALS SUBMITTED BUT NOT FUNDED

10. Cohort Studies on HIV/AIDS and Substance Abuse in Miami. National Institute of Drug Abuse (NIDA). Submitted August 2019. (**co-I**)

9. Individual differences in the development of spatial skills: Role of hippocampal function and structure. National Institute of Child Health and Human Development (NICHD). Submitted June 2018. **(co-I)**
8. Prefrontal cortex to hippocampus pathways in temporal reward discounting and sequence memory. National Institute of Mental Health (NIMH). Submitted February 2016. **(co-PI)**
7. A novel examination of the neurobiological and cognitive deficits underlying increased reaction time variability in children with ADHD. National Institute of Mental Health (NIMH). February 2016. **(co-PI)**
6. Multimodal neuroimaging of brain networks maintaining cigarette smoking. Florida Department of Health James and Esther King Biomedical Research Program. 2016. **(co-I)**
5. An fMRI and neurocognitive investigation of tolerance to stimulant medication in attention-deficit/hyperactivity disorder. National Institute of Mental Health (NIMH). Resubmission – December 2015. **(PI)**
4. An fMRI and neurocognitive investigation of tolerance to stimulant medication in attention-deficit/hyperactivity disorder. National Institute of Mental Health (NIMH). June 2015. **(PI)**
3. Working memory load capacity based safety performance evaluation of construction workers. National Science Foundation (NSF). Resubmission - October 2015. **(co-PI)**
2. Characterizing intrinsic brain networks in attention-deficit/hyperactivity disorder following methylphenidate treatment. Bran & Behavior Research Foundation (BBR). February 2015. **(PI)**
1. Working memory load capacity based safety performance evaluation of construction workers. National Science Foundation (NSF). February 2015. **(co-PI)**

## **PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS**

2019 Top Scholar, Florida International University  
 2018 College of Arts, Science, and Education Research Faculty Award, Florida International University  
 2017 Founding member of the Florida Consortium on the Neurobiology of Cognition  
 2017 Elected Fellow of the Center for the Neurobiology of Learning and Memory  
 2010 Achievement Rewards for College Scientists (ARCS) Scholar

## **GRADUATE STUDENTS, AND POSTDOCTORAL SCIENTISTS**

### **GRADUATE STUDENTS**

#### **Current PhD Students**

Amanda Renfro (PhD)  
 Adam Kimbler (PhD)  
 Vanessa Rivera (PhD)

### **POSTDOCTORAL SCIENTISTS**

#### **Current Postdoctoral Scientists**

Whitney Fosco Ph.D.

#### **Former Postdoctoral Scientists**

Jiancheng Hou Ph.D.

## **OTHER PROFESSIONAL ACTIVITIES, MEMBERSHIPS, AND PUBLIC SERVICE**

### **DEPARTMENT AND UNIVERSITY ACADEMIC SERVICE**

2018	Goldwater Faculty Board
2017	Awards and Advancement Committee
2016	Reviewer Medical School Applicant Pre-Health Professions Advising at Florida International University
2016	BRI Summer Research Award Selection Committee NIGMS RISE at Florida International University
2016	Faculty Judge Graduate Scholarly Forum at Florida International University
2015	Presidential Scholarship Selection Committee Psychology Department at Florida International University
2014-2015	Cognitive Neuroscience Faculty Search Committee Psychology Department at Florida International University

### **PROFESSIONAL MEMBERSHIPS**

2006-current	Society for Neuroscience
2012-current	Cognitive Neuroscience Society
2016-current	FLUX
2016-current	Florida Consortium on the Neurobiology of Cognition

### **REVIEWING SERVICE**

Ad hoc reviewer for: Neuropsychologia; Journal of Neuroscience; NeuroImage; Neuron; PNAS; Journal of Attention Disorders; PLOS One; Cognitive Affective Behavioral Neuroscience; Cognitive Processing; NeuroImage: Clinical; Behavioral and Brain Functions; Cerebral Cortex; Cell Reports

Reviewer for: National Science Foundation (Cognitive Neuroscience panel)

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## **BIOGRAPHICAL**

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Neurology Department  
Miami, FL 33155

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## **EDUCATION and TRAINING**

### **UNDERGRADUATE:**

6/1995-12/1999	Penn State University Schreyer Honors College College of Arts & Sciences University Park, PA	B.A with Honors Phi Beta Kappa	Psychology, Spanish Mentor: Keith Crnic, PhD
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### **GRADUATE:**

9/2001-8/2008	University of Denver Department of Psychology Denver, CO	Ph.D.	Child Clinical Psychology Mentor: Stephen Shirk, PhD
7/2007-6/2008	UCLA	Psychology Intern Semel Institute for Neuroscience & Human Behavior Department of Psychiatry Los Angeles, CA	General Child Track Director: Rhonda Sena, PhD

### **POSTGRADUATE:**

7/2008-11/2010	University of Pittsburgh School of Medicine	NIMH Post-Doctoral Research Fellow Western Psychiatric Institute & Clinic Pittsburgh, PA	Developmental Neuroscience Mentors: Ronald E.Dahl,MD Greg Siegle, PhD David Brent, MD
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### **APPOINTMENTS and PROFESSIONAL POSITIONS**

01/2016-Current	Florida International University Center for Children and Families	Associate Professor Child Clinical Science	Psychology
02/2017-Current	Florida International University Center for Children and Families	Associate Professor Cognitive Neuroscience	Psychology
06/01/2016-Current	Nicklaus Children's Hospital Pediatric Specialists of America	Research Staff Brain Institute	Neurology
		Clinical Psychologist	Neurology
12/2010-12/2015	University of Pittsburgh School of Medicine	Assistant Professor	Psychiatry

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### **LICENSURE**

2015-Current Licensed Clinical Psychologist, State of Florida, License PY #9454

### **HONORS and AWARDS**

2019	Top Scholar Award for Research Activities, Florida International University
2018	CASE Faculty Award for Research, Florida International University
2009-2016	NIH Loan Repayment Program (LRP) Fellow, NIMH, NIH
2012	Honors Convocation Faculty Honoree, University of Pittsburgh
2012	Jacobs Foundation Young Scholar, " <i>Sleep, Learning &amp; Brain Development</i> "
2010-2015	K23 Patient-Oriented Career Development Award, NIMH, NIH
2010-2012	Klingenstein Third Generation Foundation Fellow in Depression Research
2010	Child Intervention, Prevention and Services (CHIPS) Research Fellow, NIMH, NIH
2008	Wisconsin Symposium on Emotion Travel Award, Health Emotions Research Institute
2006-2007	Pre-doc Individual National Research Service Award (NRSA; F31), NIMH, NIH
2003-2004	Graduate Student Award for Teaching, Dept of Psychology, U. Denver
2002-2003	Best Teaching Assistant/Graduate Student of the Year, Undergraduate vote, U. Denver
2003	International Positive Psychology Fellow, Positive Psychology Foundation
2002	Lawrence Miller Graduate Fellowship, Competitive Travel/Training Award, U. Denver
1999-2001	Post-Baccalaureate Intramural Research Training Award (IRTA), NIAAA, NIH
1999	Phi Beta Kappa Society, The Pennsylvania State University Chapter
1995-1999	Dean's List, The Pennsylvania State University

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### **MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES**

Association for Behavioral and Cognitive Therapies, Society of Clinical Child and Adolescent Psychology, Society for Research on Adolescence, Society for Research on Child Development, American Sleep Research Society

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## PUBLICATIONS

\*Denotes role as senior/corresponding author.

## MANUSCRIPTS

1. Yoo, J.H., Sharma, V., Kim, J.W., **McMakin, D.L.**, Hong, S.B., Zalesky, A., Kim, B.N., & Ryan, N.D. (In press). Prediction of sleep side effects following methylphenidate treatment in ADHD youth. *Neuroimage: Clinical*. <https://doi.org/10.1016/j.nicl.2019.102030>
2. Silk, J. S., Price, R. B., Rosen, D., Ryan, N. D., Forbes, E. E., Siegle, G. J., Dahl, R.E., **McMakin, D.L.**, Kendall, P.C. & Ladouceur, C. D. (2019). A longitudinal follow-up study examining adolescent depressive symptoms as a function of prior anxiety treatment. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(3), 359-367. doi:<https://doi.org/10.1016/j.jaac.2018.10.012>
3. Just, M. A., Pan, L., Cherkassky, V. L., **McMakin, D. L.**, Cha, C., Nock, M. K., & Brent, D. (2018). Reply to 'Neural signatures to emotion-related word stimuli may vary'. *Nature Human Behaviour*, 2(10), 711.
4. Ricketts, E. J., Sturm, A., **McMakin, D. L.**, McGuire, J. F., Tan, P.Z., Smalberg, F.B., McCracken, J. T., Colwell, C.S., & Piacentini, J. (In Press). Changes in sleep problems across Attention-Deficit/Hyperactivity Disorder treatment: Findings from the MTA study. *Journal of Child and Adolescent Psychopharmacology*.
5. Kennard, B.D., Goldstein, T.R., Foxwell, A.A., **McMakin, D.L.**, Moorehead, A., Douaihy, A., Zullo, L., Wentroble, E., Owen, V., Zelazny, J., Iyengar, S., Porta, G., & Brent, D.A. As Safe As Possible (ASAP): A brief app-supported inpatient intervention to prevent post-discharge suicidal behavior in hospitalized, suicidal adolescents. (In press.) *American Journal of Psychiatry*.
- \*6. Ricketts, E., Price, R., Siegle, G.J., Silk, J.S., Forbes, E.E., Ladouceur, C.D., Harvey, A.G., Ryan, N.D., Dahl, R.E., **McMakin, D.L.** (In press). Vigilant attention to threat, sleep disturbance and anxiety in peripubertal youth. *Journal of Child Psychology and Psychiatry*.
7. **McMakin, D.L.**, Ricketts, E., Milbert, M.M., Trubnick, L.J., Forbes, E.E., Ryan, N.D., Silk, J.S., Siegle, G.J., Harvey, A.G., & Dahl, R.E. (In press). Anxiety treatment and targeted sleep enhancement to address sleep disturbance in pre/early adolescents with anxiety. *Journal of Child and Adolescent Clinical Psychology*.
8. Ladouceur, C.D., Tan, P., Sharma, V., Bylsma, L., Silk, J., Siegle, G., Forbes, E., **McMakin, D.L.**, Dahl, R.E., Kendall, P.C., Mannarino A., Ryan, N.D.. (In press). Error-related brain activity in pediatric anxiety disorders remains elevated following individual therapy: A randomized clinical trial. *Journal of Child Psychology and Psychiatry*.
9. Blake, M.J., Blake, L.J., Schwartz, O., Raniti, M., Waloszek, J.M., Murray, G., Simmons, J., Landau, E., Dahl, R.E., **McMakin, D.L.**, Dudgeon, P., Trinder, J.A., & Allen, N.A. (In press). Who benefits from adolescent sleep interventions? Moderators of treatment efficacy in a randomized controlled trial

of a cognitive-behavioral and mindfulness-based group sleep intervention for at-risk adolescents. *Journal of Child Psychology and Psychiatry*.

10. Blake, M.J., Snoep, L., Raniti, M., Schwartz, O., Waloszek, J., Simmons, J.G., Murray, G.W., Blake, L., Landau, E., Dahl, R.E., Bootzin, R., **McMakin, D.L.**, Dudgeon, P., Trinder, J., & Allen, N.B. (2017). A cognitive-behavioral and mindfulness-based group sleep intervention improves behavior problems in at-risk adolescents by improving perceived sleep quality. *Behavior Research and Therapy*.

11. Just, M.A., Pan, L., Cherkassky, V.L., **McMakin, D.L.**, Cha, C., Nock, M.K., & Brent, D.A. (2017). Machine-learning identification of patients with suicidal ideation and suicidal behavior: Detecting alterations in the neural representations of death- and life-related concepts. *Nature: Human Behavior*, 1, 911-919.

12. Poznanski, B., Cornacchio, D., Cox, S., Pincus, D.B., **McMakin, D.L.**, & Comer, J.S. (2017). The link between anxiety severity and irritability among anxious youth: Evaluating the mediating role of sleep problems. *Child Psychiatry and Human Development*.

13. Blake, M., Schwartz, O., Waloszek, J.M., Raniti, M., Simmons, J.G., Murray, G., Blake, L., Teach, M., Dahl, R.E., Bootzin, R., **McMakin, D.L.**, Dudgeon, P., Trinder, J., Allen, N.B. (2017). The SENSE Study: Treatment mechanisms of a randomized controlled trial of a cognitive behavioral and mindfulness-based group sleep improvement intervention among adolescents experiencing sleep disturbance and anxiety symptoms. *SLEEP*, 40 (6), zsx061.

14. Olino, T.M. **McMakin, D.L.**, & Forbes, E.E. (2017). An exploratory factor analytic study of the Positive Valence Systems: Toward an empirical multidimensional structure. *Assessment*, 1-12.

15. Morgan, J., Lee, G., Wright, A., Forbes, E. **McMakin, D.L.**, Dahl, R.E., Ladouceur, C., Siegle, G.J., Ryan, N.D., & Silk, J.S. (2017). Altered positive affect in clinically anxious youth: The role of social context and anxiety subtype. *Journal of Abnormal Child Psychology*, 1-12.

16. Silk J.S., Tan P.Z., Ladouceur C.D., Meller S.M., Siegle G.J., **McMakin D.L.**, Forbes E.E., Dahl R.E., Kendall P.C., Mannarino A., & Ryan N.D. (2017). A randomized clinical trial comparing individual cognitive behavioral therapy and child-centered therapy for child anxiety disorders. *Journal of Clinical Child and Adolescent Psychology*, 1-13.

17. Groch, S., Preiss, A., **McMakin, D.L.**, Rasch, B., Walitza, S., Huber, R. & Wilhelm, I. (2017). Targeted memory reactivation during sleep promotes the extraction of negative gist information in socially anxious children and adolescents. *Journal of Neuroscience*, 37(9), 2425-2434.

\*18. Wallace, M., **McMakin, D.L.**, Tan, P.Z., Ronzental, D., Forbes, E.E., Ladouceur, C.D., Ryan, N.D., Siegle, G.J., Dahl, R.E., Kendall, P.C., Mannarino, A., & Silk, J.S. (2017). The role of day-to-day emotions, sleep, and social interactions in pediatric anxiety treatment. *Behavior Research and Therapy*, 90, 87-95.

19. **McMakin, D.L.**, Dahl, R.E., Buysse, D.J., Cousins, J.C., Forbes, E.E., Silk, J.S., Siegle, G.J., & Franzen, P.L. (2016). The impact of experimental sleep restriction on affective functioning in social and non-social contexts among adolescents. *Journal of Child Psychiatry and Psychology*, 57(9), 1027-1037.

20. Groch, S., **McMakin, D.L.**, Guggenbuhl, P., Rasch, B., Huber, R., Wilhelm, I. (2016). Memory cueing during sleep modifies the interpretation of ambiguous scenes. *Developmental Cognitive Neuroscience*, 17, 10-18.
21. Kennard, B.D., Biernesser, C., Wolfe, K.L., Foxwell, A.A., Craddock-Lee, S.J., Rial, K.V., Patel, S., Cheng, C., Goldstein, T.R., **McMakin, D.L.**, Blastos, B., Douaihy, A., Zelazny, J., & Brent, D.A. (2016). Developing a brief suicide prevention intervention and mobile phone application: A qualitative report. *Journal of Technology and Human Services*, 33(4), 345-357.
22. Allen, K. B., Silk, J. S., Meller, S., Tan, P. Z., Ladouceur, C. D., Sheeber, L. B., Forbes, E. E., Dahl, R. E., Siegle, G. J., **McMakin, D. L.**, & Ryan, N. D. (2016). Parental autonomy granting and child perceived control: Effects on the everyday emotional experience of anxious youth. *Journal of Child Psychology and Psychiatry*, 57(7), 835-842.
23. Olino, T.M., **McMakin, D.L.**, Nicely, T.A., Forbes, E.E., Dahl, R.E., & Silk, J.S. (2016). Maternal depression, parenting, and youth depressive symptoms: Mediation and moderation in a short-term longitudinal study. *Journal of Clinical Child and Adolescent Psychology*, 45 (3), 279-290.
24. **McMakin, D.L.** & Alfano, C.A. (2015). Sleep and anxiety from childhood to early adolescence. *Current Opinions in Psychiatry*, 28(6), 483-489.
25. Spielberg, J.M., Galarce, E.M., Ladouceur, C.D., **McMakin, D.L.**, Olino, T.M., Silk, J.S., Forbes, E.E., Ryan, N.D., & Dahl, R.E. (2015). Adolescent development of inhibition as a function of SES & gender: Converging evidence from behavior & fMRI. *Human Brain Mapping*, 36(8), 3194-3203.
26. Borelli, J.L., Sbarra, D.A., Snavely, J.E., **McMakin, D.L.**, Coffey, J.L, Ruiz, S.K., Wang, B.A., & Chung, S.Y. (2014). With or without you: Attachment avoidance predicts non-deployed spouses' reactions to relationship challenges during deployment. *Professional Psychology: Research and Practice*. 45(6), 478-487.
27. Olino, T.M., **McMakin, D.L.**, Morgan, J.K., Silk, J.S., Birmaher, B., Axelson, D.A., Williamson, D.E., Dahl, R.E., Ryan, N.D., & Forbes, E.E. (2014). Reduced reward anticipation in youth at high-risk for unipolar depression. *Developmental Cognitive Neuroscience*, 8, 55-64.
28. Whalen, D. Scott, L.N., Jakubowski, K.J., **McMakin, D.L.**, Hipwell, A.E., Silk, J.S., & Stepp, S.D. (2014). Affective behavior during mother-daughter conflict and borderline personality disorder severity across adolescence. *Personality Disorders: Theory, Research, and Treatment*, 5(1), 88-96.
29. Brent, D.A., **McMakin, D.L.**, Kennard, B., Goldstein, T.R., Mayes, T. & Douaihy, A. (2013). Protecting adolescents from self-harm: A critical review of intervention studies. *Journal of the American Academy of Child and Adolescent Psychiatry*, 52(12), 1260-1271.
30. Olino, T.M, Yu, L., **McMakin, D.L.**, Forbes, E.E., Seeley, J.R., Lewinsohn, P.M., & Pilkonis, P.A. (2013). Comparisons across depression assessment instruments: An IRT study using two linking methods. *Journal of Abnormal Child Psychology*, 41(8), 1267-77.



31. **McMakin, D.L.** & Dahl, R.E. (2013). Positive affect and adolescent development: Emerging levels of understanding and clinical opportunities. In June Gruber and Judy Moskowitz (Eds.), *The Light and Dark Side of Positive Emotion*. Oxford University Press.
32. <sup>1</sup>Rofey, D.L., <sup>1</sup>**McMakin, D.L.**, Shaw, D., & Dahl, R.E. (2013). Self regulation of sleep, emotion and weight: Implications for translational research and practice in adolescence. *Clinical Translational Science*, 6(3), 238-243.  
<sup>1</sup>Authors contributed equally as first authors
33. Silk J.S., Sheeber L., Tan P.Z., Ladouceur C.D., Forbes E.E., **McMakin D.L.**, Dahl R.E., Siegle G.J., Kendall P.C., Mannarino A., Ryan N.D. (2013). "You can do it!": The role of parental encouragement to approach fears in child anxiety treatment. *Journal of Anxiety Disorders*, 27(5), 439-446.
34. Morgan, J.K., Olino, T.M., **McMakin, D.L.**, Ryan, N.D., & Forbes, E.E. (2013). Neural response to reward as a predictor of rise in depressive symptoms in adolescence. *Neurobiology of Disease*, 52, 66-74.
35. Silk, J.S., Davis S., **McMakin, D.L.**, Dahl, R.E., & Forbes, E.E. (2012). Why do anxious children become depressed teenagers?: The role of social evaluative threat and reward processing. *Psychological Medicine*, 17, 1-13.
36. **McMakin D.L.**, Olino T.M., Porta G., Dietz L.J., Emslie G., Clarke G.N., Wagner K.D., Asarnow J.R., Ryan N.D., Birmaher B., Mayes T., Kennard B., Spirito A., Keller M., Lynch, F.L., Dickerson, J.F., & Brent D.A. (2012). Anhedonia predicts poorer recovery among youth with SSRI treatment resistant depression. *Journal of the American Academy of Child and Adolescent Psychiatry*, 51 (4), 404-411.
37. **McMakin, D.L.**, Burkhouse, K., Olino, T.M., Siegle, G.J., Dahl, R.E., & Silk, J.S. (2011). Affective functioning among early adolescents at high and low familial risk for depression and their mothers: A focus on individual and transactional processes across contexts. *Journal of Abnormal Child Psychology*, 39 (8), 1213-1225.
38. Olino, T.M., **McMakin, D. L.**, Dahl, R.E., Ryan, N.D., Silk, J. S., Birmaher, B., Axelson, D. & Forbes, E.E. (2011). "I won, but I'm not getting my hopes up": Depression moderates the relationship between outcomes and reward anticipation. *Psychiatry Research: Neuroimaging*, 194, 393-395.
39. **McMakin, D.L.**, Siegle, G.J., & Shirk, S.R. (2011). Positive Affect Stimulation and Sustainment (PASS) module for depressed mood: A preliminary investigation of treatment-related effects. *Cognitive Therapy and Research*, 35 (3), 217-226.
40. **McMakin, D.L.**, Santiago, C.D., & Shirk, S.R. (2009). The time course of positive and negative emotion in dysphoria. *The Journal of Positive Psychology*, 4(2), 182-192.

41. Shirk, S. R., Gudmundsen, G., Kaplinski, H. C., & **McMakin, D. L.** (2008). Alliance and outcome in cognitive-behavioral therapy for adolescent depression. *Journal of Clinical Child and Adolescent Psychology*, 37(3), 631-639.
42. Karver, M., Shirk, S.R., Handelsman, J., Fields, S., Crisp, H., Gudmundsen, G., & **McMakin, D.** (2008). Relationship processes in youth psychotherapy: Measuring alliance, alliance building behaviors, and client involvement. *Journal of Emotional and Behavioral Disorders*, 16(1), 15-28.
43. Shirk, S.R. & **McMakin, D.** (2007). Client, therapist and treatment characteristics in empirically-based treatments for children and adolescents. In Rick Steele, David Elkin & Michael Roberts (Eds.), *Handbook of Evidence Based Therapies for Children and Adolescents*. Springer Publishers.
44. Berger, L., **McMakin, D.** & Furman, W. (2005). The language of love in adolescence. In A. Williams and C. Thurlow (Eds.), *Talking Adolescence: Perspectives on Language and Social Interaction in the Teenage Years*. New York, NY: Peter Lang Publishing Group.
45. Buydens-Branchey J., Branchey M, **McMakin D.L.**, & Hibbeln J.R. (2003). Polyunsaturated fatty acids and relapse vulnerability in cocaine addicts. *Psychiatry Research*, 120(1), 29-35.
46. Buydens-Branchey J., Branchey M., **McMakin D.L.**, & Hibbeln J.R. (2003). Polyunsaturated fatty acid status and aggression among cocaine addicts. *Drug and Alcohol Dependence*, 71(3), 319-323.

## PROFESSIONAL PRESENTATIONS

### CHAIREP PAPER SYMPOSIA

1. **McMakin, D.L.** (Chair), Forbes, E.E., Dennison, M., Guyer, A., & Silk, J.S. (2012). *Developmental Trajectories of Positive Affect Systems and Reward-related Circuitry during Adolescence: A focus on risk for depression*. Society for Research on Adolescence Biennial Meeting, Vancouver, BC Canada.
2. **McMakin, D.L.** (Chair). *Sleep and Emotional Health in Adolescence*. (2015). American Psychological Association. Toronto, Canada.

### PAPER SYMPOSIA, PUBLISHED ABSTRACTS AND POSTER PRESENTATIONS

1. **McMakin, D.L.** (2018). Anxiety and sleep-dependent memory in pre/early adolescents. *Jacobs Foundation Young Scholars Alumni Meeting*, Marbach Castle, Germany.
2. **McMakin, D.L.**, Mattfeld, A.T., Pettit, J. (2018). Sleep-dependent negative overgeneralization in peripubertal anxiety. In C. Alfano (Chair) *Sleep-Emotion Relationships in Preschoolers, School-Aged Children and Adolescents*. Baltimore, Maryland.
- \*3. Cummings, L., Graur, S., **McMakin, D.L.**, Fournier, J.C. (2018). Sleep disturbance and emotion regulation dysfunction in depression: Self-report and neural evidence. *Sleep* 41(1), A361-A361.

- \*4. Ricketts, E., Sturm, A., **McMakin, D.L.**, McGuire, J.F., Tan, P.Z., Smalberg, F., McCracken, J.T., Colwell, C.S., Piacentini, J.P. (2018). Changes In sleep patterns across attention-deficit/hyperactivity disorder treatment: Findings from the MTA study. *Sleep*, 41(1), A284-A284.
5. Mattfeld, A.T., Pettit, J., Vazquez, A., Yeguez, C., Kimbler, A., & **McMakin, D.L.** (2017). Neural and Behavioral Correlates of Negative Overgeneralization. Poster presentation at Society for Neuroscience. Washington, DC.
6. Silk, J.S., Price, R., Rosen, D., Ladouceur, C.D., Forbes, E.E., **McMakin, D.L.**, Siegle, G.J., Dahl, R.E., Ryan, N.D. (2017). The role of anxiety treatment in preventing the development of depressive symptoms in adolescence. In K. Burkhouse & A. Kujawa (Chairs) *Novel Approaches to Predicting Treatment Outcomes in Pediatric Anxiety: Insights from Neuroimaging and Longitudinal Designs*. Society for Research in Child Development (SRCD). Austin, Texas.
7. **McMakin, D.L.** Harvey, A.G., Forbes, E.E., Milbert, M.M., Trubnick, L.T., & Dahl, R.E. (2016). Sleep treatment for anxious youth during the transition to puberty. In J. Levenson (Chair) *Behavioral Interventions to Improve Sleep in Children and Adolescents*. SLEEP. Denver, Colorado.
8. **McMakin, D.L.** Harvey, A.G., Forbes, E.E., Milbert, M.M., Trubnick, L.T., & Dahl, R.E. (2016). Developing a sleep treatment for anxious youth within a framework of developmental affective neuroscience. In R. Tavernier (Chair) *Sleep and Emotional Adjustment in Adolescence and Emerging Adulthood: Opportunities for Sleep Interventions*. Association for Psychological Science. Chicago, Illinois.
9. Ricketts, E.\*, Price, R., Siegle, G.J., Silk, J.S., Forbes, E.E., Ladouceur, C. Harvey, A.G., Ryan, N.D., Dahl, R.E., **McMakin, D.L.** (2015). *Relationship between Vigilance to Threat and Objective and Subjective Sleep Disturbance*. SLEEP. Seattle, Washington.
10. **McMakin, D.L.**, Wilhelm, I., Franzen, P.L., & Dahl, R.E. (2015). Emotional learning and sleep: Implications for the negativity bias. In C. Alfano & C. Palmer (Chairs) *How does Sleep Impact Emotional Processing? Evidence from experimental research in youth*. Association for Psychological Science. New York, New York.
11. **McMakin, D.L.**, Wilhelm, I., Franzen, P.L., Dahl, R.E. (2015). *Emotional Learning during Sleep in Anxious and Healthy Youth*. Anxiety and Depression Association of America Annual Meeting, Miami, Florida.
12. Davis, S., Silk, J.S., Dietz, L.J., **McMakin, D.L.**, Dahl, R.E., Ryan, N.D. (2015). *Should I be worried about ruminating? Exploring the comorbidity between pediatric anxiety and depression*. Anxiety and Depression Association of America Annual Meeting, Miami, Florida.
13. **McMakin, D.L.** (Discussant; 2015). In L. Gulley (Chair): *Identification of Targeted Mechanisms in Youth Psychopathology: Implications for Experimental Therapeutics*. Society for Research on Child Development. Philadelphia, Pennsylvania.

14. Morgan, J.; Lee, G. Gilchrist, D. Forbes, E.E., **McMakin, D.L.**, Dahl, R.E., Ladouceur, C., Siegle, G.J., Ryan, N.D., & Silk, J.S. (2015). The social context of positive affect in clinically anxious youth. In E.vRoekel (Chair): Momentary Positive Emotions and Experiences in Adolescence: Relations with depressive symptoms, anxiety, and resilience. Society for Research on Child Development. Philadelphia, Pennsylvania.
15. Kim, Jae-Won, Sharma, V.A., **McMakin, D.L.** & Ryan, N.D. (2014). *Predicting Sleep Side Effects of Methylphenidate in ADHD using Machine Learning Approaches*. Poster presented at the American Academy of Child and Adolescent Psychiatry. San Diego, CA.
16. Silk, J.S., Tan, P.Z., Ladouceur, C.D., Siegle, G.J., Dahl, R.E., **McMakin, D.L.**, Forbes, E.E., Kendall, P.C. & Ryan, N.D. (2014). *A Comparison of CBT vs. Child-Centered Psychotherapy for Child Anxiety: Clinical and Real-world Outcomes*. The Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, Pennsylvania.
17. **McMakin, D.L.**, Harvey, A.G., Forbes, E.E., Cousins, J.C., Milbert, M.M., Mathyssek, C.M., Trubnick, L.T., Ryan, N.D. & Dahl, R.E. (2013). Developing a sleep treatment for anxious youth within a developmental affective neuroscience framework. In A.G. Harvey (Chair), *Treating Sleep Problems in Adolescents and Adults: New treatments and New Outcome Data*. The Association for Behavioral and Cognitive Therapies (ABCT), Nashville, Tennessee.
18. Lee, G.E., Gilchrist, D.E., Morgan, J.K., Forbes, E.E., **McMakin, D.L.**, Dahl, R.E., Ladouceur, C.D., Ryan N.D. & Silk, J.S. (2013). *Positive Peer Interactions in Anxious children: An Ecological Momentary Study*. Poster presentation at the 47<sup>th</sup> annual meeting of the Association for Behavioral and Cognitive Therapies, Nashville, Tennessee.
19. **McMakin, D.L.** Sleep as a modifiable risk and resilience factor in adolescence: Implications for affective development (2013). Invited Presentation, *Previews from the Pipeline: A Data Blitz Featuring Early Career Investigators*. American Academy of Child and Adolescent Psychiatry 60<sup>th</sup> Annual Meeting, Orlando, Florida.
20. Insana S.P., Dahl R.E., **McMakin D.L.**, Franzen P.L., Siegle G.J., Silk J.S. (2013). *Adolescent Sleep Quality is Associated with Connectedness to Peers and Sensitivity to Peer Rejection*. Poster presentation at SLEEP 2013 27th Annual Meeting of the Associated Professional Sleep Societies, Baltimore, MD.
21. Venable, C., Olino, T.M., **McMakin, D.L.**, Forbes, E.E., Ryan, N.D., & Dahl, R.E. (2013). *Influence of Developmental Status and Real World Socio-emotional Experiences on Sleep Patterns in Adolescence*. Poster presentation at SLEEP 2013 27th Annual Meeting of the Associated Professional Sleep Societies, Baltimore, MD.
22. Jakubowski, K., Dahl, R.E., **McMakin, D.L.**, Rofey, D.L., Gilchrist, D., El Nokali, N., & Silk, J.S. (2013). *Relationship between Sleep and Next-day Health Behaviors in the Real-world Environments of Healthy Adolescents*. Poster presentation at SLEEP 2013 27th Annual Meeting of the Associated Professional Sleep Societies, Baltimore, MD.

23. **McMakin, D.L.**, Harvey, A.G., Forbes, E.E., Cousins, J.C., Milbert, M.M., Trubnick, L.T., & Dahl, R.E. (2013). Treating sleep in early adolescents with anxiety: Implications for improving affective development. In A.G. Harvey (Chair) *Sleep in Adolescence: Pathways, Targets and Treatments*. Invited symposium at the Society for Research on Child Development, Seattle, WA.
24. Olino, T.M., Forbes, E.E., Silk, J.S., **McMakin, D.L.**, Morgan, J., Birmaher, B., Axelson, D.A., Dahl, R.E., & Ryan, N.D. (2013). *Positive Emotionality and Risk for Depression: Evidence from Behavioral and Neurobiological Indices*. Society for Research on Child Development. Seattle, WA.
25. **McMakin, D.L.**, Silk, J.S., Olino, T.M., Dahl, R.E., Forbes, E.E., Lee, K.H., Ryan, N.D. (2012). *Depressed Adolescents Show Reduced Positive Affect and Fronto-striatal Connectivity while Re-experiencing a Positive Event*. Poster presentation at the American College of Neuropsychopharmacology Annual Meeting, Hollywood, Florida.
26. Siegle, G.J., Horner, M., **McMakin, D.L.**, Silk, J. S., Friedman, E. S. (2012). Positive affect in depression: Behavioral and neural dynamics. In J. Gruber (Chair). *Positive Emotion and Reward Dysregulation across Disorders*. Association for Behavioral and Cognitive Therapies. National Harbor, MD.
27. Morgan, J.K., Olino, T.M., **McMakin, D.L.**, Ryan, N.D., & Forbes, E.E. (2012). *Neural Response to Reward as a Predictor of Rise in Depressive Symptoms in Adolescence*. Society for Psychophysiological Research.
28. Mathyssek, C.M., Olino, T.M., **McMakin, D.L.**, Verhulst, F.C., van Oort, F.V.A. (2012). *The Bidirectional Association between Sleep Problems and Anxiety Symptoms in Adolescents: The TRAILS study*. Poster presentation at the 26th Annual Meeting of the Associated Professional Sleep Societies, Boston, Massachusetts.
29. Olino, T.M., **McMakin, D.L.**, Ryan, N.D., Ladouceur, C.D., Forbes, E.E., Siegle, G.J., Dahl, R.E., Kendall, P.C., & Silk, J.S. (2012). *Therapeutic Alliance Differentially Moderates Treatment Response across Phases of CBT in Anxious Youth*. Anxiety Disorders Association of America Annual Meeting, Arlington, Virginia.
30. **McMakin, D.L.**, Harvey, A.G., Milbert, M.M., Trubnick, L.J., Cousins, J.C., Kurtzman, J.S., Siegle, G.S., Ryan, N.D., & Dahl, R.E. (2011). CBT Treatment for Anxiety in Early Adolescence: Targeting Sleep? Association of Behavioral and Cognitive Therapies Annual Meeting, Toronto, Canada.
31. **McMakin, D.L.**, Dahl, R.E., Silk, J.S., McFarland, A., Ladouceur, C., Forbes, E.E., Ryan, N.D., & Siegle, G.S. (2011). *Effects of CBT on Engaging with a Positive Memory in Anxious Adolescents: Behavioral and Neuro-imaging indices*. Association of Behavioral and Cognitive Therapies Annual Meeting, Toronto, Canada.
32. Cousins, J.C., **McMakin, D.L.**, Dahl, R.E., Forbes E.E., Silk, J.S., Siegle, G.J., & Franzen, P.L. (2011). *Experimental Sleep Restriction in Adolescents: Changes in Behavioral and Physiological Measures of Emotional Reactivity*. 25<sup>th</sup> Annual Meeting of the Associated Professional Sleep Societies. Minneapolis, MN.

33. Olino, T.M., Dahl, R.E., **McMakin, D.L.**, Silk, J.S., Ryan, N.D., Phillips, M.L., & Forbes, E.E. (2011). *Longitudinal Changes in Reward Function in Adolescence*. Poster session at the Society for Biological Psychiatry, San Francisco, CA.
34. Rollison, A.T. & **McMakin, D.L.** (2011). *Positive Affect Stimulation and Sustainment Module for Depressed Adolescents*. University of Pittsburgh, School of Arts and Sciences First Experiences in Research Program, Pittsburgh, Pennsylvania.
35. Olino, T.M., **McMakin, D.L.**, Nicely, T.A., Forbes, E.E., Silk, J.S., & Dahl, R.E. (2011). *Affective Displays in Mother-Child Interactions and Development of Adolescent Depressive Symptoms over Eighteen Months*. Society for Research in Child Development Biennial Meeting, Montreal, Quebec, Canada.
36. **McMakin, D.L.**, Silk, J.S., Siegle, G.J., & Dahl, R.E. (2010). *Activating and Sustaining Positive Affect in Adolescent Depression: Developing a Treatment Module within a Framework of Developmental Affective Neuroscience*. Association of Behavioral and Cognitive Therapies Annual Meeting, San Francisco, CA.
37. Olino, T.M., **McMakin, D.L.**, Dahl, R.E., Ryan, N.D., Birmaher, B., Axelson, D., & Forbes, E.E. (2010). *Altered Reward Anticipation in Youth At-Risk for Depression Following Winning, Losing, and Neutral Outcomes*. Society of Biological Psychiatry 65<sup>th</sup> Annual Meeting, New Orleans, LA.
38. Burkhouse, K.L., **McMakin, D.L.**, & Silk, J.S. (2010). *Mother-Child Interactions among Adolescents and their Mothers with and without a History of Depression*. Society for Research in Adolescence, Philadelphia, PA.
39. **McMakin, D.L.**, Santiago, C.D. & Shirk, S.R. (2007). *Positive Emotion Regulation in Depression*. Society for Research in Child Development, Boston, MA.
40. **McMakin, D.L.** & Shirk, S.R. (2006, November). *Positive Emotion Regulation Coaching (PERC) for Depression*. Association for the Advancement of Behavioral and Cognitive Therapy, Chicago, Illinois.
41. **McMakin, D.L.** & Shirk, S.R. (2004). *Positive Emotion Deficit in Depression: Underlying Cognitive Mechanisms and the Validation of the Savoring Scale*. Association for the Advancement of Behavioral Therapy, New Orleans, Louisiana.
42. **McMakin, D.L.**, Dent, H., and Gudmundsen, G. (2003). *The Relationship between Therapist Engagement Strategies and Working Alliance in a Controlled Trial of Cognitive-Behavioral and Nondirective Supportive Therapies for Suicidal Adolescents*. Association for the Advancement of Behavioral Therapy, Boston, Massachusetts.
43. Dent, H., Gudmundsen, G., & **McMakin, D.L.** (2003). *Engagement Strategies in a Controlled Trial of Cognitive-Behavioral and Nondirective Supportive Therapies for Adolescent Depression*. Association for the Advancement of Behavioral Therapy, Boston, Massachusetts.

44. Gudmundsen, G., **McMakin, D.L.**, & Dent, H. (2003). Examination of Therapist Strategies for Engaging Adolescents in Empirically-Supported Interventions: Development of the CTES. Association for the Advancement of Behavioral Therapy, Boston, Massachusetts.

45. **McMakin, D.L.** & Shirk, S.R. (2003). *Temporal Dynamics of Positive Emotion in Depression*. Positive Psychology Summit, Washington DC.

46. **McMakin, D.L.** (2003). Positive Affectivity as a Protective Factor in the Development of Depression. Society for Research in Child Development, Tampa, Florida.

#### INVITED TALKS AND GRAND ROUNDS

2019 UCLA, Brain and Behavioral Development in Adolescence T32 Lecture Series

2014 Florida International University, Psychology Department Grand Rounds

2013 University of Pittsburgh, Western Psychiatric Institute and Clinic, Summer Sleep Seminar Series

2013 University of Pittsburgh, Theological Seminary, Spiritual and Emotional Growth through Life, Summer Leadership Conference, Invited Research Presentation

2013 University of Pittsburgh, School of Medicine, Multidisciplinary Sleep Conference

2013 University of Pittsburgh, Western Psychiatric Institute and Clinic Research Day, Invited Speed Data Presentation

2012 University of Melbourne, Psychology Department, Dyason Fellowship Talk, Research Groups of Professors Nick Allen and John Trinder

2012 Developmental Affective Science Collective (DASC) Inaugural Meeting, Brief Invited Talk

2012 Children's Hospital of Pittsburgh, Adolescent Medicine Research Symposium

2012 University of Central Florida, Psychology Colloquium

2012 University of Pittsburgh, Psychology Department, Developmental Program Brown Bag Series

2008 University of California Los Angeles, Child and Adolescent Psychiatry Grand Rounds

2008 University of Pittsburgh, Western Psychiatric Institute and Clinic, Translational Research on Emotion, Neurobiology and Development (TREND) Group Research Presentation

#### CLINICAL AND COMMUNITY PRESENTATIONS AND WORKSHOPS

2017 Miami International Child and Adolescent Mental Health (MICAMH) Conference, Behavioral Sleep Treatment Workshop

2013 Studying Teens at Risk (STAR) Center, Weekly Clinical Case Conference Consultation for Behavioral Sleep Treatment

2012-2014 Studying Teens at Risk (STAR) Center Conference, Clinical workshop presentation

2013 Western Psychiatric Institute and Clinic Child and Family Outpatient Program, Clinical workshop presentation

2013	Western Psychiatric Institute and Clinic Intensive Outpatient Program, Clinical Workshop Presentation
2013	Pittsburgh Public Schools, Clinical workshop presentation to school counselors.

#### UNPUBLISHED TREATMENT/INTERVENTION MANUALS:

1. **McMakin, D.L.**, Milbert, M.M., Shirk, S.R., Dahl, R.E. (2010). *Positive Affect Stimulation and Sustainment Manual: A module targeting depressed mood in adolescence*. Unpublished treatment manual.
2. Borrelli, J.L., **McMakin, D.L.**, & Sbarra, D.A. (2010). *Mental Reflection Task Manual*. Unpublished manual
3. Clarke, G., Harvey, A., **McMakin, D.L.**, Lueng, S., & Firemark, A. (2009). *CBT for Teen Insomnia Manual*. Unpublished treatment manual.
4. **McMakin, D.L.**, Harvey, A., Milbert, M.M., Forbes, E.E., McMakin, D.L., Trubnick, L. & Dahl, R.E. (2013). *Sleeping Tigers: Treatment for sleep problems in young people*. Unpublished treatment manual.

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### PROFESSIONAL ACTIVITIES

#### RESEARCH:

#### CURRENT GRANT SUPPORT:

R01 MH100451-01	(MPI: McMakin; Mattfeld)	2018-2023
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Title:	Sleep-Dependent Negative Overgeneralization in Peri-pubertal Anxiety
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Role:	Principal Investigator
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Source:	National Institute of Mental Health
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Funding:	\$3,385,194
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Co-Investigators:	Jeremy Pettit, Anne Germain, Meredith Wallace
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*PCORI	(MPI: Comer, McMakin)	2018-2023
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Title:	KIDS FACE FEARS: Face-to-face vs. Computer-Enhanced Pragmatic Study of Anxiety
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Role:	CO-PI of subcontract from Boston Medical Center (MPI: Fortuna, Pincus)
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Source:	PCORI
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*Funding:	~\$3,000,000 (budget negotiations ongoing)
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Co-Investigators:	Stefany Cox
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Nicklaus Children's Hospital	(PI: McMakin)	2018-2019
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Title:	Clinical Work and Translational Research with Nicklaus Children
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Role:	Licensed Clinical Psychologist and Principal Investigator
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Source:	Nicklaus Children's Hospital
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Funding:	\$42,500
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AFSP FOCUS grant	(PI: McMakin)	2018-2023
Title:	As Safe As Possible (ASAP): A Balanced, 2x2 Design to Test Conjoint and Unique Efficacy of an Inpatient Intervention and An Emotion Regulation/ Safety Planning App in Preventing Suicide Attempts Post-Discharge	
Role:	PI of subcontract from U.T. Southwestern (MPI: Kennard, Brent)	
Source:	American Foundation of Suicide Prevention	
Funding:	\$25,173.22	

#### PRIOR RESEARCH FUNDING AND GRANT SUPPORT:

Nicklaus Children's Hospital	(McMakin)	2016-2018
Title:	Clinical Work and Translational Research with Nicklaus Children	
Role:	Licensed Clinical Psychologist and Principal Investigator	
Source:	Nicklaus Children's Hospital	
Funding:	\$22,500 annually	

R34 MH100451-01A1	(Brent; Kennard)	2014-2017
Title:	Brief Intervention for Suicide Risk Reduction in High Risk Adolescents	
Role:	Co-Investigator	
Source:	National Institute of Mental Health	
Funding:	\$100,000	
Investigators:	David A. Brent, MD and Beth Kennard, PhD	
Co-Investigators:	Antoine Douaihy, PhD; Tina Goldstein, PhD; Taryn Mayes, MA	

K23MH092400	(McMakin)	2011-2017
Title:	Treatment Development Targeting Positive Affect Function in Adolescent Depression	
Role:	Principal Investigator	
Source:	NIMH	
Funding:	\$733,108	
Mentors:	David Brent, MD; Ronald E. Dahl, MD; Jon Fincham PhD; Bea Luna, PhD	
Institution:	Florida International University, Center for Children and Families (transferred from the University of Pittsburgh in 2016)	

Research Resources Internal Award	(McMakin)	2016
Title:	Actigraphy Assessment of Sleep in Adolescents	
Role:	Principal Investigator	
Source:	Florida International University, Center for Children and Families	

Funding \$5,000

Jacobs Foundation Young Scholar Award (McMakin) 2012-2014

Title: Sleep-dependent Emotional Memory Consolidation in Anxious and Healthy Adolescents (Study #1 of 2)

Role: Principal Investigator\*

Source: Jacobs Foundation

Funding: \$41,485

Co-Investigators: Ines Wilhelm, PhD; Reto Huber, MD, Ronald E. Dahl, MD

Institution: University of Pittsburgh School of Medicine, Department of Psychiatry

Jacobs Foundation Young Scholar Award (Wilhelm) 2012-2014

Title: Sleep-dependent Emotional Memory Consolidation in Anxious and Healthy Adolescents (Study #2 of 2)

Role: Co-Investigator

Source: Jacobs Foundation

Funding: \$40,150 CHF

Co-Investigators: Reto Huber, MD, Ron Dahl, MD

Institution: University of Zurich

P50 MH080215 (Ryan) 2008-2014

Title: Transdisciplinary Studies of CBT for Anxiety in Youth

Role: Co-Investigator. Leadership role for Project 2, Effects of Sleep Enhancement on Affective Functioning

Source: National Institute of Mental Health

Funding: \$9,795,710

Investigators: Ronald E. Dahl; Jennifer Silk, Cecile Ladouceur, Erika Forbes; Greg Siegle

Institution: University of Pittsburgh School of Medicine, Department of Psychiatry

Klingenstein Third Generation Foundation (McMakin) 2010-2012

Fellowship in Depression

Title: Targeting Brain-Behavior Correlates of Positive Affect in Adolescent Depression

Role: Principal Investigator

Source: Klingenstein Third Generation Foundation

Funding: \$60,000

Mentors: David Brent, Ronald E. Dahl, Greg Siegle

Institution: University of Pittsburgh School of Medicine, Department of Psychiatry

T32 MH018951 (Brent) 2010

Title: Clinical Research Training in Child Psychiatry (Brent)

Role: Postdoctoral Research Fellow  
 Source: NIMH, Institutional National Research Service Award  
 Funding: 100% Salary  
 Mentors: David Brent, Ronald E. Dahl, Greg Siegle  
 Institution: University of Pittsburgh, Department of Psychiatry

T32 HD049354 (Noll) 2008-2010  
 Title: Interdisciplinary Research: Behavioral/Emotional Health (Noll)  
 Role: Postdoctoral Research Fellow, 100% effort  
 Source: NICHD, Institutional National Research Service Award  
 Funding: 100% Salary  
 Mentors: Ronald E. Dahl, Greg Siegle  
 Institution: University of Pittsburgh School of Medicine, Department of Pediatrics

F31MH75256 (McMakin) 2006-2007  
 Title: Positive Emotion Regulation Coaching (PERC) for Depression among High School Adolescents  
 Role: Predoc. Research Fellow, Principal Investigator  
 Source: NIMH, Individual National Research Service Award  
 Funding: \$59,971  
 Mentor: Stephen R. Shirk, Ph.D.  
 Institution: University of Denver, Department of Psychology

## TEACHING:

### STUDENT RESEARCH COMMITTEES

2018-present	Neralie Cain, PhD, Clinical Psychology, Michael Gradisar, Flinders University, Dissertation Examiner
2018-present	Kelly Cromer, PhD, Clinical Science, Stacy Frazier, FIU, Dissertation Committee
2017-present	Danielle Dellarco, PhD, Clinical Psychology, Jennifer Britton, University of Miami, Masters Committee
2017-ongoing	Jennifer Coto, PhD, Clinical Science, Paulo Graziano, FIU, Dissertation Committee
2017-present	Nathan Sollenberger, PhD program in Clinical Science, Dana McMakin, FIU, Primary Mentor
2017-present	Logan Cummings, PhD program in Clinical Science, Dana McMakin, FIU, Primary mentor
2017	Carlos Yeguez, PhD program in Clinical Science, Jeremy Pettit, FIU, 2nd reader for 2nd year project
2017	Daniella Vaclavik, PhD program in Clinical Science, Jeremy Pettit, FIU, 2nd reader for 2nd year project
2016-present	Brittany Jaso, PhD, Clinical Psychology, Aaron Heller, University of Miami, Masters Committee

2016 Victor Buitron, PhD, Clinical Science, Jeremy Pettit, FIU, 2nd reader for 2nd year project

#### POST-DOCTORAL RESEARCH COMMITTEES

2014-2016 Judith Morgan, PhD; Special committee for K award proposal, University of Pittsburgh

2012-2013 Olga Berkout, PhD; Special committee for K award proposal, University of Pittsburgh

#### MENTORING and SUPERVISION

2013-2016 Amanda Aninwene, BS; University of Pittsburgh School of Medicine, Medical Student, T32 Research Fellowship (NIMH), Elective Research Rotation, Scholarly Project mentor.

2015 Marissa Bowman, B.S.; Volunteer Research Assistant, University of Pittsburgh, School of Medicine, Elective Research Experience for Notre Dame University, Mentor.

2010-2013 Leadership Co-I role for P50 MH080215 (Project 2; *Effects of Sleep Enhancement on Affective Function*)  
Leadership role on Project 2 of the P50 CATS Center Grant included significant mentoring and training responsibilities for 20 staff members including project coordinators, data analysts, research assistants, neuroimaging techs, recruiters, and undergraduate level work study students. Coordinated and led clinical supervision for sleep treatment, which included a team of 14 independent evaluators, clinicians (social workers, counselors), and project investigators (investigators not listed below): Melissa Milbert, LCP, Laura Trubnick, MSW, Catherine Venable, B.S., Candice Croft, B.A., Marcie Walker, B.A., Matthew George, B.A., Danielle Gilchrist, B.A., Brandes Montgomery, LCP, Kara Colaizza, LCSW, Min Han, M.S., Karen Jakubowski, B.A., Adam Magerman, B.A., Jennifer Kurtzman, B.A., Jillian Rogers, B.A., Jessica Wilson, M.A., Katie Burkhouse, M.A., Sherri Karas, M.A., Christine Mathysseck, M.A., Abigail Martin, M.A., Kristin Pracht, M.A.

2013 Amber Shank, University of Pittsburgh, Department of Neuroscience, Undergraduate First Experiences in Research, Mentor for research activities

2011-2014 Abigail Rollison\*, University of Pittsburgh, Department of Neuroscience, Undergraduate First Experiences in Research, Mentor for research activities.

\*Awarded Brackenridge Research Fellowship in fall 2012, spring 2013

2010-2011 Keely Hirsch, University of Pittsburgh, Department of Psychology, Undergraduate Research Project, Co-mentor (with Jennifer Silk, PhD) for research activities

2006-2007 Jennifer Hughes, B.S., University of Denver, Department of Psychology, Post-baccalaureate Research Assistant, Co-mentor (with Stephen Shirk, PhD) for research activities

- 2004-2006 Lindsay Eichman, University of Denver, Department of Psychology, Honors Undergraduate, Co-Mentor for honors thesis and research activities (with Stephen Shirk, PhD)
- 2002-2003 Janna Grinstead, University of Denver, Department of Psychology, Honors Undergraduate, Co-Mentor for honors thesis and research activities (with Stephen Shirk, PhD)

#### COURSE INSTRUCTION:

- 2018      Role:            Instructor  
               Course:        Clinical Neuropsychology  
               Where:        Department of Psychology, Florida International University  
               Who:           Graduate Course, class size = 16 students  
               Description: Developed and taught this graduate level course clinical science and cognitive neuroscience students
- 2017-current   Role:            Instructor  
                      Course:        Motivation and Emotion  
                      Where:        Department of Psychology, Florida International University  
                      Who:           Undergraduates, class size = 70 students  
                      Description: Developed and taught this upper level psychology course for undergraduates
- 2004-2007      Role:            Instructor  
                      Course:        Motivation and Emotion  
                      Where:        Department of Psychology, University of Denver  
                      Who:           Undergraduates, class size = 38 students (average)  
                      No. quarters: 5 academic quarters  
                      No. lectures: 20 per quarter  
                      Description: Developed and taught this upper level psychology course for undergraduates
- 2006-2007      Role:            Instructor  
                      Course:        Empirically Based Treatments for Mental Illness  
                      Where:        Department of Psychology, University of Denver  
                      Who:           Undergraduates, class size = 4 students  
                      No. quarters: 1 academic quarter  
                      No. lectures: 10  
                      Description: Proposed, developed and taught this upper level psychology course for undergraduates in partial fulfillment of a National Research Service Award training plan.
- 2005-2007      Role:            Guest Lecturer  
                      Courses:        Neuropharmacology, Introduction to Biology  
                      Where:        Department of Biology, University of Denver

	Who:	Undergraduates, class size = 35 students (average)
	No. quarters:	5 academic quarters
	No. lectures:	1 per quarter
	Description:	Biology courses for undergraduates
2002-2006	Role:	Guest Lecturer
	Courses:	Depression, Cognition and Learning, University Mentoring Program
	Where:	Department of Psychology, University of Denver
	Who:	Undergraduates, class size = 45 students (average)
	No. quarters:	9 academic quarters
	No. lectures:	1-2 per quarter
	Description:	Psychology courses for undergraduates, and enrichment program for undergraduates
2003-2005	Role:	Teaching Assistant and Lecturer
	Courses:	Clinical Interviewing and Assessment Practicum
	Where:	Department of Psychology, University of Denver
	Who:	First year graduate students in Child Clinical Psychology doctoral program, class size = 5 students (average)
	No. quarters:	9 academic quarters
	No. lectures:	8 per quarter
	Description:	Clinical interviewing and test administration
2001-2005	Role:	Teaching Assistant
	Courses:	Depression, Cognition and Learning, Introduction to Statistics, and Motivation and Emotion
	Where:	Department of Psychology, University of Denver
	Who:	Undergraduates, class size = 35 students (average)
	No. quarters:	9 academic quarters
	No. lectures:	1-2 per quarter, Intro. to Statistics included leading 12 lab sessions per quarter
	Description:	Psychology courses for undergraduates
OTHER INSTRUCTION:		
2009-2013	Role:	Instructor
	Course:	Coding Observable Affective Behavior
	Where:	University of Pittsburgh, School of Medicine
	Who:	Graduate Students and Research Assistants, class size = 8 students
	No. semesters:	2 academic semesters
	No. lectures:	25 hours per semester
	Description:	Training reliability for observational coding team
2013-current	Role:	Guest Lecturer
	Course:	Medical Fellow Seminar, Developmental Process, Non-Pharmacologic Interventions in Pediatric Psychopathology Course
	Where:	University of Pittsburgh, School of Medicine

	Who:	Fellows, class size = 10-20 students
	No. lectures:	1 lecture
	Description:	Topic focused on sleep and developmental psychopathology
2011	Role:	Guest Lecturer
	Course:	Medical Resident Seminar
	Where:	University of Pittsburgh, School of Medicine
	Who:	Residents, class size = 20 students
	No. lectures:	2 lectures
	Description:	Topics focused on motivational and emotional development as it applies to developmental psychopathology

**CLINICAL EXPERIENCE and CLINICAL SUPERVISION:**

2016-current	Role:	Licensed Clinical Psychologist. Outpatient Psychological Services
	Institution:	Nicklaus Children's Hospital, Division of Psychology
	Hours:	8-10 hours per week
2017-2018	Role:	Supervisor. Outpatient Adolescent Services, Sleep Clinic
	Institution:	Center for Children and Families, Florida International University
	Hours:	6 hours per week
2016	Role:	Supervisor. Outpatient Adolescent Research Trial, Depression
	Institution:	Center for Children and Families, Florida International University
	Hours:	6 hours per week
2010-2013	Role:	Supervisor. Outpatient Adolescent Research Trial, Sleep and Anxiety
	Institution:	University of Pittsburgh School of Medicine
	Hours:	6 hours per week
2008-2010	Role:	Clinician. Outpatient Child/Adolescent Research Trial, Sleep and Anxiety
	Supervisors:	Ron Dahl, MD; Allison Harvey, PhD; Erika Forbes, PhD
	Institution:	University of Pittsburgh, School of Medicine
	Hours:	6 hours per week
2007-2008	Role:	Psychology Intern. Inpatient/Outpatient Child and Adolescent Track
	Supervisors:	Michael Strober, PhD, Rhonda Sena, PhD, Mark DeAntonio, MD, Brenda Bursch, PhD, Martha Jura, PhD, John Piacentini, PhD, Joan Asarnow, PhD, and James McCracken, MD
	Institution:	UCLA, Semel Institute for Neuroscience and Human Behavior

	Hours:	Full Time
2005-2006	Role:	Psychology Extern, Outpatient Child and Family Services
	Supervisors:	Jean Rosmarin, PhD and Molly Harig, LCSW
	Institution:	Boulder Community Mental Health Center (BMHC), Child and Family Services
	Hours:	20 hours per week
2005-2006	Role:	Clinical Trainee, Outpatient Child Trauma Team
	Supervisor:	Karen Mallah, PhD
	Institution:	University of Denver, Child and Family Clinic, Department of Psychology
	Hours:	4 hours per week
2004-2005	Role:	Psychology Extern, Inpatient/ Outpatient Child Services
	Supervisor:	Jeffrey Dolgan, PhD
	Institution:	The Children's Hospital-Denver, Department of Psychiatry and Behavioral Sciences
	Hours:	15 hours per week
2003-2005	Role:	Clinical Trainee, Outpatient Couples Clinic
	Supervisor:	Howard Markman, PhD
	Institution:	University of Denver, Child and Family Clinic, Department of Psychology
	Hours:	4 hours per week
2003-2005	Role:	Clinic Assistant, Outpatient Child and Family Services
	Supervisor:	Stephen R. Shirk, PhD
	Institution:	University of Denver, Child and Family Clinic, Department of Psychology
	Hours:	20 hours per week
2003-2005	Role:	Psychology Extern, Outpatient Child Neuropsychology Assessment
	Supervisors:	Bruce Pennington, PhD and Margaret Riddle, PhD
	Institution:	University of Denver, Developmental Neuropsychology Clinic
	Hours:	10 hours per week
2002-2007	Role:	Clinical Trainee, Outpatient Child and Family Services
	Supervisors:	Anne DePrince, PhD, Stephen Shirk, PhD, Karen Mallah, PhD, and Martha Wadsworth, PhD
	Institution:	University of Denver, Child and Family Clinic, Department of Psychology
	Hours:	5-15 hours per week

## **OTHER PROFESSIONAL ACTIVITIES**



**AD HOC REVIEWER for PEER REVIEWED MANUSCRIPTS:**

*American Journal of Psychiatry, American Journal of Child and Adolescent Psychiatry, Behavioral Sleep Medicine, Behaviour Research and Therapy, Biological Psychiatry, BioMed Central Psychology, Child Development, Cerebral Cortex, Cognition and Emotion, Current Medical Literature: Psychiatry, Developmental Cognitive Neuroscience, Developmental Psychopathology, Early Intervention in Psychiatry, Emotion, Evidence Based Practice in Child and Adolescent Mental Health, Journal of Abnormal Child Psychology, Journal of Adolescent Health, Journal of Anxiety Disorders, Journal of Child Psychology and Psychiatry, Journal of Clinical Child and Adolescent Psychology, Journal of Positive Psychology, Psychophysiology, SLEEP*

**AD HOC REVIEWER FOR PEER REVIEWED GRANTS:**

*National Institute of Mental Health, National Science Foundation (NSF), National Institute for Health Research (NIHR; United Kingdom)*

**PROFESSIONAL WORK GROUPS AND COMMITTEES:**

2016-Current	Professional Development Committee, Chair Clinical Science, Psychology Department, Florida International University
2017-Current	Curriculum Committee, Member Clinical Science, Psychology Department, Florida International University
2016-2017	Faculty Search Committee, Member Clinical Science, Psychology Department, Florida International University
2017-Current	Faculty Search Committee, Member Cognitive Neuroscience, Psychology Department, Florida International University
2017-Current	Faculty Mentor College of Arts and Sciences (CASE), Florida International University

## PROFESSIONAL REFERENCES

Ronald E. Dahl, M.D.  
Professor of Public Health;  
Director, Institute of Human  
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University of California, Berkeley  
233 University Hall  
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Child and Adolescent Psychiatry  
University of Pittsburgh  
311 Bellefield Towers  
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3811 Ohara Street  
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William E. Pelham, Jr., Ph.D., ABPP  
Distinguished Professor of Psychology  
and Psychiatry  
Director, Center for Children and  
Families  
Chair, Department of Psychology  
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Florida International University  
1200 SW 8th Street  
Miami, FL 33199  
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**CURRICULUM VITAE  
OF  
ELIZA L. NELSON  
DEPARTMENT OF PSYCHOLOGY  
FLORIDA INTERNATIONAL UNIVERSITY  
LEGAL NAME: ELIZA L. ECCLES**

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**EDUCATION**

Ph.D.	University of Massachusetts Amherst, Neuroscience and Behavior	9/2007 – 8/2010
M.S.	University of Massachusetts Amherst, Neuroscience and Behavior	8/2004 – 8/2007
B.S.	Baldwin-Wallace College, Psychology and Communication Disorders (Now Baldwin Wallace University)	8/2000 – 5/2004

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**FULL-TIME ACADEMIC EXPERIENCE**

Florida International University, Associate Professor Department of Psychology, Developmental Science/Cognitive Neuroscience	8/2019 – Present
Florida International University, Assistant Professor Department of Psychology, Developmental Science/Cognitive Neuroscience	8/2012 – 8/2019
University of North Carolina Chapel Hill, NIH/NICHD Postdoctoral Fellow Center for Developmental Science	8/2010 – 8/2012

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**PART-TIME ACADEMIC EXPERIENCE**

University of North Carolina at Greensboro, Postdoctoral Associate Department of Psychology, Infant Development Center, PI: Dr. George Michel	8/2010 – 8/2012
Wake Forest University, Postdoctoral Associate Wake Forest University Primate Center, PI: Dr. Allyson Bennett	9/2010 – 5/2011
University of Massachusetts Amherst, Graduate Research Assistant Department of Psychology, UMass Child Study Center, PI: Dr. Neil Berthier	8/2004 – 8/2010
University of Massachusetts Amherst, Lab Manager Department of Psychology, UMass Primate Lab, PI: Dr. Melinda Novak	6/2008 – 8/2010
Monkeyland Primate Sanctuary, Research Volunteer Plettenberg Bay, South Africa	5/2006 – 7/2006; 4/2007 – 6/2007
University of Massachusetts Amherst, Graduate Research Assistant Department of Psychology, UMass Primate Lab, PI: Dr. Melinda Novak	8/2004 – 5/2008
Emory University, Research Intern Yerkes National Primate Research Center, PI: Dr. William Hopkins	6/2003 – 8/2003

## NON-ACADEMIC EXPERIENCE

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N/A

## EMPLOYMENT RECORD AT FIU

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Associate Professor in Psychology (Developmental Science/Cognitive Neuroscience) 8/2019 – Present

Assistant Professor in Psychology (Developmental Science/Cognitive Neuroscience) 8/2012 – 8/2019

## PUBLICATIONS IN DISCIPLINE (31)

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Key: \*Student I advised or am advising; #Publication prepared at Florida International University;  
†Original work conducted and publication prepared at Florida International University.

### Books

N/A

### Peer-Reviewed Articles (27)

#### **Summary Refereed Articles:**

27 peer-reviewed journal articles (14 first author; 9 student first author)

Journal Impact Data from 2017 edition of the Journal Citation Reports

27. †**Nelson, E.L.**, & \*Gonzalez, S.L. (2020). Measuring infant handedness reliably from reaching: A systematic review. *Laterality*. Advance online publication. <https://doi.org/10.1080/1357650X.2020.1726367>.

**Impact Factor:** 1.388

**5-Year Impact Factor:** 1.633

**Rank:** 65/85 Psychology – Experimental; 61/135 Psychology – Multidisciplinary

26. #\*Gonzalez, S.L., Campbell, J.M., Marcinowski, E.C., Michel, G.F., Coxe, S., & **Nelson, E.L.** (2020). Preschool language ability is predicted by toddler hand preference trajectories. *Developmental Psychology*, 56(4), 699–709. <https://doi.org/10.1037/dev0000900>.

**Impact Factor:** 2.934

**5-Year Impact Factor:** 4.525

**Rank:** 18/73 Psychology – Developmental

25. †\*Gonzalez, S.L., \*Alvarez, V. & **Nelson, E.L.** (2019). Do gross and fine motor skills differentially contribute to language outcomes: A systematic review. *Frontiers in Psychology*, 10: 2670.

<https://doi.org/10.3389/fpsyg.2019.02670>.

**Impact Factor:** 2.089

**5-Year Impact Factor:** 2.749

**Rank:** 39/135 Psychology – Multidisciplinary

24. †\*Gonzalez, S.L., & **Nelson, E.L.** (12 May 2019). Factor Analysis of the Home Handedness Questionnaire: Unimanual and role differentiated bimanual manipulation as separate dimensions of handedness. *Applied Neuropsychology: Adult*. <https://doi.org/10.1080/23279095.2019.1611578>.

**Impact Factor:** 1.558

**5-Year Impact Factor:** 1.306

**Rank:** 56/78 Psychology; 161/197 Clinical Neurology

23. †**Nelson, E.L.**, \*Gonzalez, S.L., El-Asmar, J.M., Ziade, M.F., & Abu-Rustum, R.S. (2019). The Home Handedness Questionnaire: Pilot data from preschoolers. *Laterality*, 24(4), 482-503. <https://doi.org/10.1080/1357650X.2018.1543313>.  
**Impact Factor:** 1.388  
**5-Year Impact Factor:** 1.633  
**Rank:** 65/85 Psychology – Experimental; 61/135 Psychology – Multidisciplinary
22. #Marcinowski, E.C., **Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2019). The development of object construction from infancy through toddlerhood. *Infancy*, 24(3), 368-391. <https://doi.org/10.1111/infa.12284>.  
**Impact Factor:** 1.873  
**5-Year Impact Factor:** 2.724  
**Rank:** 35 of 73 Psychology – Developmental
21. †\*Gonzalez, S.L., & **Nelson, E.L.** (2018). Measuring Spanish comprehension in infants from mixed Hispanic communities using the IDHC: A preliminary study on 16-month-olds. *Behavioral Sciences*, 8(12), 117. <https://doi.org/10.3390/bs8120117>.  
**Impact Factor:** NA  
**5-Year Impact Factor:** NA  
**Rank:** NA
20. †\*Boeving, E.R., & **Nelson, E.L.** (2018). Social risk dissociates social network structure across lateralized behaviors in spider monkeys. *Symmetry*, 10(9). <https://doi.org/10.3390/sym10090390>.  
**Impact Factor:** 1.256  
**5-Year Impact Factor:** 1.213  
**Rank:** 29/64 Multidisciplinary Sciences
- [Reprinted 2019 in L.J. Rogers (Ed.), *Left Versus Right Asymmetries of Brain and Behaviour* (pp. 11-19). Basel, Switzerland: MDPI Books. <https://doi.org/10.3390/books978-3-03921-693-2>.]
19. #**Nelson, E.L.**, Berthier, N.E., & Konidaris, G.D. (2018). Handedness and reach-to-place kinematics in adults: Left-handers are not reversed right-handers. *Journal of Motor Behavior*, 50(4), 381-391. <https://doi.org/10.1080/0022895.2017.1363698>.  
**Impact Factor:** 1.513  
**5-Year Impact Factor:** 1.665  
**Rank:** 229/261 Neurosciences; 57/78 Psychology; 58/85 Psychology – Experimental; 55/81 Sport Sciences
18. †**Nelson, E.L.**, & \*Kendall, G.A. (2018). Goal-directed tail use in Colombian spider monkeys (*Ateles fusciceps rufiventris*) is highly lateralized. *Journal of Comparative Psychology*, 132(1), 40-47. <https://doi.org/10.1037/com0000094>.  
**Impact Factor:** 1.1771  
**5-Year Impact Factor:** 2.220  
**Rank:** 40/51 Behavioral Sciences; 51/78 Psychology; 48/135 Psychology – Multidisciplinary; 41/166 Zoology
17. #**Nelson, E.L.**, \*Gonzalez, S.L., Coxé, S., Campbell, J.M., Marcinowski, E.C., & Michel, G.F. (2017). Toddler hand preference trajectories predict 3-year language outcome. *Developmental Psychobiology*, 59(7), 876-887. <https://doi.org/10.1002/dev.21560>.  
**Impact Factor:** 2.494  
**5-Year Impact Factor:** 2.793  
**Rank:** 20/42 Developmental Biology; 31/78 Psychology
16. †\*Boeving, E.R., \*Belnap, S.C., & **Nelson, E.L.** (2017). Embraces are lateralized in spider monkeys (*Ateles fusciceps rufiventris*). *American Journal of Primatology*, 79:e22654. <https://doi.org/10.1002/ajp.22654>.  
**Impact Factor:** 2.288  
**5-Year Impact Factor:** 2.466  
**Rank:** 25/166 Zoology

15. #Michel, G.F., Campbell, J.M., Marcinowski, E.C., **Nelson, E.L.**, & Babik, I. (2016). Infant hand preference and the development of cognitive abilities. *Frontiers in Psychology*, 7:410. <https://doi.org/10.3389/fpsyg.2016.00410>.  
**Impact Factor:** 2.089  
**5-Year Impact Factor:** 2.749  
**Rank:** 39/135 Psychology – Multidisciplinary
- [Reprinted 2017 in P. Hauf & K. Libertus (Eds.), *Motor Skills and Their Foundational Role for Perceptual, Social, and Cognitive Development* (pp. 10-15). Lausanne: Frontiers Media. <https://doi.org/10.3389/978-2-88945-159-3>.] **\*\*Research Topic Top 10 Finalist for Frontiers Spotlight Award\*\***
14. †\*Gonzalez, S.L., Reeb-Sutherland, B.C., & **Nelson, E.L.** (2016). Quantifying motor experience in the infant brain: EEG power, coherence, and mu desynchronization. *Frontiers in Psychology*, 7:216. <https://doi.org/10.3389/fpsyg.2016.00216>.  
**Impact Factor:** 2.089  
**5-Year Impact Factor:** 2.749  
**Rank:** 39/135 Psychology – Multidisciplinary
- [Reprinted 2017 in P. Hauf & K. Libertus (Eds.), *Motor Skills and Their Foundational Role for Perceptual, Social, and Cognitive Development* (pp. 278-283). Lausanne: Frontiers Media. <https://doi.org/10.3389/978-2-88945-159-3>.] **\*\*Research Topic Top 10 Finalist for Frontiers Spotlight Award\*\***
13. †**Nelson, E.L.**, & \*Boeving, E.R. (2015). Precise digit use increases the expression of handedness in Colombian spider monkeys (*Ateles fusciceps rufiventris*). *American Journal of Primatology*, 77, 1253-1262. <https://doi.org/10.1002/ajp.22478>.  
**Impact Factor:** 2.288  
**5-Year Impact Factor:** 2.466  
**Rank:** 25/166 Zoology
12. †\*Gonzalez, S.L., & **Nelson, E.L.** (2015). Addressing the gap: A blueprint for studying bimanual hand preference in infants. *Frontiers in Psychology*, 6:560. <https://doi.org/10.3389/fpsyg.2015.00560>.  
**Impact Factor:** 2.089  
**5-Year Impact Factor:** 2.749  
**Rank:** 39/135 Psychology – Multidisciplinary
11. \*\*Boeving, E.R., Lacreuse, A., Hopkins, W.D., Phillips, K.A., Novak, M.A., & **Nelson, E.L.** (2015). Handedness influences intermanual transfer in chimpanzees (*Pan troglodytes*) but not rhesus monkeys (*Macaca mulatta*). *Experimental Brain Research*, 233, 829-837. <https://doi.org/10.1007/s00221-014-4158-8>.  
**Impact Factor:** 1.806  
**5-Year Impact Factor:** 2.100  
**Rank:** 211/261 Neurosciences
10. †**Nelson, E.L.**, \*Figueroa, A., \*Albright, S.N., & \*Gonzalez, M.F. (2015). Evaluating handedness measures in spider monkeys. *Animal Cognition*, 18, 345-353. <https://doi.org/10.1007/s10071-014-0805-5>.  
**Impact Factor:** 2.805  
**5-Year Impact Factor:** 2.612  
**Rank:** 20/51 Behavioral Sciences; 13/166 Zoology
9. #**Nelson, E.L.**, Konidaris, G.D., & Berthier, N.E. (2014). Hand preference status and reach kinematics in infants. *Infant Behavior and Development*, 37, 615-623. <https://doi.org/10.1016/j.infbeh.2014.08.013>.  
**Impact Factor:** 1.669  
**5-Year Impact Factor:** 1.921  
**Rank:** 48/73 Psychology – Developmental

8. **#Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2014). Early handedness in infancy predicts language ability in toddlers. *Developmental Psychology*, 50, 809-814. <https://doi.org/10.1037/a0033803>.

**Impact Factor:** 2.934

**5-Year Impact Factor:** 4.525

**Rank:** 18/73 Psychology – Developmental

7. **#Michel, G.F.**, Babik, I., **Nelson, E.L.**, Campbell, J.M., & Marcinowski, E.C. (2013). How the development of handedness could contribute to the development of language. *Developmental Psychobiology*, 55, 608-620. <https://doi.org/10.1002/dev.21121>.

**Impact Factor:** 2.494

**5-Year Impact Factor:** 2.793

**Rank:** 20/42 Developmental Biology; 31/78 Psychology

6. **#Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2013). Unimanual to bimanual: Tracking the development of handedness from 6 to 24 months. *Infant Behavior and Development*, 36, 181-188.

<https://doi.org/10.1016/j.infbeh.2013.01.009>.

**Impact Factor:** 1.669

**5-Year Impact Factor:** 1.921

**Rank:** 48/73 Psychology – Developmental

**\*\*Elsevier Highly Cited Research Award December 2016\*\***

5. **Nelson, E.L.**, Konidaris, G.D., Berthier, N.E., \*Braun, M.C., Novak, M.F.S.X., Suomi, S.J., & Novak, M.A. (2012). Kinematics of reaching and implications for handedness in rhesus monkey infants. *Developmental Psychobiology*, 54, 460-467. <https://doi.org/10.1002/dev20604>.

**Impact Factor:** 2.494

**5-Year Impact Factor:** 2.793

**Rank:** 20/42 Developmental Biology; 31/78 Psychology

4. **Nelson, E.L.**, Berthier, N.E., Metevier, C.M., & Novak, M.A. (2011). Evidence for motor planning in monkeys: Rhesus macaques select efficient grips when transporting spoons. *Developmental Science*, 14, 822-831. <https://doi.org/10.1111/j.1467-7687.2010.01030.x>.

**Impact Factor:** 4.078

**5-Year Impact Factor:** 4.950

**Rank:** 8/73 Psychology – Developmental; 4/85 Psychology – Experimental

3. **Nelson, E.L.**, \*Emery, M.S., \*Babcock, S.M., Novak, M.F.S.X., Suomi, S.J., & Novak, M.A. (2011). Head orientation and handedness trajectory in rhesus monkey infants (*Macaca mulatta*). *Developmental Psychobiology*, 53, 246-255. <https://doi.org/10.1002/dev.20517>.

**Impact Factor:** 2.494

**5-Year Impact Factor:** 2.793

**Rank:** 20/42 Developmental Biology; 31/78 Psychology

**\*\*Selected as the 2011 Hennessy-Smotherman-Wiley Best Student Paper\*\***

2. **Nelson, E.L.**, \*O'Karma, J.M., Ruperti, F.S., & Novak, M.A. (2009). Laterality in semi-free-ranging black and white ruffed lemurs (*Varecia variegata variegata*): Head-tilt correlates with hand use during feeding. *American Journal of Primatology*, 71, 1032-1040. <https://doi.org/10.1002/ajp.20746>.

**Impact Factor:** 2.288

**5-Year Impact Factor:** 2.466

**Rank:** 25/166 Zoology

1. Hopkins, W., Cantalupo, C., Freeman, H., Russell, J., Kachin, M., & **Nelson, E.** (2005). Chimpanzees are right-handed when recording bouts of hand use. *Laterality*, 10, 121-130.

<https://doi.org/10.1080/13576500342000347>.

**Impact Factor:** 1.388

**5-Year Impact Factor:** 1.633

**Rank:** 65/85 Psychology – Experimental; 61/135 Psychology – Multidisciplinary

### **Chapters in Books (3)**

3. #Michel, G.F., Babik, I., **Nelson, E.L.**, Campbell, J.M., & Marcinowski, E.C. (2018). Evolution and development of handedness: An evo-devo approach. In: G.S. Forrester, W.D. Hopkins, K. Hurdy, & A. Lindell, Eds., *Progress in Brain Research (Vol. 238)*, Cerebral Lateralization and Cognition: Evolutionary and Developmental Investigations of Behavioral Biases (pp. 347-376). Cambridge, MA: Elsevier.  
<https://doi.org/10.1016/bs.pbr.2018.06.007>.

**Impact Factor:** 3.174

**5-Year Impact Factor:** 3.024

**Rank:** 118/261 Neurosciences

2. #Michel, G.F., Marcinowski, E.C., Babik, I., Campbell, J.M., & **Nelson, E.L.** (2015). An interdisciplinary biopsychosocial perspective on psychological development. In S.D. Calkins (Ed.), *Handbook of Infant Development: Biopsychosocial Perspectives* (pp. 427-446). Guilford Publications.

**Impact Factor:** NA

**5-Year Impact Factor:** NA

**Rank:** NA

1. #Michel, G.F., **Nelson, E.L.**, Babik, I., Campbell, J.M., & Marcinowski, E.C. (2013). Multiple trajectories in the developmental psychobiology of human handedness. In R.M. Lerner & J.B. Benson (Eds.), *Embodiment and Epigenesis: Theoretical and Methodological Issues in Understanding the Role of Biology within the Relational Developmental System Part B: Ontogenetic Dimensions* (pp. 227-260). Elsevier: Academic Press.  
<https://doi.org/10.1016/B978-0-12-397946-9.00009-9>.

**Impact Factor:** 1.273

**5-Year Impact Factor:** 1.673

**Rank:** 60/73 Psychology – Developmental

### **Published Instruments (1)**

1. **Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2013). Role-Differentiated Bimanual Manipulation (RDBM) Handedness Assessment. PsycTESTS Dataset. <https://doi.org/10.1037/t22653-000>.

### **Government Reports or Monographs**

N/A

### **Book Reviews**

N/A

### **Posters, Talks, and Conference Proceedings (85)**

Key: \*Student I advised or am advising

85. **Nelson, E.L.** (2021, July). Early handedness consistency predicts later language outcomes. **Talk** to be given at the 15th Congress of the International Association for the Study of Child Language, Philadelphia, PA, USA [Rescheduled from July 2020 due to Covid-19].

84. \*Boevig, E.R. & **Nelson, E.L.** (2020, September). Skilled problem solvers make different social investments. **Talk** to be given at the 43rd meeting of the American Society of Primatologists, Denver, CO, USA [Rescheduled from May 2020 due to Covid-19].

83. Marcinowski, E.C., **Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2020, July). Infant and toddler hand preferences predict differential stacking ability in toddlerhood. **Poster** to be presented at the XXII Biennial International Conference on Infant Studies, Glasgow, Scotland [Virtual meeting due to Covid-19].



82. \*Gomez-Guevara, M., \*Gonzalez, S.L., & **Nelson, E.L.** (2020, March). Infant motor cascades in the development of role-differentiated bimanual manipulation. **Talk** accepted for the MARC U\*STAR and QBIC Mini-Symposium, Miami, FL, USA [Cancelled due to Covid-19].
81. \*Boeving, E.R. & **Nelson, E.L.** (2020, January). Assessing cognition in spider monkeys (*Ateles fusciceps rufiventris*) using the Primate Cognition Test Battery (PCTB). **Talk** given at the South Florida Primatology annual meeting, Fort Pierce, FL, USA.
80. \*Gonzalez, S.L., Campbell, J.M., Marcinowski, E.C., Michel, G.F., Coxe, S., & **Nelson, E.L.** (2019, October). Toddler hand preference trajectories predict 5 year language outcome. **Poster** presented at the 52<sup>nd</sup> annual meeting of the International Society on Developmental Psychobiology, Chicago, IL, USA. **Proceedings** in *Developmental Psychobiology*, 61 (S1), S28.
79. \*Boeving, E.R., & **Nelson, E.L.** (2019, August). Embraces have predictive power in the multiplex network for indexing social bonds in captive Colombian spider monkeys (*Ateles fusciceps rufiventris*). **Talk** presented at the 42<sup>nd</sup> meeting of the American Society of Primatologists, Madison, Wisconsin, USA. **Proceedings** in *American Journal of Primatology*, 82 (S1), 29-30.
78. \*Taylor, M. A., \*Gonzalez, S. L., Poznanski, B., Hart, K.C., & **Nelson, E.L.** (2019, August). Impact of fine motor skills on children's school readiness following a summer school program. **Poster** presented at the American Psychological Association annual convention, Chicago, IL, USA.
77. \*Alvarez, V., \*Gonzalez, S.L., & **Nelson, E.L.** (2019, April). Differences in predictive ability of gross and fine motor skills towards language outcomes: A systematic review. **Poster** presented at the 2019 Conference for Undergraduate Research at FIU, Miami, FL, USA.
76. \*Boeving, E.R., & **Nelson, E.L.** (2019, April). Predicting multiplex networks from embraces in spider monkeys: computational tools for quantifying social bonds. **Poster** presented at the 2019 Graduate Student Appreciation Week Scholarly Program Poster Presentation Program, Miami, FL, USA.
75. \*Gonzalez, S.L., Reeb-Sutherland, B., & **Nelson, E.L.** (2019, March). Fine motor skill predicts growth in expressive vocabulary from 12 to 24 months. **Poster** presented at the Society for Research in Child Development biennial meeting, Baltimore, MD, USA.
74. \*del Valle, A., \*Pavon, N., \*Taylor, M.A., & **Nelson, E.L.** (2019, March). Defining kinematic signatures for measurements of goal-directed actions in *Ateles fusciceps*. **Poster** presented at the South Florida Primatology annual meeting, Miami, FL, USA.
73. \*Boeving, E.R., & **Nelson, E.L.** (2019, March). Leveraging social network analysis to understand social bonds in captive primates: Development, interactions, and implications for management. **Talk** presented at the South Florida Primatology annual meeting, Miami, FL, USA.
72. \*Gonzalez, S.L., Reeb-Sutherland, B. & **Nelson, E.L.** (2019, February). The role of fine motor skills on expressive language growth from 12 to 24 months. **Talk** presented at the McKnight Mid-Year Research and Writing Conference, Tampa, FL, USA.
71. \*Boeving, E. R., & **Nelson, E.L.** (2018, November). Social risk and routine in context: Relating network structure to principles of brain organization in spider monkeys (*Ateles fusciceps rufiventris*). **Poster** presented at the Society for Social Neuroscience (S4SN) Annual Meeting, San Diego, CA, USA.
70. \*Boeving, E. R., & **Nelson E.L.** (2018, November). Social network dynamics across two affiliative, but risky, interactions in Colombian spider monkeys (*Ateles fusciceps rufiventris*). **Poster** presented at the 51<sup>st</sup> meeting of the International Society on Developmental Psychobiology, San Diego, CA, USA. **Proceedings** in *Developmental Psychobiology*, 60 (S2), 10.

69. \*Taylor, M.A. & **Nelson, E.L.** (2018, November). Early grasping skill predicts later growth in bimanual skill in infants. **Poster** presented at the 51<sup>st</sup> meeting of the International Society on Developmental Psychobiology, San Diego, CA, USA. **Proceedings** in *Developmental Psychobiology*, 60 (S2), 63.
68. \*Gonzalez, S.L. Reeb-Sutherland, B., & **Nelson, E.L.** (2018, November). Gross and fine motor skills differentially predict expressive and receptive language outcomes. **Poster** presented at the 51<sup>st</sup> meeting of the International Society on Developmental Psychobiology, San Diego, CA, USA. **Proceedings** in *Developmental Psychobiology*, 60 (S2), 25.
67. \*Mora Aballe, V., \*Gonzalez, S.L., & **Nelson, E.L.** (2018, October). Reliability and validity of the Home Handedness Questionnaire. **Poster** presented at the 2018 FIU McNair Scholars Research Annual Conference, Miami, FL, USA.
66. \*Barberena, S., \*Gonzalez, S.L., Reeb-Sutherland, B., & **Nelson, E.L.** (2018, August). The relation between gross and fine motor skills and language outcomes. **Talk** presented at the 2018 Summer Research Internship Mini-Symposium, Miami, FL, USA.
65. \*Gonzalez, S.L., Clifford, C., Reeb-Sutherland, B.C., & **Nelson, E.L.** (2018, July). 'Sticky mittens' reaching experience: Linking behavioral changes to potential neural correlates. **Poster** presented at the XXI Biennial International Conference on Infant Studies, Philadelphia, PA, USA.
64. \*Taylor, M.A., Diaz, E.M., & **Nelson, E.L.** (2018, April). Early lateralized interactions between infant and mother Colombian spider monkeys (*Ateles fusciceps rufiventris*). **Talk** presented at the 25<sup>th</sup> International Conference on Comparative Cognition, Melbourne, FL, USA.
63. \*Mora Aballe, V.I., \*Gonzalez, S.L., & **Nelson, E.L.** (2018, March). Measuring handedness in adults: A comparison of two questionnaires. **Poster** presented at the 2018 Conference for Undergraduate Research at FIU, Miami, FL, USA.
62. \*Alvarez, V., \*Gonzalez, S.L., & **Nelson, E.L.** (2018, March). Grasping ability at 6 months predicts language development at 24 and 36 months. **Poster** presented at the 2018 Conference for Undergraduate Research at FIU, Miami, FL, USA.
61. \*Solis, J., \*Gonzalez, S.L., & **Nelson, E.L.** (2018, March). Infant sitting ability at 6 months predicts language comprehension and production at 36 months. **Poster** presented at the 2018 Conference for Undergraduate Research at FIU, Miami, FL, USA.
60. \*Ali, Y., \*Gonzalez, S.L., Clifford, C., Reeb-Sutherland, B., & **Nelson, E.L.** (2017, December). Scaffolded reaching experience is related to decreased EEG coherence in infants. **Poster** presented at the 26th annual Neuroscience Research Day at UM Miller School of Medicine, Miami, FL, USA.
59. \*Pavon, N., \*Taylor, M.A., \*Fajardo, M.E., Coxe, S., Michel, G.F., & **Nelson, E.L.** (2017, November). Developmental trajectories for fully role-differentiated bimanual manipulation in infants. **Poster** presented at the 50<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C., USA. **Proceedings** in *Developmental Psychobiology*, 60 (S1), S51.
58. \*Gonzalez, S.L., \*Fajardo, M.E., Hart, K.C., & **Nelson, E.L.** (2017, November). Improved fine motor skills and school readiness in pre-kindergarteners after summer treatment program. **Poster** presented at the 50<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C., USA. **Proceedings** in *Developmental Psychobiology*, 60 (S1), S28.
57. \*Taylor, M.A., \*Seidler, A.T., Simpson, E.A., Ferrari, P.F., Sclafani, V., Suomi, S.J., Konidaris, G.D., & **Nelson, E.L.** (2017, November). Patterns of reaching in infant rhesus monkeys (*Macaca mulatta*). **Poster** presented at the 50<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C., USA. **Proceedings** in *Developmental Psychobiology*, 60 (S1), S70.

56. \*Gonzalez, S.L., \*Fajardo, M.E., Hart, K.C., & **Nelson, E.L.** (2017, October). Summer treatment program improves fine motor skills and school readiness in pre-kindergarteners. **Talk** presented at the 2017 MARC U\*STAR & MBRS RISE Student Biomedical Mini-Symposium, Miami, FL, USA.
55. Abu-Rustum, R.S., Ziade, M.F., El Asmar, J., & **Nelson, E.L.** (2017, September). Fetal choroid plexus at 11-14 weeks: A predictor of handedness? **Poster** presented at the 27<sup>th</sup> World Congress on Ultrasound in Obstetrics and Gynecology (ISUOG), Vienna, Austria. **Proceedings** in *Ultrasound in Obstetrics & Gynecology*, 50(Suppl. 1), 259.
54. \*Kendall, G.A., & **Nelson, E.L.** (2017, April). Goal-directed tail use in Colombian spider monkeys is highly lateralized. **Poster** presented at the 24<sup>th</sup> Annual International Conference on Comparative Cognition, Melbourne, FL, USA.
53. \*Seidler, A.T., \*Taylor, M.A., Simpson, E.A., Suomi, S.J., Konidaris, G.D., & **Nelson, E.L.** (2017, March). Reaching kinematics in infant rhesus monkeys (*Macaca mulatta*). **Poster** presented at the 2017 Conference for Undergraduate Research at FIU, Miami, FL, USA.
52. \*Torres, E., \*Gonzalez, S.L., & **Nelson, E.L.** (2017, March). A comparison of Hispanic infant populations on vocabulary size. **Poster** presented at the 2017 Conference for Undergraduate Research at FIU, Miami, FL, USA.
51. \*Gonzalez, S.L., & **Nelson, E.L.** (2017, March). Comparing Hispanic infant populations on comprehension of IDHC:PG items. **Talk** presented at the 2017 Graduate Student Appreciation Week Scholarly Forum, Miami, FL, USA.
50. Abu-Rustum, R.S., Ziade, M.F., El Asmar, J., & **Nelson, E.L.** (2017, March). Fetal choroid plexus at 11-14 weeks: A predictor of handedness? **Talk** presented at the American Institute of Ultrasound in Medicine (AIUM) Annual Convention, Lake Buena Vista, FL, USA. **Proceedings** in *Journal of Ultrasound in Medicine*, 36(S1), S45.
49. \*Taylor, M.A., & **Nelson, E.L.** (2017, February). Laterality in Colombian spider monkey infants (*Ateles fusciceps rufiventris*). **Poster** presented at the 3<sup>rd</sup> annual South Florida Primatology meeting, Loxhatchee, FL, USA.
48. \*Kendall, G.A., & **Nelson, E.L.** (2017, February). Problem solving in Colombian spider monkeys. **Poster** presented at the 3<sup>rd</sup> annual South Florida Primatology meeting, Loxhatchee, FL, USA.
47. \*Gonzalez, S.L., **Nelson, E.L.**, Latta, J., Campbell, J.M., Marcinowski, E.C., & Michel, G.F. (2016, November). Consistent preschool hand preference predicts language skills at 5 years of age. **Poster** presented at the 49<sup>th</sup> meeting of the International Society on Developmental Psychobiology, San Diego, California, USA. **Proceedings** in *Developmental Psychobiology*, 58 (S1), S18.
46. \*Fajardo, M.E., \*Gonzalez, S.L., Hart, K.C., & Nelson, E.L. (2016, October). Summer treatment program for prekindergarteners improves fine motor skills. **Poster** presented at the 2016 FIU McNair Scholars Research Annual Conference, Miami, FL, USA.
45. \*Boeving, E.R., & **Nelson, E.L.** (2016, August). Dyadic socio-communicative behavior is lateralized in captive Colombian spider monkeys (*Ateles fusciceps rufiventris*). **Talk** presented at the joint American Society of Primatology/International Primatological Society meeting in Chicago, IL, USA. **Proceedings** published online (Abstract #6733).
44. \*Boeving, E.R., \*Kendall, G.A., & **Nelson, E.L.** (2016, August). Tails in context: Implications for laterality in the Colombian spider monkey (*Ateles fusciceps rufiventris*). **Poster** presented at the joint American Society of Primatology/International Primatological Society meeting in Chicago, IL, USA. **Proceedings** published online (Abstract #6735).

43. **Nelson, E.L.**, & \*Neuman, S. (2016, May). Development of reaching and grasping in infant and adult Colombian spider monkeys. **Poster** presented in the featured symposium “*From robots to monkeys to human infants: Integrating different disciplines to understand early motor development*” at the XX Biennial International Conference on Infant Studies, New Orleans, LA, USA.
42. \*Gonzalez, S. L., **Nelson, E.L.**, Campbell, J.M., Marcinowski, E.C., & Michel, G.F. (2016, May). Consistency in handedness over 6 to 60 months is linked to school readiness. **Poster** presented at the XX Biennial International Conference on Infant Studies, New Orleans, LA, USA.
41. Hartstein, L., Agrawal, V., **Nelson, E.L.**, & Berthier, N.E. (2016, May). Hand preference is related to hand skill at 2 years. **Poster** presented at the XX Biennial International Conference on Infant Studies, New Orleans, LA, USA.
40. Syed, G., Marcinowski, E.C., Dusing, S.C., Michel, G.F., & **Nelson, E.L.** (2016, April). The relation between infant construction strategy and language development in toddlers. **Poster** presented at the VCU Poster Symposium for Undergraduate Research and Creativity, Richmond, VA, USA.
39. \*Boeving, E.R., \*Kendall, G.A., & **Nelson, E.L.** (2016, April). Socio-behavioral asymmetries in Colombian spider monkeys (*Ateles fusciceps rufiventris*). **Poster** presented at the 23<sup>rd</sup> Annual International Conference on Comparative Cognition, Melbourne, FL, USA. **Proceedings** published online (Abstract #P35).
38. \*Betancourt, V., \*Gonzalez, S.L., & **Nelson, E.L.** (2016, March). Creation of a Spanish language measure inclusive of a diverse Hispanic population through renorming of the IDHC:PG. **Poster** presented at the Conference for Undergraduate Research at FIU, Miami, FL, USA.
37. \*Gonzalez, S. L., & **Nelson, E.L.** (2015, October). Renorming the IDHC:PG for diverse Hispanic populations. **Poster** presented at the Society for the Study of Human Development 9<sup>th</sup> Biennial Scientific Meeting, Austin, TX, USA.
36. \*Gonzalez, S.L., & Nelson E.L. (2015, October). Administration of the IDHC:PG in Diverse Hispanic Populations. **Poster** presented at the MARC U\*STAR & MBRS RISE Student Biomedical Mini-Symposium, Miami, FL, USA.
35. \*Cavero, R., & **Nelson, E.L.** (2015, August). The role of sticky mittens on neural development. **Talk** presented at the FIU Summer Research Internship (SRI) Mini-Symposium, Miami, FL, USA.
34. \*Gonzalez, S.L., & **Nelson, E.L.** (2015, May). Improving comprehension measures: Adaptation of the Mexican-Spanish CCT for use in diverse Hispanic populations. **Talk** presented at the 2<sup>nd</sup> Annual South Florida Child Psychology Research Conference, Miami, FL, USA.
33. \*Boeving, E.R., & **Nelson, E.L.** (2015, April). Task complexity elicits stronger lateralization in the spider monkey (*Ateles fusciceps rufiventris*). **Talk** presented at the 22<sup>nd</sup> Annual International Conference on Comparative Cognition, Melbourne, FL, USA. **Proceedings** published online (Abstract #55).
32. \*Boeving, E.R., & **Nelson, E.L.** (2015, February). Social laterality in captive spider monkeys (*Ateles fusciceps rufiventris*). **Talk** presented at the South Florida Primatology Group meeting, Boca Raton, FL, USA.
31. \*Gonzalez, S.L., **Nelson, E.L.**, Campbell, J.M., Marcinowski, E.C., Coxe, S., & Michel, G.F. (2014, November). 18-24 months handedness predicts 36 months expressive language skills. **Poster** presented at the 47<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C., USA. **Proceedings** in *Developmental Psychobiology*, 57 (S1), S16.
30. Marcinowski, E.C., \*Soula, M., **Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2014, November). Does direction or consistency of hand preference predict toddler stacking ability? **Poster** presented at the 47<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C., USA. **Proceedings** in *Developmental Psychobiology*, 57, (S1), S22.

29. \*Soula, M., \*Albright, S.N., & **Nelson, E.L.** (2014, October). How laterality influences problem-solving in monkeys and humans. **Poster** presented at the FIU McNair Scholars Research Conference, Miami, FL, USA.
28. \*Soula, M., & **Nelson, E.L.** (Faculty Mentor). (2014, October). The effects of early object manipulation using 'sticky mittens' on neurological development. **Talk** presented at the MARC U\*STAR & MBRS RISE Student Biomedical Research Mini-Symposium. Miami, FL, USA.
27. \*Boeving, E.R., Lacreuse, A., Hopkins, W.D., Phillips, K.A., Novak, M.A., & **Nelson, E.L.** (2014, September). Handedness influences intermanual transfer in chimpanzees (*Pan troglodytes*) but not rhesus monkeys (*Macaca mulatta*). **Poster** presented at the 37<sup>th</sup> Annual Meeting of the American Society of Primatologists, Decatur, GA, USA. **Proceedings** in *American Journal of Primatology*, 76 (S1), 51.
26. **Nelson, E.L.** (2014, July). The development of handedness: Taking stock and looking ahead. **Talk** presented at the XIX Biennial International Conference on Infant Studies, Berlin, Germany.
25. Marcinowski, E.C., **Nelson, E.L.**, & Michel, G.F. (2014, July). The development of construction from infancy through toddlerhood. **Poster** presented at the XIX Biennial International Conference on Infant Studies, Berlin, Germany.
24. **Nelson, E.L.**, Campbell, J.M., Marcinowski, E.C., & Michel, G.F. (2013, November). How consistency in handedness is related to language development. **Poster** presented at the 46<sup>th</sup> meeting of the International Society on Developmental Psychobiology, San Diego, CA, USA. **Proceedings** in *Developmental Psychobiology*, 55, 782.
23. \*Albright, S.N., \*Soula, M., & **Nelson, E.L.** (2013, November). How laterality influences problem-solving in monkeys and humans. **Poster** presented at the 46<sup>th</sup> meeting of the International Society on Developmental Psychobiology, San Diego, CA, USA. **Proceedings** in *Developmental Psychobiology*, 55, 766.
22. \*Gall, H., Campbell, J.M., Marcinowski, E.C., Michel, G.F., & **Nelson, E.L.** (2013). Hand preference is associated with language ability in toddlers. **Talk** presented at the FIU Summer Research Internship (SRI) Mini-Symposium, Miami, FL, USA.
21. \*Bagchi, J., \*Albright, S.N., Konidaris, G.D., & **Nelson, E.L.** (2013). Reaching kinematics in an infant spider monkey. **Talk** presented at the FIU Summer Research Internship (SRI) Mini-Symposium, Miami, FL, USA.
20. **Nelson, E.L.**, \*Figueroa, A., \*Gonzalez, M.F., \*Albright, S., & \*Gil, A. (2013, June). Lateralized coordinated tail-hand sequence in spider monkeys (*Ateles fusciceps rufiventris*). **Poster** presented at the 36<sup>th</sup> Annual Meeting of the American Society of Primatologists, San Juan, Puerto Rico, USA. **Proceedings** in *American Journal of Primatology*, 75 (S1), 57.
19. **Nelson, E.L.**, Campbell, J.M., & Michel, G.F. (2012, October). Stable handedness during infancy predicts advanced language skills at two years of age. **Poster** presented at the 45<sup>th</sup> meeting of the International Society on Developmental Psychobiology, New Orleans, LA, USA. **Proceedings** in *Developmental Psychobiology*, 54, 762.
18. **Nelson, E.L.**, & Michel, G.F. (2012, June). Does infant handedness predict toddler handedness? A longitudinal study comparing early reaching to later bimanual hand use. **Poster** presented at the XVIII Biennial International Conference on Infant Studies, Minneapolis, MN, USA.
17. **Nelson, E.L.**, & Michel, G.F. (2011, November). Hand use preference and the emergence of problem-solving ability: A longitudinal study from 6 to 24 months. **Poster** presented at the 44<sup>th</sup> meeting of the International Society on Developmental Psychobiology, Washington, D.C. USA. **Proceedings** in *Developmental Psychobiology*, 53, 760.

16. **Nelson, E.L.**, \*Braun, M.C., Berthier, N.E., Novak, M.F., Suomi, S.J., & Novak, M.A. (2010, November). Left hand specialization for reaching in 5-month-old rhesus monkeys: Evidence from 2-D motion analysis. **Poster** presented at the 43rd meeting of the International Society on Developmental Psychobiology, San Diego, CA USA. **Proceedings** in *Developmental Psychobiology*, 52, 711.
15. **Nelson, E.L.**, \*Braun, M.C., Berthier, N.E., Novak, M.F., Suomi, S.J., & Novak, M.A. (2010, September). Left hand specialization for reaching in 5-month-old rhesus monkeys: Evidence from 2-D motion analysis. **Poster** presented at the 13th Annual International Institute on Developmental Science, New York, NY USA.
14. **Nelson, E.L.**, \*Emery, M.S., \*Babcock, S.M., Suomi, S.J., Songrady, J., Ruggiero, A.M., Miller, M., Novak, M.F.S.X., & Novak, M.A. (2010, June). Head orientation and hand preference during the first month of life in rhesus monkeys (*Macaca mulatta*). **Poster** presented at the 33rd Annual Meeting of the American Society of Primatologists, Louisville, KY USA. **Proceedings** in *American Journal of Primatology*, 72 (S1), 53.
13. **Nelson, E.L.**, \*Babcock, S.M., Suomi, S.J., Songrady, J.C., Ruggiero, A.M., Miller, M., & Novak, M.A. (2010, March). Neonatal head orientation preference in rhesus macaques: Do infant monkeys resemble human infants? **Poster** presented at the XVII Biennial International Conference on Infant Studies, Baltimore, MD USA.
12. **Nelson, E.L.**, Metevier, C.M., & Novak, M.A. (2009, September). Individual differences in motor planning in rhesus monkeys (*Macaca mulatta*). **Talk** presented at the 32nd Annual Meeting of the American Society of Primatologists, San Diego, CA USA. **Proceedings** in *American Journal of Primatology*, 71 (S1), 38.
11. **Nelson, E.L.**, Berthier, N.E., \*Locantore, A.M., & Novak, M.A. (2009, September). The interaction between hand preference and hand performance: Data from rhesus monkeys and human infants. **Poster** presented at the 32nd Annual Meeting of the American Society of Primatologists, San Diego, CA USA. **Proceedings** in *American Journal of Primatology*, 71 (S1), 49.
10. **Nelson, E.L.**, Ruperti, F.S., \*O'Karma, J.M., & Novak, M.A. (2008, August). Head-tilt and unimanual hand use during feeding in *Varecia variegata variegata*. **Poster** presented at the XXII International Primatological Society Congress, Edinburgh, Scotland. **Proceedings** in *Primate Eye*, 96 (Sp CD-ROM iss - IPS 2008), Abstract #571.
9. **Nelson, E.L.**, Konidaris, G.D., & Berthier, N.E. (2008, March). Using real-time motion capture to measure handedness in infants. **Poster** presented at the XVI Biennial International Conference on Infant Studies, Vancouver, Canada.
8. Ruperti, F.S., **Nelson, E.L.**, & Novak, M.A. (2007, September). Bridging science and tourism - A preliminary study of the black and white ruffed lemur at Monkeyland Primate Sanctuary, South Africa. **Talk** presented at the 2nd Congress of the European Federation of Primatology, Prague, Czech Republic. **Proceedings** in *Folia Primatologica*, 79 (5), 378-379.
7. **Nelson, E.L.**, & Novak, M.A. (2007, June). When to use end-state-comfort: The effect of handle orientation on grip selection in rhesus monkeys (*Macaca mulatta*). **Talk** presented at the 31<sup>st</sup> Annual Meeting of the American Society of Primatologists, Winston-Salem, NC USA. **Proceedings** in *American Journal of Primatology*, 69 (S1), 131.
6. **Nelson, E.L.**, Ruperti, F., & Novak, M.A. (2007, June). Measuring lateral biases during feeding in semifree-ranging black and white ruffed lemurs (*Varecia variegata variegata*). **Poster** presented at the 31<sup>st</sup> Annual Meeting of the American Society of Primatologists, Winston-Salem, NC USA. **Proceedings** in *American Journal of Primatology*, 69 (S1), 66.
5. **Nelson, E.L.**, Ruperti, F., & Novak, M.A. (2007, May). Bridging science and tourism: A preliminary study of the black and white ruffed lemur at Monkeyland. **Talk** presented at the African Association of Zoos and Aquaria (PAAZAB) Annual Meeting, Plettenberg Bay, South Africa. **Proceedings** in 18<sup>th</sup> Annual Conference of PAAZAB (African Association of Zoos & Aquaria), 39-41.

4. **Nelson, E.L.**, & Berthier, N.E. (2007, March). Hand preference and hand performance in 11-month-old infants. **Poster** presented at the Society for Research in Child Development Biennial Meeting, Boston, MA USA.
3. **Nelson, E.L.**, & Novak, M.A (2006, August). Motor planning in rhesus macaques as measured by grip selection. **Talk** presented at the 30<sup>th</sup> Annual Meeting of the American Society of Primatologists, San Antonio, TX USA. **Proceedings** in *American Journal of Primatology*, 68 (S1), 66.
2. **Nelson, E.L.** (2006, March). Hand preference and performance in 11-month-old human infants. **Talk** presented at the Annual New England Mini-Conference on Infant Studies (NEMCIS), Amherst, MA USA.
1. **Nelson, E.L.**, Russell, J.L., & Hopkins, W.D. (2003, August). Gesture latency in chimpanzees (*Pan troglodytes*): Implications for left hemisphere hand and vocal lateralization. **Poster** presented at the Emory University Summer Undergraduate Research Experience (SURE) Symposium, Atlanta, GA USA.

## **INVITED RESEARCH SEMINARS (12)**

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12. **Nelson, E.L.** (2013, October). How experience shapes development: Handedness trajectories in primates. Psychology Brownbag Series, FIU, Miami, FL.
11. **Nelson, E.L.** (2012, April). Developmental trajectories for handedness in primates. Featured Psychology Research Day Speaker, Mount Olive College, Mt. Olive, NC.
10. **Nelson, E.L.** (2012, March). Developmental trajectories for handedness in primates. Developmental Psychology Brownbag Series, UNC Greensboro, Greensboro, NC.
9. **Nelson, E.L.** (2011, March). Rhesus monkey handedness: Developmental trajectories and implications for problem solving. Comparative Medicine Lecture Series, Wake Forest University Primate Center, Winston-Salem, NC.
8. **Nelson, E.L.** (2010, November). Rhesus monkey handedness: Developmental trajectories and implications for problem solving. Developmental Psychology Brownbag Series, University of North Carolina at Chapel Hill, Chapel Hill, NC.
7. **Nelson, E.L.** (2009, November). The development of laterality in infant monkeys. Neuroscience and Behavior Program Proseminar Series, University of Massachusetts Amherst, Amherst, MA.
6. **Nelson, E.L.** (2009, November). Side-by-side: Laterality in monkey and human infants. Developmental Psychology Lecture Series, University of Massachusetts Amherst, Amherst, MA.
5. **Nelson, E.L.** & Hamel, A.F. (2009, October). Working with monkeys. Psychology Residential Academic Program (RAP) Seminar, University of Massachusetts Amherst, Amherst, MA.
4. **Nelson, E.L.** (2008, November). A comparative approach to laterality: Lemurs, monkeys, and babies. Neuroscience and Behavior Program Proseminar Series, University of Massachusetts Amherst, Amherst, MA.
3. **Nelson, E.L.** & Hamel, A.F. (2008, October). Working with primates. Psychology Residential Academic Program (RAP) Seminar, University of Massachusetts Amherst, Amherst, MA.
2. **Nelson, E.L.** (2007, November). Lateralized lemurs bridge science and tourism at Monkeyland Primate Sanctuary, South Africa. Neuroscience and Behavior Program Proseminar Series, University of Massachusetts Amherst, Amherst, MA.
1. **Nelson, E.L.** (2007, February). Motor planning in rhesus macaques: How and why do monkeys differ? Developmental Psychology Lecture Series, University of Massachusetts Amherst, Amherst, MA.

## WORKS IN PROGRESS

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Key: \*Student I advised or am advising; #Publication prepared at Florida International University; †Original work conducted and publication prepared at Florida International University.

### Manuscripts Under Review or In Revision

3. †\*Boeving, E.R. & **Nelson, E.L.** (In Revision). Assessing physical and social cognition in spider monkeys (*Ateles fusciceps rufiventris*) using the Primate Cognition Test Battery.
2. †**Nelson, E.L.**, \*Taylor, M.A., & Coxe, S. (In Revision). Early object management skill predicts growth in later bimanual skill in infants.
1. †\*Boeving, E.R., Rodrigues, M.A., & **Nelson, E.L.** (In Revision). Network analysis as a tool to understand social development in spider monkeys. Contribution to Joint Issue of *Developmental Psychobiology* and *American Journal of Primatology*: Psychobiological Development in Primates.

### Manuscripts in Preparation

3. †\*Boeving, E.R. & **Nelson, E.L.** (In Preparation). Skilled spider monkey problem solvers make different social investments.
2. †**Nelson, E.L.**, \*Taylor, M.A., \*del Valle, A., & \*Pavon, N. (In Preparation). Reach-to-grasp kinematic signatures in Colombian spider monkeys (*Ateles fusciceps rufiventris*).
1. #\*Gonzalez, S.L., Reeb-Sutherland, B., & **Nelson, E.L.** (In Preparation). Fine motor skill predicts growth in expressive vocabulary from 12 to 24 months.

## FUNDED RESEARCH

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- |  |             |
|--|-------------|
| 6. <i>NIH 1R03HD097419-01</i>  | 2019 – 2020 |
| Infant motor skill trajectories and language outcomes  |             |
| Role: PI (with S. Coxe, Co-I)  |             |
| Total Award: \$146,500 (all to PI – no subcontracts)   |             |
| Effort: 1.62 months academic year  |             |
|  |             |
| 5. <i>San Diego State University Research Foundation Award</i>                                       | 2014 – 2018 |
| Development of MacArthur-Bates forms and norms for children from varied Spanish language communities |             |
| Role: PI   |             |
| Total Award: \$1,100   |             |
| Effort: No salary support  |             |
|  |             |
| 4. <i>FIU Center for Children and Families Intramural Award</i>                                      | 2016 – 2017 |
| The origins of bimanual skill in infants   |             |
| Role: PI   |             |
| Total Award: \$5,000   |             |
| Effort: No salary support  |             |
|  |             |
| 3. <i>FIU Center for Children and Families Intramural Award</i>                                      | 2015 – 2016 |
| Measuring motor experience in the infant brain   |             |
| Role: PI   |             |
| Total Award: \$5,000   |             |
| Effort: No salary support  |             |



2. *FIU Center for Children and Families Intramural Award* 2014 – 2015  
Brain measures for examining lateralization in infants  
Role: PI  
Total Award: \$4,000  
Effort: No salary support

1. *NIH/NICHD T32-HD007376* 2012 – 2012  
Human development: Interdisciplinary research training  
Role: Postdoctoral Trainee  
Total Award: \$78,288  
Effort: 100% calendar year

### **Student Funding**

3. *McKnight Dissertation Year Fellowship* 2018 – 2019  
Graduate Fellowship to S.L. Gonzalez  
Role: Mentor  
Total Award: \$12,000

2. *NIH/NIGMS R25GM061347* 2015 – 2018  
Graduate Fellowship to S.L. Gonzalez  
Role: Mentor  
Total Award: \$75,000 plus yearly travel support

1. *FIU Department of Psychology Seed Funds Award* 2015 – 2016  
Improving language comprehension measures for diverse Hispanic populations: Adaptation of the Mexican-Spanish Computerized Comprehension Task (S.L. Gonzalez, Student PI)  
Role: Mentor  
Total Award: \$2,000

### **PROPOSALS SUBMITTED BUT NOT FUNDED**

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#### **Discussed/Scored**

9. *NIH 1R21HD098245-01* 2019 – 2020  
Motor and social neural signatures of scaffolded motor experience in infancy  
Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxe, Co-I)  
Requested Funds: \$402,875 (all to PI – no subcontracts)  
Effort: 1.62 months academic year (Duration); 1.35 summer months (Year 1); 0.6 summer months (Year 2).  
Impact Score: 46  
Percentile: 45

8. *NIH 1R21HD094177-01A1* 2018 – 2020  
The neuroscience of scaffolded motor experience in infancy  
Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxe, Co-I)  
Requested Funds: \$402,875 (all to PI – no subcontracts)  
Effort Year 1: 1.62 months academic year; 1.5 summer months.  
Effort Year 2: 1.62 months academic year; 0.75 summer months.  
Impact Score: 30  
Percentile: 21

7. *NIH 1R03HD092683-01A1* 2018 – 2020  
Trajectories for bimanual manipulation in infants  
Role: PI (with S. Coxe, Co-I)  
Requested Funds: \$145,000 (all to PI – no subcontracts)  
Effort: 1.62 months academic year; 0.21 summer months.

Impact Score: 31  
Percentile: 17

6. *NSF 1729632* 2017 – 2020

Motor-social developmental cascades in infancy

Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI, S. Coxé, Co-I, and D. Messinger, Co-I)

Requested Funds for PIs: \$520,910 (UM Subcontract = \$46,062)

Effort: 2 summer months

Ratings: Excellent (1), Very Good (1), Very Good/Good (1), Good (1), Good/Fair (2), Fair (1)

5. *NIH 1R21HD094177-01* 2017 – 2019

The neuroscience of scaffolded motor experience in infancy

Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxé, Co-I)

Requested Funds: \$402,875 (all to PI – no subcontracts)

Effort Year 1: 1.62 months academic year; 1.5 summer months.

Effort Year 2: 1.62 months academic year; 0.75 summer months.

Impact Score: 50

Percentile: 48

4. *NIH 1R03HD092683-01* 2017 – 2019

Trajectories for bimanual manipulation in infants

Role: PI (with S. Coxé, Co-I)

Requested Funds: \$145,000 (all to PI – no subcontracts)

Effort: 1.62 months academic year; 0.30 summer months.

Impact Score: 52

Percentile: 47

3. *NSF 1628514* 2016 – 2020

Motor experience and the social brain in infants

Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxé, Co-I)

Requested Funds: \$528,861 (all to PIs – no subcontracts)

Effort: 1.62 months academic year, 0.36 summer (Year 1); 2 summer months (Years 2-4).

Ratings: Excellent (1), Very Good (2), Fair (2)

2. *The Children's Trust 13370* 2017 – 2019

Project READY: Evaluation of a School Readiness Intervention to Improve Early Learning and Disruptive Behaviors in Young Children At-Risk

Role: Co-I (with K.C. Hart, PI and M. Villodas, Co-I)

Requested Funds: \$344,621 (all to PI – no subcontracts)

Effort: 0.12 months academic year; 0.33 summer months.

Score: 92.6/100

Interviewed: Not Funded

1. *NSF 1424009* 2014 – 2017

Motor trajectories for school readiness

Role: Lead PI (with G.F. Michel, Co-PI)

Requested Funds for PI: \$146,508 (UNCG Subcontract = \$278,169)

Effort: 1.98 months academic year

Ratings: Excellent (1), Good (3), Good/Fair (1) (Discussed: Not-Competitive)

**Not Discussed**

3. *NIH 1R03HD086836-01A1* 2016 – 2018

Plasticity in neural correlates of motor and social function following early motor experience in 3-month-old infants

Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxé, Co-I)

Eliza L. Nelson, Ph.D. CV 16

Updated: 5/11/20

Requested Funds: \$145,000 (all to PIs – no subcontracts)  
Effort: 0.81 summer months  
Not Discussed

2. *NIH 1R03HD086836-01* 2015 – 2017  
Plasticity in neural correlates of motor and social function following early motor experience in 3-month-old infants  
Role: Lead PI (with B.C. Reeb-Sutherland, Co-PI and S. Coxe, Co-I)  
Requested Funds: \$145,000 (all to PIs – no subcontracts)  
Effort: 0.81 summer months  
Not Discussed

1. *NIH 1R01HD079549-01* 2014 – 2017  
Predicting school readiness from infant and toddler lateralization  
Role: Co-PI (with G.F. Michel, Lead PI)  
Requested Funds: \$1,066,425 (FIU Subcontract: \$93,317.97)  
Effort: 1.80 months academic year  
Not Discussed

### **Other**

2. *FIU College of Engineering and Computing Seed Grant* 2018 – 2019  
Co-contraction and fall risk in lower-limb amputees  
Role: Co-I (with B. Hillen, PI, S. Coxe, Co-I, L. McPherson, Co-I, and A. Thota, Co-I)  
Requested Funds: \$99,163.50  
Effort: 0.45 summer months  
Status: Not reviewed due to LOI error

1. *NSF 1348560* 2014 – 2017  
Development of lateralization, language, and cognition in preschool children  
Role: Co-PI (with G.F. Michel, Lead PI)  
Requested Funds: \$849,787 (FIU Subcontract: \$82,245)  
Effort: 1.62 months academic year  
Status: Withdrawn by Lead PI due to competing renewal

### **Student Funding**

5. *NIH 1F31HD097956-01* 2018 – 2019  
Neural and motor predictors of language development in infancy  
Role: Sponsor (with S.L. Gonzalez, Student PI and L. Bahrack, Co-Sponsor)  
Requested Funds: \$44,044  
Impact Score: 46  
Percentile: 44

4. *NSF Graduate Research Fellowship Program* 2018 – 2021  
Developmental patterns of fully differentiated bimanual manipulation  
Role: Mentor (with M.A. Taylor, Student PI)  
Requested Funds: \$132,000

3. *NSF Graduate Research Fellowship Program* 2015 – 2018  
Early language comprehension in Hispanics: Improving current measures  
Role: Mentor (with S.L. Gonzalez, Student PI)  
Requested Funds: \$132,000

2. NSF Graduate Research Fellowship Program  
Infant attention to role-differentiated bimanual events  
Role: Mentor (with S.L. Gonzalez, Student PI)  
Requested Funds: \$132,000

2014 – 2017

1. American Society of Primatologist General Small Grant  
Social laterality in captive spider monkeys (*Ateles fusciceps rufiventris*)  
Role: Mentor (with E.R. Boeving, Student PI)  
Requested Funds: \$1,459

2014 – 2015

## **PATENT DISCLOSURES, APPLICATIONS, AND AWARDS**

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N/A

## **PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS**

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FIU College of Arts, Sciences, and Education Faculty Award for Research	2019
FIU College of Arts, Sciences, and Education Faculty Award for Teaching	2016
Elsevier Highly Cited Research Certificate ( <i>Infant Behavior &amp; Development</i> )	2016
Hennessy-Smotherman-Wiley Best Student Paper Award Developmental Psychobiology	2011
NIH Travel Award, International Society on Developmental Psychobiology (\$450)	2011
NIH Travel Award, International Society on Developmental Psychobiology (\$300)	2010
NSB Program 14 <sup>th</sup> Annual Vincent G. Dethier Award, University of Massachusetts	2010
Graduate School Travel Grant, University of Massachusetts (\$300)	2010
Graduate School Travel Grant, University of Massachusetts (\$400)	2008
Pi Gamma Mu International Social Science Honor Society, Baldwin-Wallace College	2004
Psi Chi National Honor Society in Psychology, Baldwin-Wallace College	2004
2 <sup>nd</sup> Place SURE Creative Writing Essay Contest, Emory University	2003
Summer Undergraduate Research Experience (SURE) Fellowship, Emory University	2003
Presidential Scholarship, Baldwin-Wallace College (4 years)	2000

## **OFFICES HELD IN PROFESSIONAL SOCIETIES**

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N/A

## **OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

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### **Service to Professional Associations and Societies**

#### **Editorial Board Service**

Review Editor, *Frontiers in Psychology* | *Developmental Psychology*, Appointed 2017

#### **Ad-hoc Journal and Book Reviewer (30)**

<i>American Journal of Primatology</i>	<i>Infant Behavior and Development</i>
<i>Animal Cognition</i>	<i>International Journal of Developmental Disabilities</i>
<i>Behavioural Brain Research</i>	<i>Journal of Comparative Psychology</i>
<i>Behavioural Processes</i>	<i>Journal of Experimental Child Psychology</i>
<i>Biology Letters</i>	<i>Journal of Visualized Experiments (JOVE)</i>
<i>Cambridge University Press</i>	<i>Laterality</i>
<i>Child Development</i>	<i>Medicina</i>
<i>Cognition</i>	<i>Mind, Brain and Education</i>
<i>Developmental Psychobiology</i>	<i>Neuropsychologia</i>
<i>Developmental Psychology</i>	<i>PLOS ONE</i>
<i>Developmental Science</i>	<i>Psychological Research</i>
<i>Experimental Brain Research</i>	<i>Quarterly Journal of Experimental Psychology</i>

### **Ad-hoc Grant Reviewer**

NIH Biobehavioral and Behavioral Sciences Subcommittee, Temporary Member	2019
NIH Special Emphasis Panel National Primate Research Centers, Member	2018
European Research Council (SH4 Panel: The Human Mind and Its Complexity)	2018
American Society of Primatologists Conservation Grants	2007 – 2010

### **Conference/Symposia Reviewer**

International Society for Developmental Psychobiology	2016
International Conference on Infant Studies (Panel: Motor and Sensorimotor Processes)	2015 –
American Society of Primatologists	2011

### **Symposium Organizer**

The Development of Handedness: Taking Stock and Looking Ahead.	2014
XIX Biennial International Conference on Infant Studies, Berlin, Germany.	

### **Other Conference Activities**

Session Moderator, International Society for Developmental Psychobiology	2016
Poster Judge, International Society for Developmental Psychobiology	2014
<i>Meet the Professors</i> event participant, International Society for Developmental Psychobiology	2013

### **Advisory Panels**

Wiley Advisors group for Early Career Researchers	2010 – 2017
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### **Professional Affiliations**

American Society of Primatologists	2002 – 2013
International Primatological Society	2002 – 2013
Society for Research in Child Development	2005 – 2007
Society for the Study of Human Development	2013 – 2014
International Society for Developmental Psychobiology	2010 –
International Society on Infant Studies	2010 –
Comparative Cognition Society	2017 –
Society for Behavioral Neuroscience and Comparative Psychology (APA: Division 6)	2018 –

### **Service to Department**

Member, Undergraduate Curriculum Committee	2018 –
Ad Hoc Reviewer, Presidential Fellowship Nominations	2016, 2018
Ad Hoc Reviewer, American Psychological Foundation (APF) and the Council of Graduate Departments of Psychology (COGDOP) Fellowship Nominations	2016, 2018
Ad Hoc Reviewer, APA Fellowship Nominations	2015
Member, Psychology Colloquium Committee	2016 – 2017
Member, Psychology Instructor Search Committee	2015 – 2016
Member, Undergraduate Curriculum Committee	2013 – 2016
Member, Cognitive Neuroscience Program Committee	2013 –
Member, Developmental Science Program Committee	2012 –
Member, Psychology Colloquium Committee	2012 – 2013

### **Service to College and University**

#### **Florida International University**

Reviewer, UndergradResearchFIU (URFIU) Conference	2020
Judge, Conference for Undergraduate Research at FIU	2019
Psychology Rep, Dissertation Advisor Status Evaluation Committee	2018 – 2020
Judge, FIU College of Engineering & Computing VIP & SCIS Senior Project Showcase	2018

Distinguished Speaker, 5 <sup>th</sup> Annual Women in Science Seminar at FIU	2017
Reviewer, Biomedical Research Initiative Student Summer Research Awards	2017, 2018
Member, NIGMS RISE Fellowship Graduate Selection Committee	2017
Member, Center for Children and Families Website Committee	2015 – 2017
Judge, MARC U*STAR & NIGMS RISE Programs Mini-Symposium	2014, 2015
Speaker, Abstract Writing, MARC U*STAR & NIGMS RISE Programs Workshop Series	2014, 2015, 2016
Member, Center for Children and Families	2013 – 2017
Member, College of Arts & Sciences Mentor Program (Mentor: Phil Stoddard)	2012 – 2018

### **Other Institutions**

Class of 2004 Representative Annual Fund Program, Baldwin Wallace University	2004 –
Webmaster, UNCG Infant Development Center	2011 – 2012
Brain Awareness Council, Wake Forest University	2010 – 2011
Webmaster, UMass Child Study Center	2008 – 2010
NSB Graduate Program Historian, UMass Amherst	2006 – 2010
NSB Graduate Program Colloquia Committee, UMass Amherst	2008
Orientation Committee Incoming Psych Grad Students, UMass Amherst	2007, 2008
Co-Chair NSB Graduate Program Annual Student Retreat, UMass Amherst	2005

### **Service to Community and Public**

Chair, DuMond Conservancy Institutional Animal Care and Use Committee (IACUC)	2019 –
FIU Child Labs Community Outreach Booth, The Children's Trust Family Expo	2013 – 2015
Contributing Research Scientist, DuMond Conservancy Scientific Advisory Board	2012 –
Invited Primate Lecture, T. Wingate Andrews High School (High Point, NC)	2010

### **TEACHING EXPERIENCE**

Key: FA = Fall, SP = Spring, SU = Summer. Course enrollment given in parentheses.

#### **Florida International University**

Participant in Spring 2016 Hybrid Teaching Pilot Program  
Participant in Summer 2016 First Time Teaching Online Pilot Program  
All syllabi are available at the following link: <http://faculty.fiu.edu/~elnelson/teaching.html>

#### **Primary Instructor – Undergraduate Courses**

- 1. EXP-4005/EXP-4005L Advanced Experimental Psychology Lecture and Laboratory (Senior Lab)**
  - Modality: Face-to-Face  
Semester(s) Taught: SP 2013 (38); SP 2014 (30)
- 2. PSB-4002 Introductory Bio-Psychology**
  - Modality: Face-to-Face  
Semester(s) Taught: SP 2014 (82); SU 2015 (18); FA 2015 (137)
  - Modality: Hybrid  
Semester(s) Taught: SP 2016 (49); FA 2016 (75); SP 2017 (49)
  - Modality: Online  
Semester(s) Taught: SU 2016 (47); SU 2017 (60); SU 2018 (67); FA 2018 (69); SP 2019 (69); SU 2019 (64); FA 2019 (63); SP 2020 (69); SU 2020 (71)
- 3. PSB-4250 Animal Cognition**
  - Modality: Face-to-Face  
Semester(s) Taught: FA 2013 (45); SP 2015 (29); SP 2016 (59)
  - Modality: Hybrid  
Semester(s) Taught: FA 2018 (69)
- 4. PSY-4930 Motor Development**
  - Modality: Face-to-Face (Cross-listed with PSY-5939)  
Semester(s) Taught: FA 2015 (4)

## 5. PSY-4931 Measuring Animal Behavior (Senior Seminar)

- Modality: Face-to-Face  
Semester(s) Taught: FA 2014 (12); SP 2015 (16); FA 2016 (14)

### Undergraduate Research Credit in the HANDS Lab

Note: Most students prior to Summer 2018 volunteered in the lab for no credit due to cost

- PSY-4900 **Independent Readings in Psychology**  
Semester(s) Taught: SP 2016 (1)
- PSY-4914 **Honors Research Project**  
Semester(s) Taught: FA 2013 (1); FA 2016 (1); SP 2017 (1)
- PSY-4916 **Independent Research in Psychology**  
Semester(s) Taught: SU 2014 (1); SP 2015 (1); SU 2015 (2); FA 2015 (2); SP 2019 (1)
- PSY-4940 **Research Internship in Psychological Science**  
Semester(s) Taught: SP 2020 (5)
- PSY-4941 **Experiential Learning/Internship in Psychology**  
Semester(s) Taught: SU 2018 (3); FA 2018 (13); SP 2019 (10); SU 2019 (6); FA 2019 (7)

### Primary Instructor – Graduate Courses

1. **CBH-5256 Animal Cognition**
  - Modality: Face-to-Face  
Semester(s) Taught: FA 2014 (12)
2. **DEP-5058 Biological Basis of Behavior Development**
  - Modality: Face-to-Face  
Semester(s) Taught: SP 2018 (13)
3. **PSY-5939 Motor Development**
  - Modality: Face-to-Face (Cross-listed with PSY-4931)  
Semester(s) Taught: FA 2015 (4)

### Graduate Research Credit in the HANDS Lab

- PSY-5908 **Directed Independent Study**  
Semester(s) Taught: FA 2016 (1); SP 2017 (1); SP 2019 (1)
- PSY-5918 **Supervised Research**  
Semester(s) Taught: SU 2014 (1); SU 2015 (2), SP 2016 (1); SU 2016 (1), FA 2016 (1); SP 2017 (2); SU 2017 (2), SP 2018 (1); SU 2018 (1); SP 2019 (1); SU 2019 (1); FA 2019 (1)
- PSY-7980 **Ph.D. Dissertation**  
Semester(s) Taught: FA 2017 (1); SP 2018 (1); SU 2018 (1); FA 2018 (2); SP 2019 (2); SU 2019 (2); FA 2019 (2); SP 2020 (1)

## University of Massachusetts Amherst

### Primary Instructor

Junior Year Writing in Psychology (Topic: Conservation Psych)	FA 2007 (20)
Junior Year Writing in Psychology (Topic: Primate Psychology)	SP 2008 (20)

### Teaching Assistant

Behavioral Neuroscience	SP 2005; FA 2009
Introduction to Psychology	FA 2004; FA 2008; SP 2009; SP 2010

## **MENTORING AND ADVISING**

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FIU Dissertation Advisor Status	Spring 2015 –
FIU MARC U*STAR Mentor Status	Spring 2014 –
FIU NIGMS RISE Mentor Status	Spring 2014 – Summer 2018 (Program End)

FIU Ph.D. candidates	Major	Role	Status
10. <b>Kaitlyn Testa</b>	Developmental Science	Member	Committee Formed
9. <b>Elizabeth Edgar</b>	Developmental Science	Member	Committee Formed
8. <b>Myriah McNew</b>	Developmental Science	Member	Committee Formed
7. <b>Sathyakumar Kuntaegowdanahalli</b>	Biomedical Engineering	Member	Committee Formed
6. <b>Carolina Vias</b>	Cognitive Neuroscience	Member	Proposed 05/14/2019
5. <b>Emily Boevig</b>	Developmental Science	Chair	Proposed 10/26/2018
4. <b>Michelle Ramos</b>	Developmental Science	Member	Proposed 6/21/2018
3. <b>Starlie Belnap</b> DISSERTATION: The influence of maternally regulated prenatal sensory experience on postnatal motor coordination in neonatal bobwhite quail ( <i>Colinus virginianus</i> )	Developmental Science	Member	Defended 10/29/2019
2. <b>Sandy Gonzalez</b> DISSERTATION: Motor-language cascades: How fine motor relates to language outcomes across early development	Developmental Science	Chair	Defended 08/30/2019
1. <b>Rosalie Odean</b> DISSERTATION: The development of spatial vocabulary	Developmental Science	Member	Defended 03/21/2018
FIU M.A. candidates	Major	Role	Status
9. <b>Christopher Clifford</b> THESIS: Relation between individual differences in face-recognition and joint attention behaviors in infants	Developmental Science	Member	Defended 11/14/2019
8. <b>Elizabeth Edgar</b> THESIS: Child multisensory attention skills and parent language input predict child vocabulary	Developmental Science	Member	Defended 08/30/2019
7. <b>Zahra Nazarimehrvarani</b> THESIS: Interrelations among emotion regulation, eating behaviors, and risk for eating disorders during women's transition to adulthood	Developmental Science	Member	Defended 03/04/2019
6. <b>Megan Taylor</b> THESIS: Early grasp proficiency predicts individual patterns of bimanual skill development in infants	Developmental Science	Chair	Defended 10/17/2018
5. <b>Michelle Ramos</b> THESIS: Individual differences in self-reported attentional control moderates the relation between error monitoring and anxiety in children and adolescents	Developmental Science	Member	Defended 07/06/2017
4. <b>Sandy Gonzalez</b> THESIS: Measuring comprehension in diverse Hispanic infants using the Mexican-Spanish CDI	Developmental Science	Chair	Defended 05/02/2017
3. <b>Starlie Belnap</b> THESIS: Coordinated movement is influenced by prenatal light experience in bobwhite quail hatchlings ( <i>Colinus virginianus</i> )	Developmental Science	Member	Defended 12/06/2016
2. <b>Emily Boevig</b> THESIS: Hugs are lateralized in spider monkeys	Developmental Science	Chair	Defended 06/21/2016



1. <b>Rosalie Odean</b>	Developmental Science	Member	Defended 07/08/2015
THESIS: Comprehension and real-time processing of English dimensional adjectives in toddlers			

<b>FIU Undergraduate Honors Thesis</b>	Major	Role	Status
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6. <b>Alyssa Seidler</b>	Psychology	Chair	Defended 4/26/2017
THESIS: Reaching kinematics in infant rhesus monkeys ( <i>Macaca mulatta</i> )			

5. <b>Melissa Fajardo</b>	Psychology	Chair	Defended 12/07/2016
THESIS: Seven-week summer treatment program improves fine motor skills and school readiness outcomes in disadvantaged prekindergarten children			

4. <b>Gisela Jorge</b>	Psychology	Member	Defended 12/07/2016
THESIS: Attention filtering and conversational engagement as predictors of language at 18 months			

3. <b>Aysha Suppice</b>	Psychology	Member	Defended 12/07/2016
THESIS: Attention filtering and conversational engagement as predictors of language at 18 months			

2. <b>Alejandra Figueroa</b>	Biology	Member	Defended 04/24/2014
THESIS: Sex differences in captive spider monkey social behaviors ( <i>Ateles fusciceps rufiventris</i> )			

1. <b>Stephanie Albright</b>	Psychology	Chair	Defended 12/06/2013
THESIS: What is the function of owl monkey calls?			

*Undergraduate Thesis Supervision at the University of Massachusetts Amherst*

4. <b>Michelle Emery</b>	Psychology	Member	Defended Dec 2009
THESIS: Uncovering the development of laterality in infant rhesus monkeys ( <i>Macaca mulatta</i> ) through head orientation and hand preference			

3. <b>Angela Locantore</b>	Animal Science	Supervisor	Defended May 2009
THESIS: Measuring handedness in rhesus monkeys ( <i>Macaca mulatta</i> ): The interaction between hand preference and hand performance			

2. <b>Yelena Vaydman</b>	Psychology	Member	Defended May 2009
THESIS: The effect of cognitive testing on the well-being of rhesus monkeys ( <i>Macaca mulatta</i> )			

1. <b>Jaime O'Karma</b>	Psychology	Supervisor	Defended May 2008
THESIS: Head-tilt and unimanual hand use during feeding in <i>Varecia variegata variegata</i>			

<b>Undergraduate Supervision</b>	Major(s)	Term(s)
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*Research Assistants in the HANDS Lab at Florida International University*

1. Stephanie Albright	Psychology	Fall 2012 – Fall 2013
2. Yasmin Ali	Biology	Summer 2017 – Spring 2019
3. Jacqueline Alvarez	Biology/Chemistry	Spring 2020 –
4. Veronica Alvarez	Biology	Fall 2016 – Fall 2019
5. Katherine Antillano	Biology	Fall 2015 – Fall 2016
6. Cassandra Arvelo	Psychology/Biology	Summer 2015 – Spring 2016
7. Venus Betancourt	Biology	Fall 2015 – Summer 2018
8. Anais Cabezas	Psychology	Spring 2015 – Fall 2015
9. Gema Carroll-Zuluaga	Psychology/Biology	Spring 2016 – Fall 2017
10. Ansley Castineira	Biology	Spring 2015 – Spring 2017
11. Yoli Davalos	Psychology/Biology	Spring 2017 – Summer 2017
12. Armando Del Valle	Chemistry	Fall 2017 – Summer 2019

13. Alexandra Derr	Biology	Fall 2013 – Spring 2014
14. Christina Diaz	Psychology	Spring 2013 – Fall 2013
15. Emily Diaz	Biology	Spring 2017 – Fall 2018
16. Michelle Diaz	Psychology/Religion	Spring 2015 – Summer 2015
17. Barbara Dominguez	Psychology/Biology	Fall 2013 – Fall 2015
18. Melissa Fajardo	Psychology	Fall 2013 – Summer 2018
19. Alejandra Figueroa	Biology	Fall 2012 – Summer 2015
20. Pamela Galera	Psychology	Fall 2018 – Fall 2019
21. Ivanna Gamez	Psychology	Fall 2018
22. Alfredo Garcia	Biology	Summer 2015 – Summer 2016
23. Sydney Garcia	Psychology/Biology	Fall 2018 – Spring 2019
24. Andres Gil	Psychology	Spring 2013 – Summer 2013
25. Michelle Gomez-Guevara	Biology	Spring 2019 –
26. Maria Gonzalez	Biology	Spring 2013 – Fall 2013
27. Diancy Hernandez	Biology	Summer 2019 –
28. Kacey Hung	Biology	Fall 2018 – Spring 2019
29. Brenda Jimenez	Biology	Summer 2020 –
30. Giulianna Kendall	Psychology/Biology	Spring 2015 – Fall 2017
31. Rachel Leong	Biology	Summer 2019 –
32. Alejandra Lopez	Psychology	Summer 2015 – Fall 2015
33. Dominique Lopez	Biology	Spring 2019 – Summer 2019
34. Violeta Mora Aballe	Biology	Summer 2017 – Fall 2019
35. Brianny Medina	Psychology	Fall 2019 – Spring 2020
36. Lorena Mendez	Psychology	Summer 2017 – Spring 2018
37. Monica Melendez	Psychology	Fall 2018
38. Genesis Mendoza	Biology	Fall 2013
39. Angela Montanez	Psychology	Fall 2015 – Spring 2016
40. Emily Morales	Biology	Summer 2018 – Fall 2018
41. Kimberly Morales	Biology	Fall 2017 – Spring 2018
42. Sara Neuman	Biology	Fall 2013 – Spring 2017
43. Vanessa Padilla	Psychology	Fall 2014 – Summer 2015
44. Emily Palin	Psychology	Spring 2019
45. Kasey Padron	Psychology	Spring 2020 –
46. Narciso Pavon	Psychology	Fall 2016 – Summer 2019
47. Joao Bosco Pereira	Psychology	Fall 2018 – Summer 2019
48. Andrea Perez-Villarreal	Psychology	Fall 2014 – Fall 2015
49. Alexandra Quinones	Psychology	Fall 2018
50. Royden Ramirez	Biology	Fall 2018 – Spring 2019
51. Joyce Ruiz	Psychology	Spring 2014
52. Eduardo Saczek	Psychology	Summer 2015 – Spring 2016; Fall 2019 – Spring 2020
53. Alyssa Seidler	Psychology	Fall 2016 – Spring 2017
54. Jonathan Solis	Psychology/Philosophy	Summer 2017 – Summer 2019
55. Marisol Soula	Psychology/Biology	Spring 2013 – Fall 2014
56. Joseph Stearns	Psychology	Summer 2014
57. Melisa Stecklen	Psychology	Summer 2016 – Fall 2016
58. Heilen Suarez	Biology	Summer 2019 – Spring 2020
59. Danielle Tepsitch	Psychology	Fall 2018 – Spring 2019
60. Bianca Tercero	Psychology/Biology	Fall 2014 – Summer 2016
61. Elizabeth Torres	Psychology	Fall 2016 – Spring 2017
62. Angela Toscano	Biology	Fall 2014
63. Samantha Verne	Psychology/Biology	Spring 2013 – Fall 2013
64. Carla Vidal	Biology	Fall 2018 – Spring 2019
65. Olivia Williamson	Biology	Fall 2019 – Spring 2020
66. Sofia Zunjic	Psychology	Fall 2014

Developmental Science Summer Internship Program	Home Institution	Term
1. <b>Kaitlyn Vogel</b> "Fine motor skills and the implications on future academic achievement"	Illinois State University	Summer 2014

High School students	School	Term
<i>FIU Summer Research Internship Participants</i>		

4. <b>Shaileen Barberena</b> "The relation between gross and fine motor skills and language outcomes"	MAST @ Homestead	Summer 2018
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3. <b>Renzo Caverio</b> "The role of sticky mittens on neural development"	TERRA	Summer 2015
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2. <b>Joeeta Bagchi</b> "Reaching kinematics in an infant spider monkey"	TERRA	Summer 2013
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1. <b>Helen Gall</b> "Hand preference is associated with language ability in toddlers"	MAST @ Homestead	Summer 2013
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## **STUDENT AWARDS**

### **Graduate Students**

<i>Student Name</i>	<i>Date</i>	<i>Award</i>
Emily Boeving	2019	American Society of Primatologists Ruppenthal Student Travel Award (1 of 4 awarded)
	2018	International Society for Developmental Psychobiology Travel Award
Sandy Gonzalez	2019	International Society for Developmental Psychobiology Travel Award
	2018	International Society for Developmental Psychobiology Travel Award
	2017	International Society for Developmental Psychobiology Travel Award
	2016	International Society for Developmental Psychobiology Travel Award
	2015	Honorable Mention (Poster Presentation) at FIU MARC U*STAR and MBRS-RISE Mini Symposium
Megan Taylor	2014	International Society for Developmental Psychobiology Travel Award
	2018	International Society for Developmental Psychobiology Travel Award
	2017	International Society for Developmental Psychobiology Travel Award

### **Undergraduate/Post-Baccalaureate Students**

<i>Student Name</i>	<i>Date</i>	<i>Award</i>
Sara Neuman	2016	University of Michigan Ecology and Evolutionary Biology (EEB) and Molecular, Cellular, and Developmental Biology (MCDB) Fall Graduate Program Preview Weekend (Travel, Housing, Meals)
	2016	International Conference on Infant Studies Undergraduate Travel Award (1 of 19 awarded)
Narciso Pavon	2017	International Society for Developmental Psychobiology Travel Award
Marisol Soula	2016	FIU Worlds Ahead Award (Biology)
	2014	FIU MARC U*STAR Undergraduate Fellowship

## **High School Students**

<i>Student Name</i>	<i>Date</i>	<i>Award</i>
Shaileen Barberena	2018	2 <sup>nd</sup> Place Talk at 2018 Summer Research Internship Mini-Symposium

## **POPULAR PRESS AND MEDIA**

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<b>Why a Spanish word list won't necessarily work for all Spanish speakers</b> Featured on theinformedSLP.com	2/2019
<b>Psychology's Dr. Eliza Nelson awarded research grant</b> Featured in FIU CASE news	1/2019
<b>Preschoolers' cognitive skills may be tied to timing of their motor milestones</b> Commentary in Reuters.com; Foxnews.com	6/2016
<b>Strong partnership between students and mentors sparks cutting-edge research</b> Featured in FIU news	4/2016
<b>Spider monkeys point to a new understanding of hand dominance</b> Featured in FIU News; Phys.org	3/2015
<b>Infants with a clear hand preference show advanced language ability as toddlers</b> Featured in FIU News; MedicalXpress.com	7/2014
<b>Early hand preference tied to language</b> Featured on Wall Street Journal Live Lunch Break program and WSJ.com Life & Culture	4/2014
<b>Professor and students are "monkeying" around</b> Featured in FIUSM.com News	4/2013
<b>Handedness in primatological perspective</b> Featured in Popular Anthropology Magazine article	3/2010
<b>50 50 Television Program (South Africa)</b> Featured in segment on research at Monkeyland Primate Sanctuary	7/2007

TENURE AND PROMOTION CURRICULUM VITAE  
OF  
**BETHANY C. REEB-SUTHERLAND, DEPARTMENT OF PSYCHOLOGY**  
**LEGAL NAME: BETHANY C. SUTHERLAND**

**CONTACT INFORMATION**

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**EDUCATION**

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Ph.D.	University of New Mexico	Psychology (Behavioral Neuroscience) with Distinction	12/2004 – 7/2006
M.S.	University of New Mexico	Psychology (Behavioral Neuroscience)	8/2001 – 7/2003
B.S.	University of New Mexico	Psychology (Cum Laude)	8/1996 – 12/2000
B.S.	University of New Mexico	Biology (Cum Laude)	8/1996 – 12/2000

**FULL-TIME ACADEMIC EXPERIENCE**

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Florida International University, Associate Professor, Psychology Developmental Science/Cognitive Neuroscience	8/2019 – Present
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Florida International University, Assistant Professor, Psychology Developmental Science/Cognitive Neuroscience	8/2012 – 8/2019
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University of Maryland, Research Assistant Professor Department of Human Development, Child Development Laboratory	8/2008 – 7/2012
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University of Maryland, Postdoctoral Fellow Department of Human Development, Child Development Laboratory	9/2006 – 7/2008
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**PART-TIME ACADEMIC EXPERIENCE**

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University of New Mexico, Research Assistant Department of Psychology, Laboratory of Cognitive Neuroscience	1/2000 – 8/2001
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**PUBLICATIONS IN DISCIPLINE**

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Roles: \*Undergraduate student; \*\*Graduate student

**Articles**

Roles: \*Undergraduate student; \*\*Graduate student

**Summary Refereed Publications:**

45 peer-reviewed journal articles

1956 total citations, h-index = 24 (Google Scholar count on 2/17/2020)

48. Vieites, V.\*\*, Pruden, S.M., & **Reeb-Sutherland, B.C.** (2020). Childhood wayfinding experience explains sex and individual differences in adult wayfinding strategy and anxiety. *Cognitive Research: Principles and Implications*, 5: 12.

47. Vieites, V.\*\*, Pruden, S.M., Shusterman, A., & **Reeb-Sutherland, B.C.** (2020). Using hippocampal-dependent eyeblink conditioning to predict individual differences in spatial reorientation strategies in 3-to-6-year-olds. *Developmental Science*, 23: e12867.

46. Salo, V.C., **Reeb-Sutherland, B.**, Frenkel, T.I., Bowman L.C., & Rowe, M.L. (2019). Does Intention Matter? Relations between parent pointing, infant pointing, and developing language ability. *Journal of Cognition and Development*, 20: 635-655.
45. Bechor, M.\*\* , Ramos M.\*\* , Crowley, M.J., Silverman, W.K., Pettit, J.W., & **Reeb-Sutherland, B.C.** Neural correlates of attentional processing of threat in youth with and without anxiety disorders. *Journal of Abnormal Child Psychology*. 47: 119-129.
44. Salo, V.C.\*\* , Rowe, M.L., & **Reeb-Sutherland, B.C.** Exploring infant gesture and joint attention as related constructs and as predictors of later language. *Infancy*, 23: 432-452.
43. **Reeb-Sutherland, B.C.** (2018). What environmental factors contribute to the development of anxiety in temperamentally inhibited children? Insight from animal research models. *Policy Insights from the Behavioral and Brain Sciences*, 5: 126-133.
42. Vieites, V.\*\* , & **Reeb-Sutherland, B.C.** (2017). Individual differences in non-clinical maternal depression impact infant affect and behavior during the Still-Face Paradigm across the first year. *Infant Behavior & Development*, 47: 13-21. Senior Author.
41. Gonzalez, S.L.\*\* , **Reeb-Sutherland, B.C.**, & Nelson, E.L. (2016). Quantifying motor experience in the infant brain: EEG power, coherence, and mu desynchronization. *Frontiers in Psychology*, 7: 216.  
[Reprinted 2017 in P. Hauf & K. Libertus (Eds.), *Motor Skills and Their Foundational Role for Perceptual, Social, and Cognitive Development* (pp. 278-283). Lausanne: Frontiers Media.  
\*\*Research Topic Top 10 Finalist for Frontiers Spotlight Award\*\*
40. Barker, T.V.\*\* , **Reeb-Sutherland, B.C.**, Degnan, K.A., Walker, O.L., Chronis-Tuscano, A., Henderson, H.A., Pine, D.S., & Fox, N.A. (2015). Contextual startle responses moderate the relation between behavioral inhibition and anxiety in middle childhood. *Psychophysiology*, 52: 1544-1549.
39. Vieites, V.\*\* , Nazareth, A.\*\* , **Reeb-Sutherland, B.C.**, & Pruden, S.M. (2015). A new biomarker to examine the role of hippocampal function in the development of spatial reorientation abilities in children: A review. *Frontiers in Psychology*, 6: 490. First Faculty Author.
38. Sorondo, B.M.^ , & **Reeb-Sutherland, B.C.** (2015). Associations between infant temperament, maternal stress, and infants' sleep across the first year of life. *Infant Behavior and Development*, 39: 131-135. Senior Author.
37. **Reeb-Sutherland, B.C.**, & Fox, N.A. (2015). Eyeblink conditioning: a non-invasive biomarker for neurodevelopmental disorders. *Journal of Autism and Developmental Disorders*, 45: 376-394.
36. **Reeb-Sutherland, B.C.**, Williams, L.R., Degnan, K., Perez-Edgar, K., Henderson, H.A., Chronis-Tuscano, A., Leibenluft, E., Pine, D.S., Pollak, S.D., & Fox, N.A. (2015). Identification of emotional facial expressions among behaviorally inhibited adolescents with lifetime anxiety disorders. *Cognition & Emotion*; 29: 372-382.
35. Tang, A.C., **Reeb-Sutherland, B.C.**, Romeo, R.D., & McEwen, B.S. (2014). On the causes of early life experience effects: evaluating the role of mom. *Frontiers in Neuroendocrinology*; 35: 245-251.
34. Barker, T.V.\*\* , **Reeb-Sutherland, B.C.**, & Fox, N.A. (2014). Individual differences in fear potentiated startle in behaviorally inhibited children. *Developmental Psychobiology*; 56: 133-141.
33. Yoo, K.^ , & **Reeb-Sutherland, B.C.** (2013). Effects of negative temperament on 5-month-old infants' behavior during the still-face paradigm. *Infant Behavior & Development*; 36: 344-348. Senior Author.

32. Fox, N.A., Kirwan, M., & **Reeb-Sutherland, B.C.** (2012). Measuring the physiology of emotion and emotion regulation – timing is everything. *Monographs of the Society for Research in Child Development*; 77: 98-108.
31. **Reeb-Sutherland, B.C.**, Levitt, P., & Fox, N.A. (2012). The predictive nature of individual differences in early associative learning and emerging social behavior. *PLoS ONE*; 7: e30511.
30. **Reeb-Sutherland, B.C.**, & Tang, A.C. (2012). Functional specificity in modulation of novelty exposure effects by reliability of maternal care. *Behavioural Brain Research*; 226: 345-350.
29. Tang, A.C., **Reeb-Sutherland, B.C.**, Romeo, R.D., & McEwen, B.S. (2012). Reducing behavioral inhibition to novelty via systematic neonatal novelty exposure: The influence of maternal hypothalamic-pituitary-adrenal (HPA) regulation. *Biological Psychiatry*; 72: 150-156.
28. Tang, A.C., Yang, Z., **Reeb-Sutherland, B.C.**, Romeo, R.D., & McEwen, B.S. (2012). Maternal modulation of novelty effects on physical development. *Proceedings of the National Academy of Sciences USA*, 109: 2120-2125.
27. **Reeb-Sutherland, B.C.**, Fifer, W.P., Byrd, D.L., Hammock, E.A., Levitt, P., & Fox, N.A. (2011). One-month-old human infants learn about the social world while they sleep. *Developmental Science*; 14: 1134-1141.
26. Perez-Edgar, K., **Reeb-Sutherland, B.C.**, McDermott, J.N.M., Henderson, H.A., Degnan, K.A., Hane, A.A., Pine, D.S., & Fox, N.A. (2011). Attention biases to threat link behavioral inhibition to social withdrawal over time in very young children. *Journal of Abnormal Child Psychology*; 39: 885-895.
25. **Reeb-Sutherland, B.C.**, & Tang, A.C. (2011). Dissociation between neonatal novelty-induced preferential maternal care and enhancement in cognitive, social, and emotional functions. *Behavioural Brain Research*; 224: 318-325.
24. Tang, A.C., **Reeb-Sutherland, B.C.**, Yang, Z., Romeo, R.D., & McEwen, B.S. (2011). Neonatal novelty-induced persistent enhancement in offspring spatial memory and the modulatory role of maternal self-stress regulation. *Journal of Neuroscience*; 31: 5348-5352.
23. Tang, A.C., **Reeb-Sutherland, B.C.**, & Yang, Z. (2011). Functional brain asymmetry in adult novelty response: on fluidity of neonatal novelty exposure effects. *Behavioural Brain Research*; 221: 91-97.
22. Degnan, K.A., Hane, A.A., Henderson, H.A., Moas, O.L., **Reeb-Sutherland, B.C.**, & Fox, N.A. (2011). Longitudinal stability of temperamental exuberance and social-emotional outcomes in early childhood. *Developmental Psychology*; 47: 765-780.
21. Hane, A.A., Henderson, H.A., **Reeb-Sutherland, B.C.**, & Fox, N.A. (2010). Ordinary variations in human maternal caregiving in infancy and biobehavioral development in early childhood: A follow-up study. *Developmental Psychobiology*; 52: 558-567.
20. **Reeb-Sutherland, B.C.**, Helfinstein, S.M., Degnan, K.A., Perez-Edgar, K., Henderson, H.A., Lissek, S., Chronis-Tuscano, A., Grillon, C., Pine, D.S., & Fox, N.A. (2009). Startle response in behaviorally inhibited adolescents with a lifetime occurrence of anxiety disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*; 48: 610-617.
19. **Reeb-Sutherland, B.C.**, Vanderwert, R.E., Degnan, K.A., Marshall, P.J., Perez-Edgar, K., Chronis-Tuscano, A., Pine, D.S., & Fox, N.A. (2009). Attention to novelty in behaviorally inhibited adolescents moderates risk for anxiety. *Journal of Child Psychology and Psychiatry*, 50: 1365-1372.
18. Marshall, P.J., **Reeb, B.C.**, & Fox, N.A. (2009). Electrophysiological responses to auditory novelty in temperamentally different 9-month-old infants. *Developmental Science*; 12: 568-582.

17. White, L.K., Helfinstein, S.M., **Reeb-Sutherland, B.C.**, Degnan, K.A., & Fox, N.A.. (2009). Role of attention in the regulation of fear and anxiety. *Developmental Neuroscience*, 31: 309-317.
16. Marshall, P.J., **Reeb, B.C.**, & Fox, N.A. (2008). Effects of early intervention on EEG power and coherence in previously institutionalized children in Romania. *Development and Psychopathology*, 20: 861-880.
15. Tang, A.C., Zou, B., **Reeb, B.C.**, & Connor, J.A. (2008). An epigenetic induction of a right-shift in hippocampal asymmetry: selectivity for short- and long-term potentiation but not post-tetanic potentiation. *Hippocampus*, 18: 5-10.
14. Akers, K.G., Yang, Z., DelVecchio, D.P., **Reeb, B.C.**, Romeo, R.D., McEwen, B.S., & Tang, A.C. (2008). Social competitiveness and plasticity of neuroendocrine function in old age: influence of neonatal novelty exposure and maternal care reliability. *PLoS ONE*, 3: e2840.
13. **Reeb, B.C.**, & Akers, K.G. (2006). Journal Club Commentary: Is neuroplasticity of the hypothalamic-pituitary-adrenal axis maternally mediated? *Journal of Neuroscience*, 26: 5589-5590. NPR.
12. Tang, A.C., Akers, K.G., **Reeb, B.C.**, Romeo, R.D., & McEwen, B.S. (2006). Programming social, cognitive, and neuroendocrine development by early exposure to novelty. *Proceedings of the National Academy of Sciences USA*, 103: 15716-15721.
11. **Reeb, B.C.**, & Tang, A.C. (2005). Sex difference in temporal patterns of social interaction and its dependence upon neonatal novelty exposure. *Behavioural Brain Research*, 158: 359-365.
10. Tang, A.C., Nakazawa, M., Romeo, R.D., **Reeb, B.C.**, Sisti, H., & McEwen, B.S. (2005). Effects of long-term estrogen replacement on social investigation and social memory in ovariectomized C57BL/6 mice. *Hormones & Behavior*, 47: 350-357.
9. Tang, A.C. & **Reeb, B.C.** (2004). Neonatal novelty exposure, dynamics of brain asymmetry, and social recognition memory. *Developmental Psychobiology*, 44:84-93.
8. Akers, K.G., **Reeb, B.C.**, & Tang, A.C. (2004). Developmentally stable sex-dependent modulation of turning asymmetry by neonatal novelty exposure. *Behavioural Brain Research*, 155: 257-263.
7. Tang, A.C., Nakazawa, M., & **Reeb, B.C.** (2003). Neonatal novelty exposure affects sex difference in open field disinhibition. *NeuroReport*, 14:1553-1556.
6. Tang, A.C., **Reeb, B.C.**, Romeo, R.D., & McEwen, B.S. (2003). Modification of social memory, HPA axis, and brain asymmetry by neonatal novelty exposure. *Journal of Neuroscience*, 23:8254-8260.
5. Tang, A.C., Pearlmuter, B.A., Malaszenko, N.A., Phung, D.B., & **Reeb, B.C.** (2002). Independent components of magnetoencephalography: Localization. *Neural Computation*, 14:1827-1858.

### **Chapters in Books**

4. Fox, N.A., **Reeb-Sutherland, B.C.**, & Degnan, K.A. (2013). Personality and Emotional Development: Overview. In P.D. Zelazo (Ed.) *Oxford Handbook of Developmental Psychology, Volume II*. (pp. 15-44). Oxford University Press, London.
3. Fox, N.A., & **Reeb-Sutherland, B.C.** (2010). Biological moderators of infant temperament and its relation to social withdrawal. In K.H. Rubin and R.J. Coplan (Eds.) *The Development of Shyness and Social Withdrawal* (pp. 84-103). Guilford Press, New York.



2. **Reeb, B.C.**, Fox, N.A., Nelson, C.A., & Zeanah, C.H. The effects of early institutionalization on social behavior and underlying neural correlates. (2009). In M. de Haan and M.R. Gunnar (Eds.) *Handbook of Developmental Social Neuroscience* (pp. 477-496). Guilford Press, New York.

1. Fox, N.A., & **Reeb, B.C.** (2008). Effects of early experience on the development of cerebral asymmetry and approach-withdrawal. In A.J. Elliot (Ed.) *Handbook of Approach and Avoidance Motivation* (pp. 35-49). Lawrence Erlbaum, Hillsdale, NJ.

## **OTHER PUBLICATIONS**

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3. Vieites, V., & **Reeb-Sutherland, B.C.** (February 9, 2018). Does Non-Clinical Maternal Depression Have a Lasting Effect on Mother-Infant Interaction? *Atlas of Science*. Invited Research Summary.

(<http://atlasofscience.org/does-non-clinical-maternal-depression-have-a-lasting-effect-on-mother-infant-interactions/#more-24255>)

2. **Reeb-Sutherland, B.C.** (November 24, 2017). Young Women, Listen to Your Gut: Breast Cancer Doesn't Care How Old you Are. *Miami Herald*. Op-Ed.

<http://digital.olivesoftware.com/Olive/APA/MiamiHerald/SharedView.Article.aspx?href=TMH%2F2017%2F11%2F24&id=Ar15E2&sk=71ADCB48&viewMode=text>

1. **Reeb-Sutherland, B.C.** (October 30, 2017). Young Women: Breast Cancer Doesn't Care How Old You Are. *FIU News*. Op-Ed.

(<https://news.fiu.edu/2017/10/young-women-breast-cancer-doesnt-care-how-old-you-are/116614>)

## **PRESENTED PAPERS AND LECTURES**

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Roles: \*Undergraduate student; \*\*Graduate student, ^Post-Bac

### **Invited Scientific Presentations**

13. **Reeb-Sutherland, B.C.** (November, 2017). Early Risk Factors in the Development of Autism and Anxiety. Talk presented as part of a Congressional Briefing entitled *Contributions of Early Career Investigators in the Sciences of the Mind, Brain, and Behavior*, Congressional Building, Washington, DC.

12. **Reeb-Sutherland, B.C.** (April, 2015). Maternal Factors that Moderate the Relation Between Early Contingency and Joint Attention Skills During Infancy. Talk presented at Developmental Brown Bag Series, Department of Psychology, University of Miami.

11. **Reeb-Sutherland, B.C.** (November, 2014). Blinking Babies: Eyeblick Conditioning and Individual Differences in Infant Social Development. Talk presented to the Child Development Lab, University of Maryland.

10. **Reeb-Sutherland, B.C.** (November, 2014). Basics in Electroencephalogram (EEG) Research. Guest Lecture to Cognitive Neuroscience Methods (PSB 6350), Department of Psychology and Department of Physics, Florida International University.

9. **Reeb-Sutherland, B.C.** (March, 2014). Individual Differences in Associative Learning and the Development of Social and Communicative Function. Talk presented to the Early Play and Development Lab, University of Miami.

8. **Reeb-Sutherland, B.C.** (October, 2013). Development of Social Learning during Infancy. Guest Lecture to Theoretical Perspectives in Developmental Psychology (DEP 5608), Department of Psychology, Florida International University.

7. **Reeb-Sutherland, B.C.** (September, 2013). What Can Heterogeneity in Early Associative Learning Tell Us About the Development of Individual Differences in Social Behavior? Talk presented at Department of Psychology, Florida Atlantic University.

6. **Reeb-Sutherland, B.C.** (April, 2010). Differential Learning to Social vs. Non-Social Stimuli in 1-month-old Infants. Talk presented to the Maryland Infant Studies Laboratory, University of Maryland.
5. **Reeb-Sutherland, B.C.** & Fox, N.A. (March, 2010). Individual Differences in Early Associative Learning as a Predictor for Social Behavior in Infants. Talk presented to the Center for Genetic Medicine, Children's Hospital-Washington, D.C.
4. **Reeb-Sutherland, B.C.** & Fox, N.A. (January, 2010). Individual Differences in Early Associative Learning as a Predictor for Social Behavior in Infants. Talk presented to the Center for Autism Spectrum Disorders, Children's Hospital-Washington, D.C.
3. **Reeb-Sutherland, B.C.** (September, 2009). Differential Learning to Social vs. Non-Social Stimuli in 1-month-old Infants. Talk presented to the Division of Developmental Medicine Laboratories of Cognitive Neuroscience, Children's Hospital-Boston.
2. **Reeb-Sutherland, B.C.**, Helfinstein, S., Vanderwert, R., Perez-Edgar, K., Henderson, H.A., Lissek, S., Grillon, C., Pine, D.S., & Fox, N.A. (March, 2009). Underlying Neural Correlates of Attention Among Behaviorally Inhibited Adolescents Moderate Risk for Anxiety. Talk presented to the Department of Psychology, University of New Mexico.
1. **Reeb-Sutherland, B.C.** (April, 2006). Maternal Modulation as an Alternative for Maternal Mediation. Talk presented to the Department of Psychology, University of New Mexico.

### **Scientific Meeting Presentations**

#### ***Talks***

24. Vieites, V., Pruden, S., Shusterman, A., & **Reeb-Sutherland, B.C.** (March 2019). Eyeblink conditioning as a biomarker for children's success on spatial reorientation tests. How do navigational skills develop in typical and atypical populations? Talk presented at the Society for Research in Child Development (SRCD) Biennial Meeting: Baltimore, MD.
23. **Reeb-Sutherland, B.C.** (March, 2019). Consistency in maternal responsiveness across early infancy predicts later social behaviors. *Learning the Social World: Contingency in Infant-Caregiver Interaction Influences Infant Brain and Behavioral Development*. Talk presented at the Society for Research in Child Development (SRCD) Biennial Meeting: Baltimore, MD.
22. **Reeb-Sutherland, B.C.** (June, 2018). The relation between early contingency detection and joint attention across the first year: The moderating role of mother-infant synchrony. Symposium Chair: **Reeb-Sutherland, B.C.** *The Important Role of Maternal Contingent Responsiveness in Infant Social and Communicative Development*. Talk presented at the Biennial Meeting of the International Congress of Infant Studies (ICIS): Philadelphia, PA.
21. Pinkney, J.\*, Vieites, V.\*\*, & **Reeb-Sutherland, B.C.** (October, 2017). Delay eyeblink conditioning in young children with autism spectrum disorder. Talk and poster presented at the FIU McNair Scholars Annual Conference. Miami, FL.
20. Vieites, V.\*\*, Pruden, S.M. & **Reeb-Sutherland, B.C.** (March, 2017). Spatial reorientation ability may be linked to hippocampal development in young children. Talk presented at FIU's Graduate Student Appreciation Week Scholarly Forum. Miami, FL.
19. Vieites, V.\*\*, & **Reeb-Sutherland, B.C.** (March, 2016). Longitudinal effects of elevated levels of non-clinical maternal depression on infant and maternal behaviors during the still-face paradigm. Talk presented at FIU's Graduate Student Appreciation Week (GSAW) Scholarly Forum: Miami, FL.

18. Ramos, M.\*\* & **Reeb-Sutherland, B.C.** (March, 2016). Examining error monitoring and attentional control in youth with and without anxiety. Talk presented at FIU's Graduate Student Appreciation Week (GSAW) Scholarly Forum: Miami, FL.
17. Ramos, M. L.\*\* & Bechor, M.\*\* & Pettit, J.W., Silverman, W.K., & **Reeb-Sutherland, B.C.** (December, 2015). Error-related brain activity in youth with and without anxiety. Talk presented at FIU Center for Children and Families Speaker Series Graduate Student Data Blitz: Miami, FL.
16. Vieites, V.\*\* & **Reeb-Sutherland, B.C.** (December, 2015). Longitudinal effects of non-clinical maternal depression on infant behavior during the still-face paradigm. Talk presented at FIU Center for Children and Families Speaker Series Graduate Student Data Blitz: Miami, FL.
15. Ramos, M. L.\*\*#, Casas, A.\*, Bechor, M.\*\* & Pettit, J.W., Silverman, W.K., & **Reeb-Sutherland, B.C.** (July, 2015). Electrophysiological response during error monitoring as a potential biomarker for anxiety. Talk and poster presented at the International Society for Developmental Psychobiology (ISDP): San Sebastian, Spain. #Received NIH Travel Award from ISDP.
14. Bechor, M.\*\* & **Reeb-Sutherland, B.C.**, Ramos, M.\*\* & Pettit, J.W., & Silverman, W. (May, 2015). Neural correlates of attention to threatening stimuli among youth with and without anxiety disorders. Talk presented at FIU Center for Children and Families Speaker Series Graduate Student Data Blitz: Miami, FL.
13. Casas, A.\* & **Reeb-Sutherland, B.C.** (October, 2014). Electrophysiology of anxiety in pediatric populations. Talk and poster presented at FIU McNair Scholars Research Conference: Miami, FL.
12. Vieites, V.\*\* & Pruden, S.M., & **Reeb-Sutherland, B.C.** (May, 2014). Using hippocampal-dependent eyeblink conditioning to characterize the neural correlates involved in the development of spatial reorientation in young children. Talk presented at the South Florida Child Psychology Conference: Miami, FL.
11. Alfonso, K.\* & **Reeb-Sutherland, B.C.** (March, 2014). Non-clinical levels of maternal depression affects mother-infant interaction within the still-face paradigm. Talk presented at the Advanced Research and Creativity in Honors (ARCH) Conference: Miami, FL.
10. **Reeb-Sutherland, B.**, & Sorondo, B.^ (November, 2014). Sex differences in patterns of sleep behavior across the first year of life. Invited workshop speaker: *A Workshop on Emerging Results on Sex Differences in Early Brain and Behavior*. Talk presented at the International Perinatal Brain & Behavior Network (IPBBN): Washington, DC.
9. **Reeb-Sutherland, B.C.** (November, 2013). Blinking babies: Repurposing the classic eyeblink conditioning paradigm to understand individual differences in infant social behavior. Invited symposium speaker: *New Methods and New Insights: Rethinking the Study of Infant Development*. Talk presented at the Biennial Meeting of the Society for the Study of Human Development (SSHD): Fort Lauderdale, FL.
8. **Reeb-Sutherland, B.C.**, Suway, J.G., Hammock, E.A.D., Levitt, P., & Fox, N.A. (November, 2010). Individual differences in early associative learning predicts behavioral and neural correlates of human infant social engagement during the first year of life. Paper presented at the International Society of Developmental Psychobiology (ISDP) Annual Conference: San Diego, CA.
7. **Reeb-Sutherland, B.C.** (March, 2010). Differential learning to social vs. non-social stimuli in 1-month-old infants. Symposium Chair: *The Importance of Social Cues for Learning During Infancy*. Talk presented at the Biennial Meeting of the International Conference on Infant Studies (ICIS): Baltimore, MD.
6. **Reeb-Sutherland, B.C.**, Helfinstein, S., Vanderwert, R., Perez-Edgar, K., Henderson, H.A., Lissek, S., Grillon, C., Pine, D.S., & Fox, N.A. (March, 2009). Underlying neural correlates of attention among behaviorally inhibited adolescents moderate risk for anxiety. Symposium Chair: *Modulation of Temperamental Anxiety via Caregiving and Cognitive Mechanisms: Lessons from Cross-Species Research*. Talk presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Denver, CO.

5. **Reeb, B.C.**, Vanderwert, R.E., Perez-Edgar, K., Henderson, H.A., Pine, D.S., & Fox, N.A. (November, 2008). Physiological response to auditory novelty differentiates between behaviorally inhibited adolescents with and without a lifetime occurrence of anxiety disorders. Talk presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: Washington, DC.

4. **Reeb, B.C.**, Romeo, R.D., McEwen, B.S., & Tang, A.C. (April, 2007). Explaining early stimulation effect: Maternal modulation as an alternative to maternal mediation. Talk presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Boston, MA.

3. Tang, A.C., Akers, K.G., **Reeb, B.C.**, Korzekwa, A.M., & Rogers, L.N. (October, 2006). What makes an adaptive rat – “better” mothers or early exposure to novelty? Talk presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: Atlanta, GA.

2. Tang, A.C., & **Reeb, B.C.** (May, 2004). Modification of social memory and brain asymmetry by neonatal novelty exposure. Talk presented at the Association for Psychological Science (APS) Annual Convention: Chicago, IL.

1. Tang, A.C., **Reeb, B.**, Nakazawa, M., Romeo, R.D., Akers, K.G., & McEwen, B.S. (November, 2003). Neonatal novelty exposure modulates adult corticosterone stress response elicited by the morris water maze test. Paper presented at the International Society for Developmental Psychobiology Annual Conference: New Orleans, LA.

## **Posters**

71. Ramos, M.L.\*\* & **Reeb-Sutherland, B.C.** (February 2020). The Development of Reward Processing and Risky Behavior: An Examination of Individual Differences in Adults. Talk presented at the McKnight Midyear Research and Writing Conference: Tampa, FL.

70. Ramos, M.L.\*\* & **Reeb-Sutherland, B.C.** (October 2019). Characterizing Neural Responses during a Probabilistic Reversal Learning Task in Children. Poster presented at the Annual Meeting of the International Society of Developmental Psychobiology: Chicago, IL.

69. Clifford, C.\*\* & Ramos, M. L.\*\* & **Reeb-Sutherland, B.C.** (May 2019). Alpha and Theta Characteristics of Mother and Stranger Face Processing in 9-Month-Old Infants. Poster presented at the Association for Psychological Science: Washington, D.C.

68. **Reeb-Sutherland, B.C.**, Ramos, M.L.\*\* & Cenatus, M.\* & Pintos, R.L.\*\* (March 2019) Time Course of 5-Month-Old Social Contingency Learning and Extinction. Poster presented at the Biennial Meeting of the Society for Research in Child Development: Baltimore, MD.

67. Pankey, B.\*\* & **Reeb-Sutherland, B.C.**, & Stollstorff, M. (May, 2018). Genetic underpinnings to race bias: The interaction between the serotonin transporter gene and race/ethnicity. Poster to be presented at the Association for Psychological Science (APS) Annual Convention: San Francisco, CA.

66. Pankey, B.\*\* & **Reeb-Sutherland, B.C.**, & Stollstorff, M. (March, 2018). Genetic contributions to implicit race bias: Does race matter? Poster to be presented at Cognitive Neuroscience Society (CNS) Annual Conference: Boston, MA.

65. Vanessa, V.\*\* & Pruden, S.M., & **Reeb-Sutherland, B.C.** (October, 2017). Hippocampal-dependent eyeblink conditioning predicts children’s strategies for spatial reorientation. Poster presented at Cognitive Development Society (CDS): Portland, OR.

64. Salo, V.C.\*\* & **Reeb-Sutherland, B.C.**, Frenkel, T.I., Bowman, L.C., Fox, N.A., & Rowe, M.L. (October, 2017). Intention matters: Examining relations between parent pointing, child pointing, and developing language ability. Poster presented at Cognitive Development Society (CDS): Portland, OR.

63. Pinkney, J.\*#, Vieites, V.\*\*, McDowell, L., Gutierrez, A., & **Reeb-Sutherland, B.C.** (November, 2017). Delay eyeblink conditioning in preschool children with autism spectrum disorder. Poster presented at the International Society for Developmental Psychobiology (ISDP): Washington, DC. *#Received NIH Travel Award from ISDP.*
62. Vieites, V.\*#, Limia, J.\* , Green, E.\* , Hoang, N.\* , **Reeb-Sutherland, B.C.**, & Pruden, S.M. (November, 2017). The role of experience in gender differences in spatial aptitude. Poster presented at the International Society for Developmental Psychobiology (ISDP): Washington, DC. *#Received NIH Travel Award from ISDP.*
61. Clifford, C.\*\*#, Ramos, M.\*\* , Bechor, M.\*\* , Silverman, W.K., Pettit, J.W., & **Reeb-Sutherland, B.C.** (November, 2017). Training effects of attention bias modification on error-related negativity in youth with anxiety. Poster presented at the International Society for Developmental Psychobiology (ISDP): Washington, DC. *#Received NIH Travel Award from ISDP.*
60. Bechor, M.\*\* , Ramos, M.\*\* , Silverman, W.K., Crowley, M.J., Pettit, J.W., & **Reeb-Sutherland, B.C.** (November, 2017). Neural correlates of attention training in youth with anxiety disorders. Poster presented at the International Society for Developmental Psychobiology (ISDP): Washington, DC.
59. Ramos, M.L.\*\*#, Bechor, M. \*\* , Pettit, J.W., Silverman, W.K., & **Reeb-Sutherland, B.C.** (November, 2017). Individual differences in self-reported attentional control moderates the relation between error monitoring and anxiety in children and adolescents. Poster presented at the International Society for Developmental Psychobiology (ISDP): Washington, DC. *#Received NIH Travel Award from ISDP.*
58. Vieites, V.\*\* , Pruden, S. M., & **Reeb-Sutherland, B. C.** (May, 2017). Hippocampal-dependent eyeblink conditioning predicts children's spatial reorientation strategies. Poster presented at Association for Psychological Science (APS) Annual Convention: Boston, MA.
57. Vieites, V.\*\* , Pruden, S. M., & **Reeb-Sutherland, B. C.** (April, 2017). Relations between spatial reorientation and hippocampal-dependent learning and memory in young children. Poster presented at Biennial Meeting of the Society for Research in Child Development (SRCD): Austin, TX.
56. Ramos, M.\*\* , Bechor, M.\*\* , Pettit, J. W., Silverman, W. K., & **Reeb-Sutherland, B. C.** (April, 2017). Response Monitoring Within Youth with Anxiety and the Role of Attention. Poster presented at Biennial Meeting of the Society for Research in Child Development (SRCD): Austin, TX.
55. Green, E.\* , Limia, J.\* , Vieites, V.\*\* , **Reeb-Sutherland, B. C.**, & Pruden, S. M. (March, 2017). The role of experience in gender differences in spatial aptitude. Poster presented at Florida International University's Conference for Undergraduate Research (FIU-CFUR): Miami, FL.
54. Hoang, N.\* , Mora, P.\* , Vieites, V.\*\* , Pruden, S. M., & **Reeb-Sutherland, B. C.** (March, 2017). The role of wayfinding experience on spatial anxiety: Implications for spatial aptitude. Poster presented at Florida International University's Conference for Undergraduate Research (FIU-CFUR): Miami, FL.
53. Leonard, A.K.\*#, Ramos, M.L.\*\* , Bechor, M.\*\* , Silverman, W. K., Pettit, J. W., & **Reeb-Sutherland, B.C.** (November, 2016). Cognitive Recruitment in Youth with Anxiety during a Speeded Response Task. Poster presented at International Society for Developmental Psychobiology (ISDP): San Diego, CA. *#Received NIH Travel Award from ISDP.*
52. Ramos, M.\*\*#, Bechor, M.\*\* , Pettit, J. W., Silverman, W. K., & **Reeb-Sutherland, B. C.** (November, 2016). Enhanced Error Monitoring and Attentional Control Ability in Youth With and Without Anxiety. Poster presented at International Society of Developmental Psychobiology: San Diego, CA. *#Received NIH Travel Award from ISDP.*
51. Bechor, M.\*\*#, **Reeb-Sutherland, B. C.**, Ramos, M.\*\* , Pettit, J. W., & Silverman, W. K. (November, 2016). Neural Correlates Of Attentional Bias to Threat Among Youth with and without Anxiety Disorders. Poster

presented at International Society of Developmental Psychobiology (ISDP: San Diego, CA. *#Received NIH Travel Award from ISDP.*

50. Vieites, V.\*\*#, Pruden, S. M., & **Reeb-Sutherland, B. C.** (November, 2016). Relation between spatial reorientation and hippocampal-dependent learning and memory in young children. Poster presented at International Society for Developmental Psychobiology (ISDP): San Diego, CA. *#Received NIH Travel Award from ISDP.*

49. Bechor, M.\*\*, Ramos, M.\*\*, Pettit, J. W., Silverman, W. K., & **Reeb-Sutherland, B. C.** (October, 2016). Neural correlates of attention training in youth with anxiety disorders. Poster presented as part of the Neurocognitive Therapies/Translational Research Special Interest Group (SIG) Exposition, Association for Behavioral and Cognitive Therapies (ABCT): New York, NY.

48. Vaclavik, D.\*\*, **Reeb-Sutherland, B. C.**, Foster, A. E., Gralnik, L. M., Bechor, M.\*\*, Pettit, J., Silverman, W.K., Bar-Haim, Y., Pine, D.S., Bikson, M., & Hajcak, G. (October, 2016). Transcranial direct current stimulation augmentation of attention bias modification in children with anxiety disorders: A case series. Poster presented as part of the Neurocognitive Therapies/Translational Research Special Interest Group (SIG) Exposition, Association for Behavioral and Cognitive Therapies (ABCT): New York, NY.

47. Vaclavik, D.\*\*, Bechor, M. \*\*, Foster, A., Reeb-Sutherland, B., & Pettit, J.W. (2016, October,). Transcranial direct current stimulation as an adjuvant to attention training in an adolescent with generalized anxiety disorder: A case study. Poster presented at the FIU Annual MARC U\*STAR & MBRS RISE Student Biomedical Mini-Symposium: Miami, Florida.

46. Vieites, V.\*\* & **Reeb-Sutherland, B.C.** (May, 2016). The role of gender in spatial anxiety, wayfinding strategies, and early wayfinding experience: Implications for hippocampal-dependent learning and spatial memory in adulthood. Poster presented at the University of Miami's South Florida Child Psychology Collaborative Research Conference: Miami, FL.

45. Dominguez, A.\*, Mora, P.\* , Vieites, V.\*\* , & **Reeb-Sutherland, B.C.** (March, 2016). Elevated but non-clinical levels of anxiety and depression impair hippocampal-dependent learning and memory outcomes. Poster presented at FIU's Undergraduate Research Conference.

44. Leonard, A.K.\* , Ramos, M.L.\*\* , Bechor, M. \*\*, Pettit, J.W., & **Reeb-Sutherland, B.C.** (March, 2016). Examination of the N2 component in youth with and without an anxiety disorder. Poster presented at FIU's Undergraduate Research Conference.

43. Jimenez, M.\*#, Vieites, V.\*\* , Garduno, A.\* , & **Reeb-Sutherland, B.C.** (January, 2016). Mother-infant reciprocity scaffolds the development of joint attention in 12-month-old infants. Poster presented at the CUDCP Diversifying Clinical Psychology Networking Event: Miami, FL. *# Received 3<sup>rd</sup> Place Outstanding Research Poster Award*

42. Pintos Lobo, R.^#, Perez, J.\* , Perez, J.\* , & **Reeb-Sutherland, B.C.** (January, 2016). Conditioning social responsiveness via social contingency in 5-month-old infants. Poster presented at the CUDCP Diversifying Clinical Psychology Networking Event: Miami, FL. *# Received 1<sup>st</sup> Place Outstanding Research Poster Award*

41. Bechor, M., **Reeb-Sutherland, B.**, Pettit, J.W., Silverman, W.K., & Ramos, M. (2016, April). Neural Correlates of attentional bias to threat among youth with and without anxiety disorders. Poster presented at the 2016 Wisconsin Symposium on Emotion: Madison, WI.

40. Bechor, M.\*\* , **Reeb-Sutherland, B.C.**, Ramos, M.\*\* , Pettit, J.W., & Silverman, W. (November, 2015). Neural correlates of attentional bias to threat among youth with and without anxiety disorders. Poster presented at the Association for Behavioral and Cognitive Therapies (ABCT) Annual Convention: Chicago, IL.

39. Jimenez, M.\* , Vieites, V.\*\* , Garduno, A.\* , & **Reeb-Sutherland, B.C.** (October, 2015). Mother-infant reciprocity scaffolds the development of joint attention in 12-month-old infants. Poster presented at the Society for the Study of Human Development (SSHD) Biennial Meeting: Austin, TX.
38. Pintos Lobo, R.^ , Perez, J.\* , Perez, J.\* , & **Reeb-Sutherland, B.C.** (October, 2015). Conditioning social responsiveness via social contingency in 5-month-old infants. Poster presented at the Society for the Study of Human Development (SSHD) Biennial Meeting: Austin, TX.
37. Vieites, V.\*\* & **Reeb-Sutherland, B.C.** (October, 2015). Longitudinal effects of elevated levels of non-clinical maternal depression on infant behavior during the still-face paradigm. Poster presented at the Society for the Study of Human Development (SSHD) Biennial Meeting: Austin, TX.
36. Ramos, M. L.\*\* , Casas, A.\* , Bechor, M.\*\* , Pettit, J.W. , Silverman, W.K. , & **Reeb-Sutherland, B.C.** (May, 2015). Electrophysiological response during error monitoring as a potential biomarker for anxiety. Poster presented at the South Florida Child Psychology Research Conference: Miami, FL.
35. Vieites, V.\*\* , Alfonso, K.\* , & **Reeb-Sutherland, B.C.** (May, 2015). Reactions to still-face paradigm in infants of mothers with elevated, but non-clinical, depression. Poster presented at the South Florida Child Psychology Conference: Miami, FL.
34. Jimenez, M.\* , Vieites, V.\*\* , & **Reeb-Sutherland, B.C.** (March, 2015). Mother-infant reciprocity and the development of joint attention in 12-month-old infants. Poster presented at FIU's Undergraduate Research Conference: Miami, FL.
33. Armenteros, N.\* , Gutierrez, A. , & **Reeb-Sutherland, B.C.** (March, 2015). Eyeblink conditioning in children with autism spectrum disorder. Poster presented at the FIU Undergraduate Research Conference: Miami, FL.
32. Alfonso, K.\* , Vieites, V.\*\* , & **Reeb-Sutherland, B.C.** (March, 2015). The effect of elevated non-clinical maternal depression on 5-month-old infant behavior during the still-face paradigm. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Philadelphia, PA.
31. **Reeb-Sutherland, B.C.** , Bagner, D. , Ramos, M.\*\* , Levitt, P. , & Fox, N.A. (March, 2015). Heterogeneity in associative learning and joint attention: the moderating role of mother-infant synchrony and maternal stress. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Philadelphia, PA.
30. Salo, V.\*\* , Rowe, M. , & **Reeb-Sutherland, B.C.** (March, 2015). Maternal gesture and the development of infant joint attention. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Philadelphia, PA.
29. Sorondo, B.^ , & **Reeb-Sutherland, B.C.** (March, 2015). Associations between infant temperament, maternal stress, and infants' sleep over the first year of life. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Philadelphia, PA.
28. **Reeb-Sutherland, B.C.** , Ramos, M.\*\* , Levitt, P. , & Fox, N.A. (November, 2014). Mother-infant synchrony moderates the relation between early associative learning and joint attention. Poster presented at the International Society of Developmental Psychobiology (ISDP) Annual Conference: Washington, DC.
27. Joyas, Y.\*\* , Ramos, M.\* , **Reeb-Sutherland, B.C.** , Rowe, M.L. , Levitt, P. , & Fox, N.A. (May, 2014). Individual differences in early associative learning predicts later language development. Poster presented at the Association for Psychological Science (APS): San Francisco, CA.
26. Alfonso, K.\* , & **Reeb-Sutherland, B.C.** (February, 2014). Non-clinical levels of maternal depression affects mother-infant interaction within the still-face paradigm. Poster presented at the Florida Undergraduate Research Conference (FURC): Miami, FL.

25. Barker, T.V.\*\* , **Reeb-Sutherland, B.C.**, Pine, D.S., & Fox, N.A. (November, 2013). Threat discrimination moderates the relation between behavioral inhibition and social anxiety in middle childhood. Poster presented at the International Society of Developmental Psychobiology (ISDP) Annual Conference: San Diego, CA.
24. Tang, A.C., **Reeb-Sutherland, B.C.**, Romeo, R.D., McEwen, B.S. (November, 2013). Three moments, three variables, and three predictions: Why some measures of individual circulating corticosterone (CORT) are better functional markers than others. Poster presented at the Society for Neuroscience Annual Conference (SfN): San Diego, CA.
23. Salo, V.\*\* , Rowe, M., & **Reeb-Sutherland, B.C.** (October, 2013). Comparing early measures of child gesture and joint attention in relation to later language development. Poster presented at the Biennial Meeting of the Cognitive Development Society: Memphis, TN.
22. Barker, T.V.\*\* , **Reeb-Sutherland, B.C.**, & Fox, N.A. (October, 2012). Individual differences in fear-potentiated startle in behaviorally inhibited children. Poster presented at the International Society of Developmental Psychobiology (ISDP) Annual Conference: New Orleans, LA.
21. Rodrigues, N.^ , **Reeb-Sutherland, B.C.**, & Fox, N.A. (June, 2012). Five-month-old infant ability to coordinate attention as a predictor of responding to joint attention and language development during the second year. Poster presented at the Biennial Meeting of the International Conference on Infant Studies (ICIS): Minneapolis, MN.
20. **Reeb-Sutherland, B.C.**, Suway, J.N.\*\* , Hammock, E.A.D., Levitt, P., & Fox, N.A. (March, 2011). Heterogeneity in associative learning at one month of age predicts social responsivity at five and nine months of age. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Quebec, Montreal.
19. Yoo Chon, K.^ , Bingaman, R.^ , Martin, R.\* , **Reeb-Sutherland, B.C.**, & Fox, N.A. (March, 2011). Infant temperament as a predictor of emotion regulation in five-month-olds during the still-face paradigm. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Quebec, Montreal.
18. Kresse, A.^ , Hannan, C.\* , **Reeb-Sutherland, B.C.**, & Fox, N.A. (March, 2011). The relation between social referencing and positivity in nine-month-old infants. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Quebec, Montreal.
17. Suway, S.B.\* , Vieira, F.G.\* , Bingaman, R.L.^ , **Reeb-Sutherland, B.C.**, & Fox, N.A. (March, 2011). Early speech segmentation and later language. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Quebec, Montreal.
16. Goldstein, J.N.\*\* , Vieira, F.G.\* , Lamm, C., & **Reeb-Sutherland, B.C.** (March, 2010). Electrophysiological correlates of infant temperament and sociability. Poster presented at the Biennial Meeting of the International Conference on Infant Studies: Baltimore, MD.
15. Vanderwert, R.E.\*\* , **Reeb-Sutherland, B.C.**, Marshall, P.J., & Fox, N.A. (March, 2010). Early intervention effects on the developing EEG: Recent findings from the Bucharest Early Intervention Project (BEIP). Poster presented at the Biennial Meeting of the International Conference on Infant Studies (ICIS): Baltimore, MD.
14. **Reeb-Sutherland, B.C.**, Williams, L.R., Perez-Edgar, K., Henderson, H.A., Pine, D.S., & Fox, N.A. (March, 2009). Categorical representations for facial expressions of emotion among behaviorally inhibited adolescents. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD): Denver, CO.
13. **Reeb, B.C.**, Marshall, P.J., & Fox, N.A. (March, 2008). Temperamental differences in electrophysiological responses to auditory novelty in 3-year-old children. Poster presented at the Biennial Meeting of the International Conference on Infant Studies (ICIS): Vancouver, BC, Canada.



12. Nakazawa, M., **Reeb, B.C.**, Vandiver, N.M., & Tang, A.C. (May, 2007). Creating temperamental differences between sibling rats via 60-minutes of non-shared environment. Poster presented at the Association for Psychological Science (APS) Annual Convention: Washington, DC.
11. Nakazawa, M., **Reeb, B.C.**, Vandiver, N., & Tang, A.C. (October, 2007). Dissociating the effects of neonatal novelty exposure and maternal stress response on adult offspring spatial memory. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: San Diego, CA.
10. Yang, Z., **Reeb, B.C.**, & Tang, A.C. (October, 2007). Between-sibling and between-family difference in body weight: the role of neonatal novelty exposure and maternal stress response. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: San Diego, CA.
9. Yang, Z., Romeo, R.D., Nakazawa, M., Korzekwa, A.M., **Reeb, B.C.**, McEwen, B.S., & Tang, A.C. (November, 2007). Priming adult stress response by neonatal novelty exposure. Poster presented at the Society for Neuroscience (SfN) Annual Conference: San Diego, CA.
8. **Reeb, B.C.**, Romeo, R.D., Akers, K.G., McEwen, B.S., & Tang, A.C. (June, 2006). Maternal modulation hypothesis as an alternative to maternal mediation hypothesis. Poster presented at the Biennial Meeting of the International Congress of Neuroendocrinology (ICN): Pittsburgh, PA.
7. **Reeb, B.C.**, Romeo, R.D., McEwen, B.S., & Tang, A.C. (October, 2006). Explaining early stimulation effect: maternal mediation or maternal modulation? Poster presented at the International Society for Developmental Psychobiology Annual Conference: Atlanta, GA.
6. Korzekwa, A.M., Jaetao, E., **Reeb, B.C.**, & Tang, A.C. (October, 2006). Negative maternal behavior predicts offspring's spatial cognition. Poster presented at the International Society for Developmental Psychobiology Annual Conference: Atlanta, GA.
5. **Reeb, B.C.**, & Tang, A.C. (November, 2003). Sex Differences in Social Recognition Memory in a Longitudinal Study of the Rat. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: New Orleans, LA.
4. Tang, A.C., & **Reeb, B.C.** (October, 2002). Dynamics of Functional Brain Asymmetry Predict Changes in Social Investigation and Is Modulated by Neonatal Novelty Exposure. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: Orlando, FL.
3. **Reeb, B.C.**, Nakazawa, M., & Tang, A.C. (October, 2002). Neonatal Novelty Exposure Enhances Sex Difference in Social Interaction. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: Orlando, FL.
2. **Reeb, B.C.**, Brown, B., & Tang, A.C. (November, 2001). Neonatal Novelty Exposure Enhances Social Recognition Memory in Adult Rats. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: San Diego, CA.
1. Zou, B., **Reeb, B.C.**, Verstynen, T.D., & Tang, A.C. (October, 2000). Can Mom Tell Whether You've Left Home? – Evidence From Maternal Observations of the Rat. Poster presented at the International Society for Developmental Psychobiology (ISDP) Annual Conference: New Orleans, LA.

## **WORKS IN PROGRESS**

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### **Manuscripts Under Review**

Vaclavik, D.\*\*, Bechor, M.\*\*, Foster, A., Gralnik, L.M., Bar-Haim, Y., Pine, D.S., Bikson, M., Silverman, W.K., **Reeb-Sutherland, B.C.**, Pettit, J.W. Transcranial direct current stimulation to augment attention bias modification training in adolescents with anxiety disorders: A case series.

## **Manuscripts In Progress**

**Reeb-Sutherland, B.C.**, Bagner, D., Ramos, M.\*\*, Levitt, P., & Fox, N.A. Relation between early contingency detection and joint attention across the first year: The moderating roles of mother-infant synchrony and maternal stress.

Ramos, M.\*\* , Bechor, M.\*\* , Casas, A.\* , Silverman, W.K., Pettit, J.W., & **Reeb-Sutherland, B.C.** Individual differences in self-reported attentional control moderates the relation between error monitoring and anxiety in children and adolescents.

Bechor, M.\*\* , Ramos, M. \*\*, Silverman, W.K., Crowley, M.J., Pettit, J.W., & **Reeb-Sutherland, B.C.** Neural correlates of attention training in youth with anxiety disorders.

## **FUNDED RESEARCH**

<b>Title/Funding Agency/Grant Number</b>	<b>Role</b>	<b>Amount</b>	<b>Dates</b>
11. Individual Differences in the Development of Spatial Skills: Role of Hippocampal Function and Structure NICHD 1R01HD098152-01A1 (with Pruden (co-PI), Dick, and Mattfeld)	Co-PI	\$502,551	08/19-07/23
10. Targeting Attention Orienting to Social Threat To Reduce Social Anxiety in Youth NIMH 1R01MH119299-01 (with Pettit (PI), Silverman (co-PI), and Crowley)	Co-I	\$1,130,654	04/19-03/24
9. Intersensory Processing, Developmental Trajectories, and Longitudinal Outcomes NICHD 2R01HD053776-11 (with Bahrack (PI))	Co-I	\$616,908	04/19-03/24
8. <i>A New Biomarker of Hippocampal Functioning In Children and its Relation to the Development of Spatial Reorientation Abilities</i> Collaborative Research Award, FIU Dept of Psych (with Pruden (PI), Dick, and Mattfeld)	Co-PI	\$8,005	01/18-09/18
7. <i>Effects of Social Cues on Learning and Memory During Early Infancy</i> NICHD 1R03HD082636-01A1 (with Bahrack & Coxé (co-Is))	PI	\$145,000	08/15-07/18
6. <i>Enhancement of Attention Bias Modification Training in Adolescents with Anxiety: A Novel Use for Transcranial Direct Current Stimulation (tDCS)</i> Intramural Award, FIU Center for Children and Families	PI	\$5,000	07/15-06/16
5. <i>Examination of ERPs in Typically Developing Infants and Children with Anxiety</i> Intramural Award, FIU Center for Children and Families	PI	\$4,000	02/14-06/15
4. <i>Maternal Modulation as an Alternative to Maternal Mediation</i> Student Research Allocation Committee Award, UNM	PI	\$500	08/05-12/05

3. <i>Maternal Modulation as an Alternative to Maternal Mediation</i> Research, Projects, and Travel Award, UNM	PI	\$1000	08/05-12/05
2. <i>Asymmetric Frontal Activation and Reactivity to Novelty in Inhibited and Uninhibited Children</i> Large Research Allocation Committee Award, UNM (with Tang (PI))	co-I	\$7,325	01/05-12/05

Title/Funding Agency/Grant Number	Role	Amount	Dates
1. <i>Effects of Early Experience on Sex Differences in Social Memory</i> Student Research Allocation Committee Award, UNM	PI	\$500	01/03-06/03

#### **PATENT DISCLOSURES, APPLICATIONS, AND AWARDS**

N/A

#### **PROFESSIONAL HONORS, PRIZES, AND FELLOWSHIPS**

FIU Ignite Flame Award	2020
FIU College of Arts, Science, and Education Research Award	2019
FIU College of Arts, Science, and Education Research Award	2017
FIU UGS Provost Award for Mentorship of Graduate Students	2017
ISDP Early Career Impact Award, FABBS	2017
National Institutes of Health Loan Repayment Program Award	2013-2014
National Institutes of Health Loan Repayment Program Award	2008-2011
NIH Travel Award, International Society for Developmental Psychobiology (\$300)	2010
Postdoctoral Fellow, NIMH Conferences on Comparative and Primate Research	2006-2008
Symposium Fellowship Award, Health and Emotions Research Institute (\$500)	2006
NIH Travel Award, International Society for Developmental Psychobiology (\$500)	2006
Young Investigators Poster Award, International Congress of Neuroendocrinology (\$500)	2006
Young Investigators Student Travel Award, International Congress of Neuroendocrinology (\$250)	2006
Symposium Fellowship Award, Health and Emotions Research Institute (\$500)	2004
NIH Travel Award, International Society for Developmental Psychobiology (\$500)	2002
NIH Travel Award, International Society for Developmental Psychobiology (\$500)	2001
NIH Travel Award, International Society for Developmental Psychobiology (\$500)	2000

#### **OFFICES HELD IN PROFESSIONAL SOCIETIES**

Treasurer, International Society for Developmental Psychobiology	2018-2019
Program Director, International Society for Developmental Psychobiology	2015-2017
Program Director-Elect, International Society for Developmental Psychobiology	2014-2015
Co-Faculty Leader of the FIU-SSHD Emerging Scholar Affiliate Group	2015-2016

#### **OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

##### **Professional Service**

##### **Grant Committees**

Study Section Panelist, National Science Foundation: East Asia and Pacific Summer Institutes, 2016  
Study Section Panelist, National Science Foundation: East Asia and Pacific Summer Institutes, 2015

##### **Ad-hoc Grant Reviewer**

National Institutes for Child Health and Human Development, K99 reviewer, 2018

National Institutes for Mental Health, Special Emphasis Panel for CPDD study section, 2018  
US-Israel Bi-National Science Foundation (BSF), Psychobiology: Brain and Behavior section, 2018  
National Science Foundation: Major Research Instrumentation section, 2013  
National Science Foundation: Cognitive Neuroscience section, 2012

### **Journal Editorial Boards**

Editorial Advisory Board Member, *Mind, Brain, & Education*  
Associate Editor, *Developmental Psychobiology*

### **Ad Hoc Journal Reviewer**

*Behavioural Brain Research, Stress, Developmental Cognitive Neuroscience, Psychoneuroendocrinology, PLoS ONE, Frontiers in Human Neuroscience, International Journal of Developmental Neuroscience, Hormones and Behavior, Emotion, International Neuropsychiatric Disease Journal, Child Development, Psychophysiology, Journal of Abnormal Child Psychology, Nature and Science of Sleep, Developmental Psychology, Social and Cognitive Affective Neuroscience, Biological Psychiatry, Psychological Medicine, Psychiatry Research, Journal of Experimental Child Psychology, Developmental Psychobiology, Frontiers in Behavioral Neuroscience, Cognitive, Affective, and Behavioral Neuroscience, Journal of Child Psychology and Psychiatry, Neuropsychologia, Behavior Therapy, Physical Therapy, International Journal of Psychophysiology, Infant Behavior and Development, Behavior Therapy, Neuropsychobiology, Frontiers in Psychology, Current Psychology Research and Reviews, Development and Psychopathology, Psychiatry Research, Infant and Child Development,*

### **Conference Reviewer**

International Society for Developmental Psychobiology 2017 Annual Meeting  
Society for Research in Child Development 2017 Biennial Meeting, Panel 3: Cognitive Processes  
International Society for Developmental Psychobiology 2016 Annual Meeting  
International Society for Developmental Psychobiology 2015 Annual Meeting  
International Conference on Infant Studies 2014 Biennial Meeting, Panel 7: Social Development  
Society for Research in Child Development 2009 Biennial Meeting, Panel 30: Neuroscience and Child Development

### **Other Conference Activities**

*Meet the Professors* event participant, International Society for Developmental Psychobiology 2017 Annual Meeting  
Poster Judge, International Society for Developmental Psychobiology 2017 Annual Meeting  
Session Chair/Moderator, International Society for Developmental Psychobiology 2016 Annual Meeting  
Session Chair/Moderator, International Society for Developmental Psychobiology 2015 Annual Meeting  
*Meet the Professors* event participant, International Society for Developmental Psychobiology 2012 Annual Meeting

### **Professional Affiliations**

International Society of Developmental Psychobiology (ISDP), 2000-Present  
Society for Neuroscience (SFN), 2000-Present  
Society for Research in Child Development (SRCD), 2006-Present  
International Congress of Infant Studies (ICIS), 2007-Present  
Association for Psychological Science (APS), 2004-Present  
Society for Psychophysiological Research (SPR), 2011-Present

### **Department, College, and University Service**

#### **Service to Department (Florida International University)**

Developmental Science Program Committee (2012-present)  
Cognitive Neuroscience Program Committee (2014-present)  
Undergraduate Curriculum Committee (2013-2014)  
Psychology Colloquium Committee (2013-present)

Panelist, Post-Doc Workshop, Psychology Student Government Association (April, 2015)  
Panelist, Publishing Workshop, Psychology Student Government Association (October, 2015)  
Psychology Igniter (2017-present)  
Cognitive Neuroscience Program Faculty Search Committee (2017-2018)  
Reviewer, Psychology Graduate Student Seed Funds (Spring 2017)  
Reviewer, Psychology Graduate Student Seed Funds (Fall 2017)  
Faculty Member, Health and Wellness Committee

### **Service to College and University (Florida International University)**

Member, Center for Children and Families (2012-present)  
Co-Coordinator, Center for Children and Families Speaker Series (2013-2016)  
Mentee, College of Arts & Sciences Faculty Mentor Program (Mentor: K. Rein)  
Faculty Mentor, McNair Undergraduate Program (2014-present)  
Panelist, Developing Your Curriculum Vita, FIU CCF Graduate Professional Development Series (January, 2014)  
Panelist, Writing and Submitting Manuscripts, FIU CCF Graduate Professional Development Series (March, 2014)  
Panelist, Applying and Interviewing for Internship/Postdoc/Faculty Positions, FIU CCF Graduate Professional Development Series (April, 2014)  
Faculty Mentor, MBRS RISE Program (2015-2017)  
Faculty Mentor, MARC U\*STAR Program (2015-present)  
Panelist, Surviving (and Thriving) in Graduate School, FIU CCF Graduate Professional Development Series (January, 2015)  
Panelist, Graduate and Post-Doctoral Research and Fellowship Funding, FIU CCF Graduate Professional Development Series (February, 2016)  
Faculty Judge, Graduate Student Appreciation Week (Spring, 2017)  
Member, CASE Faculty Development Committee (Spring, 2018)  
Faculty Judge, Biomedical and Comparative Immunology Symposium (Spring, 2018)  
Faculty Judge, FIU Conference for Undergraduate Research (Spring, 2018)  
Member, McNair Advisory Council (Fall, 2019 - )  
Mentor, College of Arts & Sciences Faculty Mentor Program (Fall 2019 - )

### **Public Service**

Exhibiter, College of Arts & Sciences Undergraduate Open House (Fall 2015)  
Congressional Delegate, Federation of Associations in Behavioral and Brain Sciences (October 2017)  
Susan G. Komen Miami/Ft. Lauderdale Affiliate Board of Directors (April 2018-present)

### **Popular Press and Media**

3. *Paying Attention to Pediatric Anxiety*, FABBS News, July 21, 2017.  
(<http://fabbs.org/2017/06/21/paying-attention-to-pediatric-anxiety/>)
2. *1 Year, 1 Newborn, 2 Awards, 1 Cancer Diagnosis*, FIU News, April 3, 2017  
(<http://news.fiu.edu/2017/04/1-year-1-newborn-2-awards-1-cancer-diagnosis/110276>)
1. *Sleeping Babies Learn in an Eyeblink*, Science News, June 30, 2011  
([http://www.sciencenews.org/view/generic/id/332049/title/Sleeping\\_babies\\_learn\\_in\\_an\\_eyeblink](http://www.sciencenews.org/view/generic/id/332049/title/Sleeping_babies_learn_in_an_eyeblink))

**Mentoring and Advising**

Graduate student supervision (\*committee chair, ^ committee member)

<b>FIU Ph.D. Candidates</b>	<b>Major</b>	<b>Status</b>
Michelle Ramos*	Developmental Science/ Cognitive Neuroscience Enrolled Fall 2014	Projected Defense Fall 2020
Vanessa Vieites*	Developmental Science Enrolled Fall 2015	Projected Defense Summer 2020
Brianna Pankey*	Neuroscience	Projected Defense Summer 2021
Pablo Currea	Developmental Science	Projected Defense Spring 2021 (Mentor: Lickliter)
Daniella Vaclavik^	Clinical Science	Projected Defense Summer 2020 (Mentor: Pettit)
Starlie Belnap^	Developmental Science	Defended Fall 2019 (Mentor: Lickliter)
Michele Bechor^	Clinical Science/ Cognitive Neuroscience	Defended Spring 2018 (Mentor: Pettit)
Adam Zimmerman^	Developmental Science	Defended Fall 2016 (Mentor: Stephens)
Elaine Espanola^	Developmental Science	Defended Fall 2015 (Mentor: Gutierrez)
Desiree Espinal^	Developmental Science	Defended Fall 2014 (Mentor: Gutierrez)
Joshua Herrington^	Developmental Science	Defended Summer 2014 (Mentor: Lickliter)
<b>FIU M.S. Candidates</b>	<b>Major</b>	<b>Status</b>
Christopher Clifford*	Developmental Science/ Cognitive Neuroscience Enrolled Fall 2016	Defended Fall 2019 (Mentor: Reeb-Sutherland)
Elsa Bravo^	Developmental Science	Defended Summer 2018 (Mentor: Pruden)
Myriah McNew^	Developmental Science	Defended Fall 2017 (Mentor: Bahrck)
Brianna Pankey*	Cognitive Neuroscience Enrolled Fall 2015	Defended Summer 2017 (Members: Dick, Mattfeld)
Michelle Ramos*	Developmental Science/ Cognitive Neuroscience Enrolled Fall 2014	Defended Summer 2017 (Members: Pettit, Nelson, Sutherland)
Vanessa Vieites*	Developmental Science Enrolled Fall 2013	Defended Summer 2017 (Members: Pruden, Dick)
Emily Boeving^	Developmental Science	Defended Spring 2015

(Mentor: Nelson/Lickliter)

Starlie Belnap^	Developmental Science	Defended Fall 2016 (Mentor: Lickliter)
Elaine Espanola^	Developmental Science	Defended Summer 2014 (Mentor: Gutierrez)

<b>FIU Honors Thesis</b>	<b>Major</b>	<b>Status</b>
Marqueline Cenataus*	Psychology	Defended Fall 2019
Mariana Barbara*	Psychology	Defended Spring 2018
Kaitlyn Testa^	Psychology	Defended Spring 2018 (Mentor: Bahrlick)
Anna Leonard*	Psychology	Defended Fall 2016
Natalie Armenteros*	Psychology	Defended Spring 2016
Yvette Rodriguez^	Psychology	Defended Spring 2015 (Mentor: Lickliter)
Marianne Jimenez*	Psychology	Defended Summer 2015
Marcela Ramos^	Psychology	Defended Spring 2014 (Mentor: Pruden)
Alejandro Casas*	Psychology/Philosophy	Defended Fall 2014
Katherine Alfonso*	Psychology	Defended Summer 2014

<b>Undergraduate Supervision</b>	<b>Major</b>	<b>Term</b>
Donique Burke	Psychology	Spring 2013 – Summer 2013
Beatriz Buzzi	Psychology	Spring 2013-Fall 2013
Melissa Alegria	Psychology	Spring 2013-Spring 2014
Fatima Ahmed	Psychology	Spring 2013-Summer 2015
Alena Stumbre	Psychology	Spring 2013-Summer 2013
Irma Mesa	Psychology	Spring 2013-Fall 2013
Katherine Alfonso	Psychology	Summer 2013-Summer 2014
Seyna Yeakey	Psychology	Summer 2013-Fall 2013
Mei-Ling Fernandez	Psychology	Summer 2013-Spring 2014
Jessire Perez	Psychology	Summer 2014-Summer 2015
Sara Bloom	Psychology	Fall 2014-Spring 2015
Alejandro Casas	Psychology	Spring 2014-Fall 2014
Natalie Armenteros	Psychology	Summer 2014-Present
Jessica Perez	Psychology	Spring 2015-Summer 2015
Nilda Chery	Psychology	Fall 2014-Spring 2015
Karina Amor	Psychology	Spring 2015-Summer 2015
Marianne Jimenez	Psychology	Fall 2014-Spring 2016
Andrea Garduno	Psychology	Summer 2014 (Summer Intern)
Margarita Alvarez	Psychology	Summer 2015-Fall 2015
Alexis Landa	Psychology	Summer 2015-Fall 2015
Andrea Dominguez	Psychology	Summer 2015-Present
Anna Leonard	Psychology	Spring 2015-Present
Dayana Orta	Psychology	Summer 2015-Fall 2015
Michelle Caldera	Psychology	Summer 2015-Fall 2016
Nadya Ariano	Psychology	Summer 2015-Summer 2016

Paolanthon Mora	Psychology	Summer 2015-Fall 2016
Jorge Limia	Psychology	Spring 2015-Fall 2017
Elaine Green	Psychology	Spring 2015-Spring 2016
Nhan Hoang	Psychology/Pre-Med	Spring 2015-Fall 2017
Hannah Bell	Psychology	Spring 2015-Spring 2016
Eduardo Leon	Psychology/Pre-Med	Fall 2016-Fall 2017
Jacqueline Pivaral	Psychology	Spring 2017-Fall 2017
Hector Aguilar	Psychology	Fall 2017-Present
Mariana Barbara	Psychology	Fall 2017-Present
Justyce Pankey	Psychology	Spring 2017-Present
Marqueline Cenatus	Psychology	Spring 2018-Present

### **Undergraduate Student/Post-Bac**

### **Awards, Honors, and Fellowships**

Marqueline Cenatus	Ronald E. McNair Fellowship
Justyce Pankey	Ronald E. McNair Fellowship
Anna Leonard	Ronald E. McNair Fellowship
Alejandro Casas	Ronald E. McNair Fellowship
Alejandro Casas	FIU Award for Academic Excellence

### **Teaching Experience**

### **Term**

#### **Primary Instructor**

\*Research Seminar in Psychosocial Development (DEP 5725)

FA 2012 (7); FA 2014 (7); FA 2017 (7); SP 2019

Special Topics: Psychosocial Development (PSY 4930)

FA 2012 (6)

\*Integrating Theory and Research in Dev Science (DEP 5936)

SP 2014 (9)

Infant Knowledge (DEP 3115)

SP 2015 (69); FA 2015 (127), FA 2019 (125)

Social Development (DEP 4182)

SP 2013 (68); SP 2014 (68); SU 2014 (62); FA 2014 (78); SP 2015 (79); SU 2015 (68); FA 2015 (80); SP 2016 (69); SU 2016 (62); SP 2017 (69); SU 2017 (69); FA 2017 (69); SP 2018 (76)

\*Introduction to Psychophysiology (PBS 5115)

FA 2018 (12)

\*Biological Basis of Behavioral Development (DEP 5058)

FA 2019 (9)



**Bennett L. Schwartz**

Curriculum Vitae

**Address:**

Department of Psychology  
College of Arts and Sciences  
Florida International University  
University Park, Miami, FL, 33199  
phone: (305) 348-4025  
email: bennett.schwartz@fiu.edu  
web: <http://www.bennettschwartz.com/home>

**Education:**

1993            Ph.D., Cognitive Psychology, June, 1993  
                  Dartmouth College, Hanover, NH.  
                  Dissertation: Mechanisms of Feeling of Knowing in Memory.  
1988            A.B., cum laude with High Honors in Psychology, June, 1988  
                  Dartmouth College, Hanover, NH.

**Professional Positions:**

2007 – present      Professor, Florida International University  
1998 - 2007        Associate Professor, Florida International University  
1993 - 1998        Assistant Professor, Florida International University  
1992                Instructor in Psychology, Dartmouth College.

**Membership in Professional Associations:**

Member -- Psychonomic Society  
Member – Southern Society of Philosophy and Psychology  
Member – Women in Cognitive Science  
Member – Division 3, APA

**Research:**

Research Interests

1. Metacognition -- tip-of-the-tongue states, feelings of knowing and judgments of learning, heuristics in metacognition, applications of metacognition to education.
2. Memory -- Adaptive memory and survival processing. Relation between objective and subjective indices of human memory. Episodic memory in non-human primates.

**Books**

Purdy, J., Markham, M., Schwartz, B. L., & Gordon, W. G. (2001). Learning and Memory, 2nd Edition. Wadsworth: California. (textbook)

Schwartz, B. L. (2002). Tip-of-the-tongue states: Phenomenology, mechanism, and lexical retrieval. Lawrence Erlbaum: New Jersey. (sole-authored)

Perfect, T. J., & Schwartz, B. L. (2002). Applied Metacognition. Cambridge University Press: Cambridge, UK. (edited volume).

Schwartz, B. L. (2011). Memory: Foundations and Applications. Sage Publishers: Thousand Oaks, CA. (textbook).

B. Schwartz, B. L., Howe, M. L., Toglia, M. P., & Otgaar, H. (2014). What is adaptive about adaptive memory? Oxford University Press. (edited volume).

Schwartz, B. L. (2014). Memory: Foundations and Applications, 2<sup>nd</sup> Edition. Sage Publishers: Thousand Oaks, CA. (textbook).

Schwartz, B. L., & Brown, A. S. (2014). Tip-of-the-tongue states and related phenomena. Cambridge University Press. (edited volume).

Schwartz, B. L. & Krantz, J. H. (2016). Sensation and Perception. Sage Publishers: Thousand Oaks, CA. (textbook).

Schwartz, B. L. (2017). Memory: Foundations and Applications, 3<sup>rd</sup> Edition. Sage Publishers: Thousand Oaks, CA. (textbook).

Schwartz, B. L. & Krantz, J. H. (2019). Sensation and Perception. 2<sup>nd</sup> Edition. Sage Publishers: Thousand Oaks, CA. (textbook).

Otani, H., & Schwartz, B. L. (2019). Handbook of Research Methods in Human memory. Routledge Press New York, New York. (edited volume).

Dickinson, J., J., Schreiber Compo, N., Carol, R. N., Schwartz, B. L., & McCauley, M. (2019). Evidence-Based Investigative Interviewing. Routledge Press. (edited volume).

Cleary, A. M., & Schwartz, B. L. (2021). Memory Quirks: The Study of Odd Phenomena in Memory. Routledge Press. (edited volume).

Schwartz, B. L. (2021). Memory: Foundations and Applications, 4<sup>th</sup> Edition. Sage Publishers: Thousand Oaks, CA. (textbook).

**Refereed Publications:**

Schwartz, B. L., & Metcalfe, J. (1992). Cue familiarity but not target retrievability enhances feeling-of-knowing judgments. Journal of Experimental Psychology: Learning, Memory, and Cognition, 18, 1074-1083.

Kersten, D., Bulthoff, H. H., Schwartz, B. L., & Kurtz, K. J. (1992). Interaction between transparency and structure from motion. Neural Computation, 4, 573-589.

Metcalfe, J., Schwartz, B. L., & Joaquim, S. G. (1993). The cue familiarity heuristic in metacognition. Journal of Experimental Psychology: Learning, Memory, and Cognition, 19, 851 - 861.

Schwartz, B. L. (1994). Sources of information in metamemory: Judgments of learning and feelings of knowing. Psychonomic Bulletin and Review, 1, 357 - 375.

Schwartz, B.L., & Smith, S. M. (1997). The retrieval of related information influences tip-of-the tongue states. Journal of Memory and Language, 36, 68 - 86.

Schwartz, B. L., Benjamin, A. S., & Bjork, R. A. (1997). The inferential and experiential basis of metamemory. Current Directions in Psychological Science, 6, 132 - 137.

Benjamin, A. S., Bjork, R. A., & Schwartz, B. L. (1998). The mismeasure of memory: When retrieval fluency is misleading as a metamnemonic index. Journal of Experimental Psychology: General, 127, 55 - 68.

Schwartz, B. L., Fisher, R. P., & Hebert, K. S. (1998). The relation of output order and commission errors in free recall and eyewitness accounts. Memory, 6, 257 - 275.

Schwartz, B. L. (1998). Illusory tip-of-the-tongue states. Memory, 6, 623 - 642.

Schwartz, B. L. (1999). Sparkling at the end of the tongue: The etiology and phenomenology of tip-of-the-tongue states. Psychonomic Bulletin and Review, 6, 379 - 393.

Schwartz, B. L., Travis, D. M., Castro, A. M., & Smith, S. M. (2000). The phenomenology of real and illusory tip-of-the-tongue states. Memory & Cognition, 28, 18 - 27.

Schwartz, B. L. (2001). The relation of tip-of-the-tongue states and retrieval time. Memory & Cognition, 29, 117 - 126.

Schwartz, B. L., & Evans, S., (2001). Episodic memory in primates. American Journal of Primatology, 55, 71 - 85.

Schwartz, B. L. (2002). The strategic control of retrieval during tip-of-the-tongue states. Korean Journal of Creativity and Problem-Solving, 12, 27 – 38.

Schwartz, B. L., Colon, M. R., Sanchez, I. C., Rodriguez, I. A., & Evans, S. (2002). Single-trial learning of "what" and "who" information in a gorilla (*Gorilla gorilla gorilla*): Implications for episodic memory. Animal Cognition, 5, 85 – 90.

Maril, A., Simons, J. S., Mitchell, J. P., Schwartz, B. L., & Schacter, D. L. (2003). Feeling of knowing in episodic memory: An event-related fMRI study. NeuroImage, 18, 827 – 836.

Schwartz, B. L., Meissner, C. A., Hoffman, M., Evans, S., & Frazier, L. D. (2004). Event memory and misinformation effects in a gorilla (*Gorilla gorilla gorilla*). Animal Cognition, 7, 93 – 100.

Hampton, R. R. & Schwartz, B. L. (2004). Episodic Memory in Nonhumans: What, and Where, is When? Current Opinion in Neurobiology, 14, 192 – 197.

Schwartz, B. L., Hoffman, M. L., & Evans, S. (2005). Episodic-like memory in a gorilla: A review and new findings. Learning and Motivation, 36, 226 – 244.

Schwartz, B.L. & Frazier, L. D. (2005). Tip-of-the-tongue states and aging: Contrasting psycholinguistic and metacognitive perspective. Journal of General Psychology, 132, 377-391.

Matvey, G., Dunlosky, J., & Schwartz, B. L. (2006). The effects of categorical relatedness on judgments of learning (JOLs). Memory, 14, 253 – 261.

Schwartz, B. L. (2006). The feeling of going: Judgments of learning (JOLs) for maps and directions. Korean Journal of Creativity and Problem-Solving, 16, 5 – 16.

Schwartz, B. L. (2006). Tip-of-the-tongue states as metacognition. Metacognition and Learning, 1, 149 – 158.

Bacon, E., Schwartz, B. L., Paire-Ficout, L., & Izaute, M. (2007). Dissociation between the cognitive process and the phenomenological experience of the TOT: effect of the anxiolytic drug lorazepam on TOT states. Cognition and Consciousness, 16, 360 – 373.

Schwartz, B. L. (2008). Working memory load differentially affects tip-of-the-tongue states and feeling-of-knowing judgment. Memory & Cognition, 36, 9 – 19.

Allen, M. & Schwartz, B. L. (2008) Mirror self-recognition in a gorilla (*Gorilla gorilla gorilla*). Journal of Integrated Biosciences, 3, 19 – 24.

Schwartz, B. L. (2010). The effects of emotion on tip-of-the-tongue states. Psychonomic Bulletin & Review, 17, 82 – 87.

Kersten, A. W., Meissner, C. A., Lechuga, J. Schwartz, B. L., Iglesias, A., & Albrechtsen, J. S. (2010). English Speakers Attend More Strongly than Spanish Speakers to Manner of Motion when Classifying Novel Objects and Events. Journal of Experimental Psychology: General, 139, 638 – 653.

Schwartz, B. L. (2011). The effect of being in a tip-of-the-tongue state on subsequent items. Memory & Cognition, 39, 245 – 250.

Schwartz, B. L., Son, L. K., Kornell, N., & Finn, B. (2011). Four principles of memory improvement: A guide to improving learning efficiency. International Journal of Creativity and Problem Solving, 21, 7 – 15.

Schwartz, B. L., & Metcalfe, J. (2011). Tip-of-the-tongue (TOT) states: Retrieval, Behavior, and Experience. Memory & Cognition, 39, 737 – 749.

Schwartz, B. L., & Efklides, A. (2012). Metamemory and Memory efficiency: Implications for Student Learning. Journal of Applied Research in Memory And Cognition, 1, 145 – 151.

Sellers, P. D. II, & Schwartz, B. L. (2013). Episodic-like animals, functional faces, and a defense of accuracy. Journal of Applied Research in Memory And Cognition, 2, 243 – 245.

Hoffman, M. L., & Schwartz, B. L. (2014). Metacognition does not imply self-reflection, but it does imply function. Journal of Comparative Psychology, 128, 150 – 151.

Schwartz, B. L., Bacon, E., & Pillot, M. (2014). The contribution of partial and contextual information to the feeling of knowing in episodic memory. Consciousness & Cognition, 29, 96 – 104.

Bacon E., Pillot M., Sevdinoglou E., Schwartz B.L. (2015). Exploration des processus sous-tendant l'élaboration des jugements introspectifs relatifs à leur mémoire chez les patients schizophrènes. *L'encéphale*, 41, 50.

Schwartz, B. L., Boduroglu, A., & Tekcan, A. I. (2016). Methodological concerns: The feeling-of-knowing task affects resolution. *Metacognition and Learning*, 11, 305 – 316.

Brogaard, B., Marlow, K., Overgaard, M., Schwartz, B. L., Zopluoglu, C., Tomson, S., Neufeld, J., Sinke, C., Owen, C., & Eagleman, D. (2017). Deaf Hearing: Implicit Discrimination of Auditory Content in a Patient with Mixed Hearing Loss. *Philosophical Psychology*, 30, 21 – 43.

Metcalf, J., Schwartz, B. L., & Bloom, P. A. (2017). The tip-of-the-tongue state (TOT) and the urge to Google: A metacognitive goad to epistemic action? *Cognitive Research: Principles and Implications*, 2, 1- 8 (December).

Evans, J.R., Schreiber Compo, N., Carol, R. N., Schwartz, B. L., Holness, H., Rose, S., & Furton, K. G. (2017). Alcohol intoxication and metamemory: Little evidence that moderate intoxication impairs metacognitive monitoring processes. *Applied Cognitive Psychology*, 31, 573 – 585. doi: 10.1002/acp.3373

Bacon, E., Pillot, M., Izaute, M., & Schwartz, B. L. (2018). What do patients with schizophrenia rely on when monitoring the accuracy of their memory reporting. *Metacognition and Learning*, 13, 91 – 108.

Jemstedt, A., Schwartz, B. L., & Jönsson, F. U. (2018). Ease of learning judgments are based on both processing fluency and beliefs. *Memory*, 26, 807 – 815.

Schwartz (2019). Using natural ecology to predict higher cognition in human and non-human primates. *Animal Behavior and Cognition*, 6, 344 - 354.  
<https://doi.org/10.26451/abc.06.04.13.2019>

Schwartz, B. L., Peynircioğlu, Z. F., & Tatz, J. R. (2019, online). Effects of processing fluency on metamemory for written music in piano players. *Psychology of Music*.

Metcalf, J., Schwartz, B. L., & Eich, T. S. (in press). Epistemic Curiosity and the Region of Proximal Learning. *Current Opinion in Behavioral Sciences*.

### **Book Chapters, Commentaries, & Book Reviews:**

Schwartz, B. L., & Metcalfe, J. (1994). Methodological problems and pitfalls in the study of human metacognition. In J. Metcalfe & A. Shimamura (Eds.) *Metacognition: Knowing about knowing*. pp. 93-114.

Schwartz, B. L. (1996). Amnesia and metamemory demonstrate the importance of both metaphors. *Behavioral and Brain Sciences*, 19, 207.

Schwartz, B. L. (2000). Skirmishes in the memory wars: A review of Williams and Banyard's (Eds.) *Trauma and Memory*. *Applied Cognitive Psychology*, 14, 594 - 595.

Schwartz, B. L. (2002). The phenomenology of naturally-occurring tip-of-the-tongue states: A diary study. In S. P. Shohov (Ed). *Advances in Psychology*, Volume 8, Nova Science Press: New York, pp. 72 – 84.

Schwartz, B. L., & Perfect, T. J. (2002). Toward an applied metacognition. In T. J. Perfect & B. L. Schwartz (Eds.) Applied Metacognition. pp. 1 – 11.

Son, L. K., & Schwartz, B. L. (2002). The relation between metacognitive monitoring and control. In T. J. Perfect & B. L. Schwartz (Eds.) Applied Metacognition. pp. 15 – 38.

Son, L. K., Schwartz, B. L., & Kornell, N. (2003). Implicit metacognition, explicit uncertainty, and the monitoring/control distinction in animal metacognition. Behavioral and Brain Sciences, 26, 355- 356.

Schwartz, B. L. (2005). Do animals have episodic memory? In H. Terrace & J. Metcalfe (Eds). The missing link in cognition: Origins of self-reflective consciousness. pp. 225 – 241.

Schwartz, B. L. (2005). A wonderful ride through the world of agnosia: A review of Martha J. Farah's Visual Agnosia, 2<sup>nd</sup> edition. Applied Cognitive Psychology, 19, 963 – 964.

Schwartz, B. L. (2006). Annäherungen an eine vergleichende Psychologie des episodischen Gedächtnisses. [Toward a comparative psychology of episodic memory: Studies with a gorilla.] In H. Welzer & H. Markowitsch (Eds). Warum Menschen sich erinnern können. [Interdisciplinary approaches to Autobiographical memory]. pp. 189 – 204.

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Schwartz, B.L., Metcalfe, J. (2017) Metamemory: An Update of Critical Findings. In: Wixted, J.T. (ed.), *Cognitive Psychology of Memory, Vol. 2 of Learning and Memory: A Comprehensive Reference, 2nd edition*, Byrne, J.H. (ed.). pp. 423–432. Oxford: Academic Press. <http://dx.doi.org/10.1016/B978-0-12-809324-5.21056-0>



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Otani, H., Schwartz, B. L., & Knoll, A. R. (2019). History of methods in Memory Science: From Ebbinghaus to fMRI. In H. Otani & B.L. Schwartz (Eds). *Research methods in Human memory research*. Routledge Press. pp. 1 – 18.

Peynircioğlu, Z., F., Mungan, E., & Schwartz, B. L. (2019). Challenges in music memory research. In H. Otani & B.L. Schwartz (Eds). *Research methods in Human memory research*. Routledge Press. pp. 330 – 353.

Schwartz, B. L. (2019). A community of minds: Commentary on Mather on Octopus Mind. *Animal Sentience*.  
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Schwartz, B. L., & Jemstedt, A. (in press). The role of fluency and dysfluency in metacognitive experiences. In P. Metallidou and D. Moraitou (Eds.) *Trends and Prospects in Metacognition Research across the Lifespan – a tribute to Anastasia Efklides*. New York, NY: Springer.

### **Manuscripts under review:**

Pournaghdali, A., Schwartz, B. L., Hays, J., & Soto, F. A. (under revision). Sensitivity vs. Awareness Curve: A Novel Model-Based Analysis to Uncover the Processes Underlying Nonconscious Perception. *Psychological Science*.

Pournaghdali, A., & Schwartz, B. L. (under revision). Continuous Flash Suppression: Known and Unknowns. *Psychonomic Bulletin & Review*.

Jönsson, F. U., Jemstedt, A., Eshraty, H. M., Schwartz, B. L., & Kubik, V. (under review). Cue competition explains when pre- and post-study judgments differ in accuracy. *Zeitschrift für Psychologie*.

Kubik, V., Jemstedt, A., Schwartz, B. L., & Jönsson, F. U. (under review). The Underconfidence-With-Practice Effect in Action Memory: The Influence of Enactment and Testing on Metacognitive Monitoring. *Metacognition and Learning*.

Frazier, L. D., Schwartz, B. L., & Metcalfe J. (under review). The MAPS model of Self-Regulation: Integrating metacognition, agency, and possible selves. *Metacognition and Learning*.

### **Conference Presentations:**

Pournaghdali, A., Schwartz, B.L., Soto, F.A. Sensitivity vs. awareness curve: a novel model-based analysis to uncover the processes underlying nonconscious perception The 53rd Annual Meeting of the Society for Mathematical Psychology (virtual).

Pournaghdali, A & Schwartz, B. L. "Tip of the Tongue for Emotional Faces." Southern Society of Philosophy and Psychology, March, 2020. Louisville, KY. Conference canceled.

Schwartz, B. L. Fluency affects memory and metamemory for written music. Southern Society of Philosophy and Psychology, March, 2020. Louisville, KY. Conference canceled.

Schwartz, B. L. Comparing Paradigms of Conscious Cognition in Humans and Non-human Primates. Presented at the 58<sup>rd</sup> annual meeting of the Psychonomics Society, Montreal, QC, November 2019.

Schwartz, B. L. What Memory Quirks, Hiccups and Odd Phenomena Tell Us. Symposium presented at the 58<sup>rd</sup> annual meeting of the Psychonomics Society, Montreal, QC, November 2019.

Schwartz, B. L. Improving Memory Efficiency. Perceptual and Cognitive Illusions: Quirks of our Everyday Experience. Fort Collins, Colorado, June 19, 2019. **Invited Talk.**

Schwartz, B. L. Tip of the Tongue States: An overview. Perceptual and Cognitive Illusions: Quirks of our Everyday Experience. Fort Collins, Colorado, June 18, 2019. **Invited Talk.**

Schwartz, B. L. Déjà vu experiences: What confusions of past and present tell us about the nature of episodic representation. Presented at Southern Society of Philosophy and Psychology, March, 7 2019. Cincinnati, Ohio.

Schwartz, B. L., Peynircioğlu, Z.F., & Tatz, J.R. Fluency and metamemory for written music. Presented at the 57<sup>rd</sup> annual meeting of the Psychonomics Society, New Orleans, La, November 16. 2018.

Pournaghdali, A., & Schwartz, B. L. Conservative criterion explains the non-conscious perception of facial expression under continuous flash suppression. Poster presentation at 18<sup>th</sup> Meeting of the Vision Sciences Society, May 22, 2018, St Pete Beach, Florida.

Schwartz, B.L. Tip-of-the-tongue states: A tribute to Alan Brown. Presented at Memory Quirks, the Study of Odd Phenomena in Memory: A conference in Honor of Dr. Alan Brown's retirement. April 27, 2018. Southern Methodist University Dallas, TX. **Invited Speaker.**

Schwartz, B.L. Varieties of fluency and metamemory for musical notation judgments. Presented at Southern Society of Philosophy and Psychology, March, 15 2018, San Antonio, TX.

Metcalf, J., Bloom, P. A., & Schwartz, B. L. The Tip of the Tongue (TOT) state and curiosity. Presented at the 56<sup>th</sup> annual meeting of the Psychonomics Society, Vancouver BC, November, 2017.

Schwartz, B. L. Mechanisms of metacognition in non-human primates. Presented at The Learning from Apes and other Nonhuman Animals Conference. October 20, 2017. Atlanta, Georgia. **Invited Speaker.**

Jemstedt, A., Jönsson, F. U., Schwartz, B. L., & Kubik, V. Metacognitive judgments and the predictive validity of available information. Presented at Southern Society of Philosophy and Psychology, March, 23 2017, Savannah, GA.

Peynircioğlu, Z.F., & Schwartz, B. L. Influences of effort and fluency on memory for written music. Presented at Southern Society of Philosophy and Psychology, March, 23, 2017, Savannah, GA. **Invited Speaker.**

Pournaghdali, A., & Schwartz, B. L. Cognitive Bias and Conscious Perception. Presented at Southern Society of Philosophy and Psychology, March, 23, 2017, Savannah, GA.

Gatzia, D. E., & Schwartz, B. L. I think it's going to hurt: the effects of cognition on pain perception. Presented at the Eastern Philosophical Association Meeting. January 2017.

Schwartz, B. L. Judgments of learning and efficient learning. Invited colloquium, Aristotle University, Thessaloniki, Greece, December 19, 2016. **Invited speaker.**

Schwartz, B. L. Tip-of-the-tongue (TOT) states: Metacognition and Conscious Experience. Psychological Society of Northern Greece, December 17, 2016, Thessaloniki, Greece. **Invited Keynote speaker.**

Peynircioğlu, Z.F., & Schwartz, B. L. Influences of effort and fluency on memory

for written music. Presented at the 55<sup>rd</sup> annual meeting of the Psychonomics Society, Boston, Ma, November, 2016.

Karadöller , D. Z., Boduroglu, A., Teckan, A. İ., & Schwartz, B. L. The Effect of Timing and Stimulus Qualities on Feeling-of-Knowing Judgments. International Conference on Memory (ICOM). July, 2016, Budapest, Hungary.

Gatzia, D. E., & Schwartz, B. L. I think it's going to hurt: the effects of cognition on pain perception. Presented at Ohio Philosophical Association Meeting, April 9, 2016, Columbus, Ohio.

Schwartz, B. L. Metacognition and Conscious Experience. Southern Society of Philosophy and Psychology, March 11, 2016, Louisville, KY. **Invited Presidential Talk.**

Gatzia, D. E., & Schwartz, B. L. I think it's going to hurt: the effects of cognition on pain perception. Presented at Southern Society of Philosophy and Psychology, March 12, 2016, Louisville, KY.

Bacon, E., Schwartz, B. L., & Pillot, M. Mechanisms of feeling of knowing in patients with schizophrenia. Presented at the 54<sup>rd</sup> annual meeting of the Psychonomics Society, Chicago, Il. November, 2015.

Schwartz, B. L., Boduroglu, A., & Tekcan, A. Methodological Issues Concerning Feeling-of-Knowing Accuracy. Presented at the 53<sup>rd</sup> annual meeting of the Psychonomics Society, Long Beach, California. November, 2014.

Schwartz, B. L. Tip-of-the-tongue (TOT) states: Subjective Experience and the Nature of Metacognitive Control. Keynote address. METACOG 2014: The 2nd International Conference on Metacognition, Clermont-Ferrand, France. September 10, 2014. **Invited Talk.**

Bacon, E., Pillot M., Schwartz, B. L. The contribution of partial and contextual cue retrieval to feeling-of-knowing judgments in patients with schizophrenia. METACOG 2014: The 2nd International Conference on Metacognition, Clermont-Ferrand, France. September, 2014.

Schwartz, B. L. Games and the Mind. Presented at Southern Society of Philosophy and Psychology, March 2014, Charleston, SC.

Schwartz, B. L., Pillot, M., & Bacon, E. Contextual information and the Feeling of Knowing in episodic memory in normal participants and schizophrenic patients. Presented at Southern Society of Philosophy and Psychology, March 2014, Charleston, SC.

Bacon E., Sevdinoglou E., Pillot M., Schwartz B.L. Processes underlying the introspective ability of patients with schizophrenia towards their memory accuracy .WPA thematic meeting: The multidisciplinary facets of psychiatry, Athens, February, 2014.

Schwartz, B. L., Pillot, M., & Bacon, E. Contextual information influences feeling of knowing in episodic memory. Presented at the 52<sup>th</sup> annual meeting of the Psychonomics Society, Toronto, Ontario, Canada. November, 2013.

Schwartz, B. L., & Metcalfe, J. Tip-of-the-tongue states and information seeking. Presented at the 52<sup>th</sup> annual meeting of the Psychonomics Society, Toronto, Ontario, Canada. November, 2013.

Pillot, M., Schwartz, B. L., & Bacon, E. The contribution of partial and contextual information to the Feeling of Knowing in episodic memory. Presented at Eighteenth meeting of the European Society for Cognitive Psychology, Budapest, Hungary, September 1, 2013.

Schwartz, B. L. Does thinking about evolution benefit the study of human memory? Presented at the Southern Society of Philosophy and Psychology, March 2013, Austin, Tx. **Invited Symposium.**

Schwartz, B. L., & Brothers, B. R. Survival processing does not improve paired-associate learning. Presented at the 51<sup>th</sup> annual meeting of the Psychonomics Society, Minneapolis, Mn. November, 2012.

Schwartz, B. L., Arango-Muñoz, S., & Laginess, A. J. The feeling of forgetting. Presented at the Southern Society of Philosophy and Psychology, March 2012, Savannah, Georgia.

Schwartz, B. L. Tip-of-the-tongue states: Retrieval, behavior, and experience. **Invited Presentation.** Epistemic feelings and Metacognition, Interdisciplinary Workshop, Bochum, Germany. October, 28, 2011.

Schwartz, B. L., & Brothers, B. R. Survival processing in paired associate learning. **Invited Presentation.** SARMAC, June, 2011. New York, NY.

Coffman, K. A. J., & Schwartz, B. L. Deception in Everyday Statements of Activity: Reliance on Intuitive vs. Evidential Phenomena. Presented at the 4<sup>th</sup> International Congress on Psychology and Law. Miami, Fl. March, 2011.

Schwartz, B. L. Effects of being in tip-of-the-tongue states on subsequent items. Presented at the 49<sup>th</sup> annual meeting of the Psychonomics Society, St. Louis, Mo. November, 2010.

Schwartz, B. L. The effects of emotion on tip-of-the-tongue states. Presented at the 48<sup>th</sup> annual meeting of the Psychonomics Society, Boston, Ma. November, 2009.

Kersten, A. W., Meissner, C. A., Lechuga, J., Schwartz, B. L., Albrechtsen, J. S., & Iglesias, A. Classification of novel manners of motion by monolingual English and Spanish speakers. Presented at the 48<sup>th</sup> annual meeting of the Psychonomics Society, Boston, Ma. November, 2009.

Schwartz, B. L. Are hole-in-memory states different from tip-of-the-tongue states? Presented at 47<sup>th</sup> annual meeting of the Psychonomics Society, Chicago, IL. November 13, 2008.

Schwartz, B. L. Metacognition: Brains, Bonobos, and Behavior. Presented International Association for Metacognition meeting. Long Beach, California, November 2007. **Invited Presentation.**

Schwartz, B. L. Tip-of-the-tongue states interfere with verbal working memory. Presented at the 46th annual meeting of the Psychonomics Society, Long Beach, California. November, 2007.

Schwartz, B. L. How concurrent tasks affect tip-of-the-tongue states and feelings of knowing. Presented at the joint meeting of the Psychonomic Society and the UK Experimental Psychology Society. Edinburgh, Scotland, UK. July 4, 2007.

Allen, M. R., & Schwartz, B. L. Self-recognition in a gorilla (*G. gorilla gorilla*). Presented at the 14<sup>th</sup> Annual Comparative Cognition Conference, Melbourne, Florida, March, 2007.

Allen, M. R., & Schwartz, B. L. Mirror self-recognition in a gorilla (*Gorilla gorilla gorilla*). Presented at Southeastern Psychological Association (SEPA) Meeting, February 21- 24, 2007.

Schwartz, B. L. The effect of working memory on tip-of-the-tongue states. Presented at the 45th annual meeting of the Psychonomics Society, Houston, TX. November, 2006.

Kersten, A. W., Meissner, C. A., Schwartz, B. L., Iglesias, A., & Albrechtsen, J. S. Effects of linguistic context and age of exposure to English on Attention to manner of motion. Presented at the 45th annual meeting of the Psychonomics Society, Houston, TX. November, 2006

Schwartz, B. L. Tip-of-the-tongue states as metacognitive judgments. Paper presented at International Association for Metacognition meeting. Toronto, Canada, November 9, 2005. **Invited Presentation.**

Schwartz, B. L. A comparative psychology of episodic memory. Paper presented at SWIM symposium at Southeastern Psychological Association Meeting. April, 8, 2005. **Invited Presentation.**

Schwartz, B. L., Hoffman, M. L., Allen, M., Lane, J. Cherry, H. Working memory in gibbons (*Hylobates lar*). Paper presented at the 12<sup>th</sup> Annual Comparative Cognition Conference, Melbourne, Florida, March 18, 2005.

Schwartz, B. L. Towards a comparative psychology of autobiographical memory. Paper presented at Autobiographical Memory in Interdisciplinary Perspective Wissenschaftsforum Berlin, May 14, 2004. **Invited Presentation**

Schwartz, B. L., Meissner, C. M., Hoffman, M.,L., & Tessier, G. Delayed match-to-sample in golden lion tamarins (*Leontopithecus rosalia*). Paper presented at the 11<sup>th</sup> Annual Comparative Cognition Conference, Melbourne, Florida, March 2004.

Hoffman, M.,L. & Schwartz, B. L. The communication of where an event occurred by a gorilla. Paper presented at the 11<sup>th</sup> Annual Comparative Cognition Conference, Melbourne, Florida, March 2004.

Schwartz, B. L., Meissner, C. M., Hoffman, M., Evans, S., & Frazier, L. D. Trial-unique learning and episodic memory in gorillas. Paper presented at the 10<sup>th</sup> Annual Comparative Cognition Conference, Melbourne, Florida, March 2003.

Schwartz, B. L., Meissner, C. M., Evans, S., & Frazier, L. D. Memory for Unique Events in a Gorilla. Presented at the 41st annual meeting of the Psychonomics Society, Kansas City, MO, November, 2002.

Schwartz, B. L. Déjà vu and the modern gorilla: implication of subjective experience for the study of non-human episodic memory Presented at the conference on Origins of self-knowing consciousness. Columbia University, New York, NY. April 20, 2002. **Invited Presentation.**

Schwartz, B. L. Episodic memory in primates: Is it an answerable question? Presented at symposium on Primate Cognition. Eastern Psychological Association, Boston, Ma. March 10, 2002. **Invited Presentation.**

Mari1, A., Schwartz, B. L., & Schacter, D. L. An event-related fMRI study of feeling of knowing. Presented at the Society for Neuroscience, San Diego, Ca.. November 2001.

Schwartz, B. L., Sanchez, I., Colon, M., & Evans, S. Single-trial learning of “what” and “who” information in a gorilla (*Gorilla gorilla gorilla*). Presented at the American Society of Primatologists, Savannah, Ga. 2001.

Sanchez, I., Rodriguez, I., Castillo, R., Schwartz, B. L., & Evans, S. Non-random pattern reveals one-trial learning of objects in orangutans (*Pongo pygmaeus*). Poster presented at the American Society of Primatologists, Savannah, Ga. 2001.

Schwartz, B. L., Sanchez, I. C., Colon, M. R., & Evans, S. Single-trial learning in a gorilla: Implications for episodic memory. Presented at the Southern Society for Philosophy and Psychology. New Orleans, LA, April, 2001. **Invited Presentation.**

Schwartz, B. L. Tip-of-the-tongue states and the strategic control of retrieval. paper presented at the 41st annual meeting of the Psychonomics Society, New Orleans, LA, November, 2000.

Schwartz, B. L. Control processes and the tip-of-the-tongue experience. paper presented at the American Psychological Society Convention, Miami Beach, FL., June 2000.

Berg, R. A., Rodriguez, I., Schwartz, B. L., & Fisher, R. P. Effects of interval and repetition of inquiry on accuracy and confidence in recall for a flashbulb memory. Paper presented at American Psychology and Law Society, New Orleans, LA, March 2000.

Schwartz, B. L. The phenomenology of naturally-occurring tip-of-the-tongue states: A diary study. paper presented at the 40th annual meeting of the Psychonomics Society, Los Angeles, CA, November, 1999.

M. R. Phillips, R. P. Fisher, & B. L. Schwartz. The effects of encoding conditions, type of recall, and metacognitive control on the accuracy and amount of eyewitness recall. Paper presented at the Psychology and Law Conference, Trinity College, Dublin, Ireland, July, 1999.

M. R. Phillips, R. P. Fisher, & B. L. Schwartz. Metacognitive control in eyewitness memory. Paper presented at Society for Applied Research in Memory and Cognition (SARMAC) convention, Boulder, Colorado, July, 1999.

Schwartz, B. L. Emotional frustration and tip-of-the-tongue states. Paper presented at the Southeastern Psychological Association, Savannah, Georgia, March, 1999.

Schwartz, B. L. The phenomenology of tip-of-the-tongue states paper presented at the 39th annual meeting of the Psychonomics Society, Dallas, Tx, November, 1998.

Schwartz, B. L. Illusory tip-of-the-tongue states. Paper presented at the 12th Florida Conference on Cognition, Perception, Sensation, Language, and Action. Florida International University, March, 1998.

Castro, A. M. & Schwartz, B. L. Output order of illusory memories in a serial recall Roediger-McDermott paradigm. Paper presented at the 12th Florida Conference on Cognition, Perception, Sensation, Language, and Action. Florida International University, March, 1998.



Hebert, K. S., Parker, J. F., & Schwartz, B. L. Confidence and accuracy in misinformation. Paper presented at the 12th Florida Conference on Cognition, Perception, Sensation, Language, and Action. Florida International University, March, 1998.

Hebert, K. S., Parker, J. F., & Schwartz, B. L. Confidence and accuracy in misinformation. American Psychology and Law Society, Rodondo Beach, California, March, 1998.

Schwartz, B. L. Illusory tip-of-the-tongue states paper presented at the 38th annual meeting of the Psychonomics Society, Philadelphia, PA, November, 1997.

Schwartz, B. L. Inferential processes in tip-of-the-tongue states. Paper presented at the 11th Florida Conference on Cognition, Perception, Sensation, Language and Action. University of West Florida, March, 1997.

Schwartz, B. L. Intrusions during recall of related lists depend on access to gist information. paper presented at the 37th annual meeting of the Psychonomics Society, Chicago, IL, November, 1996.

Schwartz, B. L., Fisher, R. P., & Hebert, K. S. The relation of intrusions and output order in free recall. presented at 104th meeting of the American Psychological Association, Toronto, Ontario, Canada, August, 1996.

Fisher, R. P., & Schwartz, B. L. Diagnosing incorrect recollections in eyewitness testimony. presented at 2nd International Conference in Memory, Padua, Italy, July, 1996.

Hebert, K. S., Schwartz, B. L., & Parker, J. F. Suggestibility in memory: The nature of witnesses and events. American Psychology and Law Society, Hilton Head, South Carolina, February, 1996.

Fisher, R. P. & Schwartz, B. L. Increasing the accuracy of recollection. paper presented at the 36th annual meeting of the Psychonomics Society, Los Angeles, CA., November, 1995.

Dunlosky, J. & Schwartz, B. L. Does relational information affect people's predictions of eventual free recall. poster session presented at the 36th annual meeting of the Psychonomics Society, Los Angeles, CA., November, 1995.

Schwartz, B. L., Dunlosky, J., & Corcho, J. Judgments of learning for mixed-language lists. paper presented at the Southeastern Psychological Association, Savannah, Georgia, March, 1995.

Thornton, W. J., & Schwartz, B. L. Category cuing and the release from proactive interference. paper presented at the Southeastern Psychological Association, Savannah, Georgia, March, 1995.

Schwartz, B. L. Sources of information in metamemory. paper presented at the 9th Florida Conference on Cognition, Perception, Sensation, Language and Action. University of Central Florida, March, 1995.

Schwartz, B. L. Judgments of learning: Monitoring and Control. paper presented at the Winter Text Conference, Jackson Hole, January, 1995. **Invited Presentation.**

Schwartz, B. L. & Smith, S. M. Partial information and the tip-of-the-tongue phenomenon. paper presented at the 35th annual meeting of the Psychonomics Society, St. Louis, MO., November, 1994.

Schwartz, B. L. Metamnemonic judgments: Sources of information and accuracy. paper presented at Practical Aspects of Memory Conference, University of Maryland, College Park, Md., August, 1994.

Schwartz, B. L. On the "tip-of-the-tongue". paper presented at the 8th Florida Conference on Cognition, Perception, Sensation, Language and Action. Florida Atlantic University, March, 1994.

Schwartz, B. L. & Bjork, R. A. Do people understand the relation between retrieval difficulty and subsequent recall? paper presented at the 34th annual meeting of the Psychonomics Society, Washington, D.C., November, 1993.

Schwartz, B. L. Cue priming influences feeling-of-knowing judgments. paper presented at American Psychological Society Convention, San Diego, CA., June 1992.

Schwartz, B. L. Cue familiarity enhances feeling-of-knowing judgments. paper presented at Eastern Psychological Association, 63rd Annual Meeting, Boston, Ma., April, 1992.

Schwartz, B.L. Cue familiarity enhances feeling-of-knowing judgments. paper presented at International Conference on Memory, Lancaster, United Kingdom, July, 1991.

Schwartz, B. L. Cue familiarity rather than target memorability predicts feeling-of-knowing judgments. paper presented at American Psychological Society Convention, Washington, D.C., June, 1991.

Hughes, H. C., Schwartz, B. L., and Zimba, L. D., Luminance, spatial and temporal expectancies, and speeded detection responses, paper presented at the 29th Annual Meeting of the Psychonomic Society, November, 1988.

### **Invited Colloquia**

"The phenomenology of Tip-of-the-tongue States." FIU Linguistics Program, November 4, 1998.

"On the tip of the tongue: Issues in cognition, memory, and language." Florida Atlantic University, Davie, FL. September 29, 1999.

"Tip-of-the-tongue states: metacognition or delayed word retrieval?" Columbia University, New York, NY, November 8, 1999.

"Episodic memory in a gorilla." Millersville University, Millersville, PA. December 6, 2004.

"The comparative psychology of episodic memory: Evidence from non-human primates." Harvard University, Cambridge, MA. December 16, 2004.

"Tip-of-the-tongue states: Mechanism and function." March 23, 2009. University of North Florida.

"Episodic memory in primates" October, 2009, at Coe College, Cedar Rapids, Iowa.

"The metacognitive approach to tip-of-the-tongue states," September 23, 2010. Florida Atlantic University.

"Episodic memory in primates." October 7, 2010, Bates College, Lewiston, Maine.

"Survival processing in paired-associate learning," October 27, 2011, Düsseldorf University, Düsseldorf, Germany.

"Metacognition and the control of retrieval during tip-of-the-tongue states," April 3, 2014, Boğaziçi University, Istanbul, Turkey.

"Applying principles of memory science for the improvement of learning." April 6, 2014, American University of Iraq, Sulaymaniyah, Iraq.

"Tip-of-the-tongue states, déjà vu and other metacognitive oddities." September 11, 2015, University of Miami, Philosophy Department, Miami, Florida.

"Metacognition in non-human Primates," October 2, 2016, Psychology Department, American University, Washington, D.C.

"Judgments of learning and learning efficiency," December 19, 2016. Psychology Department, Aristotle University of Thessaloniki, Greece.

"Metacognition and Conscious Experience: exploring tip-of-the-tongue states and ease-of-learning judgments. October 10, 2017. Psychology Department, Colorado State University.

"Metacognition and Conscious Experience: exploring tip-of-the-tongue states and ease-of-learning judgments." December 6, 2017. Psychology Department, Central Michigan University.

"Varieties of Fluency and Metamemory for Musical Notation judgments." September 6, 2018. Psychology Department, Stockholm University, Stockholm, Sweden.

"Applying Cognitive Principles to Improve the Efficiency of Study" November 9, 2018, Middlebury College, Middlebury Vermont.

### **Symposia Organized**

What Memory Quirks, Hiccups and Odd Phenomena Tell Us. Symposium organized for Psychonomics Convention, November 2019.

Memory as Adaptation II. Invited Symposium at Southern Society for Philosophy and Psychology, Cincinnati, OH, March 2019.

Music Cognition II. Invited Symposium at Southern Society for Philosophy and Psychology, San Antonio, TX, March 2018.

Metacognition. Invited Symposium at Southern Society for Philosophy and Psychology, Savannah, GA, March 2017.

Music Cognition. Invited Symposium at Southern Society for Philosophy and Psychology, New Orleans, LA, April 2015.

Games, the mind, and Learning. Symposium at Southern Society for Philosophy and Psychology, Charleston, S.C. March, 2014.

Memory as Adaptation: Perspectives from Comparative, Developmental and Cognitive Psychology. Symposium at Southern Society for Philosophy and Psychology, Austin, Texas. March, 2013.

Metacognition and Consciousness. Symposium at Southern Society for Philosophy and Psychology, Savannah, Georgia. March, 2012.

Intersections between human and animal metacognition. symposium at Southern Society for Philosophy and Psychology, New Orleans, La. April, 2001.

Perspectives on the Tip-of-the-Tongue Phenomenon. Invited symposium at 12th American Psychological Society Convention, Miami Beach, FL., June 9, 2000.

Metacognition and Eyewitness Memory. Symposium at Society for Applied Research in Memory and Cognition (SARMAC). Boulder, Colorado, July, 1999.

### **Conference Organized**

Festschrift for Dr. Alan Brown. April 27, 2018.

Festschrift: Applied Cognition and the Cognitive Interview: A conference in Honor of Dr. Ron Fisher. May 19, 2016.

Chairperson (2011). FIU/FAU conference in Cognition and Cognitive Development, North Miami, Florida, February 18, 2011.

Chairperson (1998). 12th annual Florida Conference in Cognition, Perception, Language, and Action. held at Kovens, Center. Florida International University. March, 1998.

### **Funded Grants**

Dean's office Summer Research Grant (2000\$)	2008
NIGMS/APA supplemental grant (10,000\$)	2008
NIGMS/APA minority development grant (\$75,000) – project leader and PI. funded.	2004 - 2007
NIGMS/APA minority development grant (30,040) – project leader and PI. Funded.	2003-2004
Provost's FIU Foundation Grant 13,200 – funded	2001
APA/NIGMS minority development (with Marvin Dunn). \$60,000. funded.	2001 - 2003
College Grant-in-aid (Dean's office, \$870)	2000
APA/NIGMS minority development (with Marvin Dunn)	1998 - 2000
College Grant-in-Aid (Dean's office)	1998
McDonnell-Pugh Cognitive Neuroscience/travel	1995
Dean's office minigrant - FIU	1995
FIU Foundation Grant with Ronald Fisher, PhD. amount: \$10,590	1994
Dean's office minigrant - FIU	1994

### **Submitted Grants**

Spencer Foundation Grant (49,900) (not funded)	2014
Provost's Research Grant (6,000)	2006
NSF submission: 136, 500 over two years; "Episodic memory in a gorilla" (not funded)	2003
NSF submission; \$392,393 over three years; "Episodic Memory in non-human primates." Submitted: (not funded)	2001
Leakey Foundation "Episodic memory in apes" submitted for 13,200 (not funded)	2000
American Society of Primatologists: ASP small grant (not funded)	2000
National Institute of Health proposed: Episodic and Autobiographical memory in <i>Pan</i> (not funded)	1999

### **Academic Awards and Distinctions:**

Certificate of Excellence; Peer Review	2013
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Journal of Applied Research in Memory And Cognition	
Dean's Special Merit Award	2011
Honors Fellow	2006 - 2014
University Sabbatical	2004
Teaching Incentive Program award	1997
Benjamin Benner Award for Honors Thesis	1988

**Teaching:**Courses Taught (1993 - 2017)graduate:

1. Animal Cognition
2. Cognitive Neuroscience
3. Proseminar in Experimental Psychology
4. Memory & Consciousness (2017)

undergraduate:

1. Cognitive Processes
2. Memory and Memory Improvement
3. Laboratory in Learning and Remembering
4. Biopsychology
5. Animal Cognition
6. Neuropsychology
7. Introduction to Psychology
8. Sensation and Perception
9. Research Methods in Psychology
10. Seminar in Research in Psychology
11. Honors Course: Aesthetics, Values, & Authority
12. Honors College: The Idea of origins and the origin of ideas
13. Honors College: Animals and Society

Student supervision

## Graduate Students:

- 1993 - 1994: Maria Hernandez-Rief: reader; doctoral dissertation committee
- 1994 - 1995: Eileen Mello: reader; Masters thesis committee
- 1994 - 1997: Rita Soza: reader; Master's committee
- 1997 - 1997: Richard Berg: reader; Master's committee
- 1998 - 1999 Mark Phillips: reader; Master's committee
- 1998 - 1999 Carlos Finlay: reader; Master's committee
- 1999 - 2000 Maria Krioukova: reader; Master's committee
- 1999 - 2000 Richard Berg: chair; doctoral dissertation committee
- 2000 - 2000 Jennifer Thompson: outside reader; doctoral dissertation committee (American University, Washington, D.C.)
- 2003 - 2006 Rebecca Markham, reader; doctoral dissertation committee
- 2003-2005 Ryann Haw: reader; doctoral dissertation committee
- 2004 - 2010 Jennifer Lewis, biology, reader; doctoral dissertation committee

2004- 2005	Mark Jaime; reader masters thesis committee
2004 – 2007	Melinda Allen, Chair, Master's Committee
2003 – 2009	Claude-Henry Vilmar, biology, reader; doctoral dissertation committee
2007 - 2010	chair, Kim Coffman; dissertation committee
2009- 2010	Barbara Sorondo; reader master's thesis committee
2011 – 2012	Michael Suarez; reader master's thesis committee
2012 – 2013:	Sarah Garner (Lancaster University, UK) external reader; dissertation committee.
2012 – 2014	Brittany Yusko; reader master's thesis committee
2012 – 2014	Dana Hirn; reader master's thesis committee.
2013 – 2014	Briana Odowd; reader, dissertation committee
2013 – 2014	Michael Suarez; reader dissertation committee
2014 – 2015	Patrick Douglas Sellers; (Florida Atlantic University) outside reader, dissertation committee
2015 - 2016	Dilay Zeynep Karadoller; Bogazaci University, Istanbul, outside reader, thesis committee
2015 – 2016;	Stephanie Kazanas, State University of New York, Albany; outside reader, dissertation committee
2017 – 2018	Andreas Jemstedt, Stockholm University, Sweden, outside reader, dissertation.
2017 – 2018	Joshua Tatz, American University, outside reader, Master's thesis
2016- 2019	Semra Avşar Esen; Bogazaci University, Istanbul, Turkey outside reader, thesis committee
2015- 2020	Jennifer Houston, Ph.D., primary mentor, dissertation.
2018 – present	Gregory Maloney, FIU school of Business, outside reader, Dissertation
2019 – present	Laura Shambaugh, outside reader, thesis.
2019 – present	Kelsey Hess, outside reader, thesis.

#### Undergraduate Honors students:

1994 - 1995:	William Thornton
1995-1996	Raul Gonzalez
1997 - 1997:	Donald Travis
2001- 2001:	Roberto Echeveria
2003- 2004:	Megan Hoffman
2003 –2004:	Genevieve Tessier
2005 – 2006:	Christopher Hord
2006- 2008:	Leah Dunleavy
2009 - 2010	Malu Lomeli
2009 – 2010	David Jaramillo

2009 – 2010 Ana Navarrete  
2010 – 2011 Moses Aluicio  
2010 – 2011 Brock Brothers  
2010 – 2011 Pablo Currea  
2011- 2012 Alexandro Vazquez  
2015 – 2016 Christopher Stewart-Muniz  
2018 – 2019 Derek Phrathep

**Professional Service:**

Editorial Activities

2018 - present Editor-In-Chief, *New Ideas in Psychology*

Associate Editor positions

2019- Associate Editor, *Metacognition and Learning*

2014 -2014 Associate Editor, *Journal of Applied Research in Memory and Cognition*

Editorial Boards

Current:

2008 – present; Editorial Board, *International Journal of Thinking & Problem Solving*.

2017 – present; Editorial Board, *Applied Cognitive Psychology*

2015 – present; Editorial Board, Sage Video Collection, Psychology

Past

2005 –2007; Consulting Editor, *Journal of Experimental Psychology: General*.

2004- 2008; Editorial Board, *Korean Journal of Thinking & Problem Solving*.

2005 –2009; Editorial Board, *Comparative Cognition and Behavior Reviews*.

2004 – 2014; Editorial Board, *Animal Cognition*.

2011 – 2015; Editorial Board, *Journal of Applied Research in Memory and Cognition*

guest editor for *Journal of Applied Research in Memory and Cognition*, 2013, 2015

2014 –2019; Editorial Board, *Metacognition and Learning*

Editorial Reviewer for the following journals:

1. Memory & Cognition
2. Journal of Memory and Language
3. Psychological Review
4. Psychonomic Bulletin & Review
5. Memory
6. Psychological Science



7. Journal of Applied Psychology
8. Journal of Experimental Psychology: Learning, Memory, and Cognition
9. Journal of Experimental Psychology: Applied
10. Journal of Experimental Psychology: General
11. Journal of Experimental Psychology: Animal Behavior and Processes.
12. American Journal of Psychology
13. International Journal of Comparative Psychology
14. Applied Cognitive Psychology
15. Psychological Methods
16. Nature Reviews Neuroscience
17. Experimental Aging Research
18. Animal Cognition
19. Learning & Motivation
20. Journal of General Psychology
21. Behavioral Processes
22. European Journal of Cognitive Psychology
23. Journal of Comparative Psychology
24. Metacognition and Learning
25. Current Biology
26. Cognition
27. Journal of Cognitive Neuroscience
28. Trends in Cognitive Sciences
29. Developmental Science
30. Biological Psychiatry
31. Cortex
32. Acta Psychologica
33. Neuropsychologia
34. Journal of Applied Research in Memory and Cognition
35. Ethology
36. Philosophical Psychology
37. Parkinson's Disease
38. Psychological Record
39. Journal of Neurolinguistics
40. Frontiers in Behavioral Neuroscience
41. British Journal of Psychology
42. Human Brain Mapping
43. Brain Stimulation
44. Language, Cognition and Neuroscience
45. Scandinavian Journal of Psychology
46. Canadian Journal of Experimental Psychology
47. Evolutionary Psychology
48. Cerebral Cortex
49. Psychological Bulletin
50. Animal Behavior & Cognition
51. Polish Psychological Bulletin
52. Neuroscience of Consciousness

- 53. Perspectives on Psychological Science
- 54. Zeitschrift fuer Psychologie

#### Tenure/Promotion Reviews for

University of Colorado - Colorado Springs; 2000  
 University of West Florida; 2002  
 Barnard College, Columbia University; 2010 – 2011.  
 Colorado State University; 2011 – 2012  
 Tufts University; 2012-2013.  
 Oakland University; 2012 – 2013.  
 University of Alabama, Huntsville, 2013 -2014.  
 Texas Tech University, 2013 -2014.  
 University of Arizona; 2013 -2014.  
 Colorado State University, 2017-2018.  
 Brooklyn College. 2017-2018.  
 University of Tennessee-Chattanooga. 2017-2018.  
 Tufts University; 2018 -2019.  
 University of Alabama in Huntsville, 2019 – 2020.

#### Other Professional Service

Secretary, Division 3 (Experimental Psychology and Cognitive Science), APA 2020 -  
 Council Member, Southern Society for Philosophy and Psychology 2019 - 2022  
 Review Committee for the Psychonomic Society. June 18 – June 21, 2018  
 Science Committee, 1<sup>st</sup> International Music Cognition Symposium  
 Istanbul Technical University Conservatory, April 18 – 19, 2018  
 Richard M. Griffith Memorial award co-chair, SSPP 2017-2018  
 Aarhus Institute of Advanced Studies (AIAS) Grant reviewer 2017  
 Richard M. Griffith Memorial award co-chair, SSPP 2016-2017  
 European Science Foundation College of Expert Reviewers 2016 -  
 Past-President, Southern Society of Philosophy  
 And Psychology 2016- 2017  
 President, Southern Society of Philosophy  
 And Psychology 2015- 2016  
 US-Israel Binational Science Foundation proposal reviewer 2015  
 Israeli Science Foundation proposal reviewer 2015  
 NSF proposal reviewer 2015  
 President-Elect, Southern Society of Philosophy  
 And Psychology 2014- 2015  
 Reviewer; Leakey Foundation Grants 2013- 2014  
 Reviewer; Croatian Science Foundation 2012 - 2013  
 Reviewer; conference proposals SEPA, 2007 - 2012  
 European Science Foundation, Peer Reviewer 2006 -

President, SWIM (Southern Workers in Memory).	2005- 2006.
Reviewer, Southern Graduate School Award Committee,	2005.
Grant Reviewer, European Science Foundation.	2005.
Chair, Institutional Animal Care and Use Committee, DuMond Conservancy for Primates and Tropical Forests,	May 2000 – September 2005
member, Board of Advisors, NSF-funded, "Web-based materials for an interdisciplinary course in Cognitive Science"	
Reviewer; grant proposals for the Louisiana Board of Regents (November, 2003).	
Reviewer, Montana NSF-EPSCoR program reviewer	2000

### Departmental Activities

Teaching Evaluation Committee	2018-
Chair, Personal Practice Committee	2015 – 2016
Member, Personal Practice Committee	2015 - 2018
Search committee, Cognitive Neuroscience	2014 - 2015
Member, Cognitive Neuroscience Committee	2013 - present
Search committee, Cognitive Neuroscience	2013- 2014
Chair, Search sub-Committee, Cognitive Neuroscience	2011- 2012
Search Committee, Developmental Neuroscience	2009 - 2010
Chair, Colloquia committee	2009 – 2010
Undergraduate Education Committee	2009 - present
Colloquia committee	2008 - 2013
Undergraduate Education Committee	2007 - 2008
Chair, interdisciplinary group	2006 – 2013
Chair, Search committee for assistant Chairperson	2005- 2006
Graduate Education Committee	2005 - 2009
Chair, Search committee for assistant Chairperson	2004 - 2005
Developmental Committee	2003 - 2004
Core Leader; APA/NIGMS program	2000 - 2006
Core team member, APA/NIGMS program	1998 - 2007
Personal Practices Committee	1998 - 1999
Human Subjects Committee- faculty member	1995 - 1996
Search committee/psychology and law	1994 - 1995
Chair - Colloquia committee	1993 - 1994
Applied Committee	1993 - 1997

### College and University Activities

McNair Conference reviewer	2016-2017
Honors College Scholarship Committee	2012- 2014
Member, Search Committee, Cognitive Neuroscience	2011-2012
Honors College Faculty Fellow Research Committee	2011 - present
Member, committee for Cognitive Neuroscience	2011 - present
Co-editor, Honors College Journal	2010 - 2011
Internal Review Board mentor	2010 - present
Center for Excellence in Writing Advisory Board.	2008 - present

Honors ARCH committee	2007- 2011
Internal Review Board (Human Subjects) board/ Psychology Representative	2007 - present
Honors College Fellow	2006 - 2015
Honors SRAI Funding Committee	2006 - 2007
Reviewer; Graduate School thesis competition	2005
UFF-FIU alternate senator	2005 - 2006
UFF-FIU committee on minorities	2005 - 2006
Honors Research Associate, Honors College	2004 - present
Vice-Chairperson, Curriculum Committee, College of Arts and Sciences	1997 - 2002
Curriculum committee	1996 - 2003
Faculty Senate	1996 - 1997
Teaching Incentive Program representative (Economics)	1995 - 1996
Library committee	1994 - 1995

### Popular Press

February 2002, “Animal Talk” with host Suzanne MacDonald, CBC.

June 1, 2008, Boston Globe, “What’s in a name?” Jonah Lehrer

[http://www.boston.com/bostonglobe/ideas/articles/2008/06/01/whats\\_that\\_name/?page=full](http://www.boston.com/bostonglobe/ideas/articles/2008/06/01/whats_that_name/?page=full)

June 7, 2008 NPR’s All Things Considered, Tip-of-Tongue Moments Reveal Brain's Organization,

<http://www.npr.org/templates/story/story.php?storyId=91284151&from=mobile>  
<http://www.npr.org/templates/story/story.php?storyId=91284151>

June 6, 2012. Quoted in Scientific American article. “Been there, done that, or did I? Déjà vu found to originate in similar scenes.

<http://www.scientificamerican.com/article.cfm?id=deja-vu-found-originate-similar-scenes>

February 29, 2016: Interviewed about the tip of the tongue phenomenon on W-radio, Bogota, Colombia

[http://www.wradio.com.co/escucha/archivo\\_de\\_audio/lo-tenia-en-la-punta-de-la-lengua-la-razon-por-la-que-olvidamos-lo-que-vamos-a-decir/20160229/oir/3072856.aspx](http://www.wradio.com.co/escucha/archivo_de_audio/lo-tenia-en-la-punta-de-la-lengua-la-razon-por-la-que-olvidamos-lo-que-vamos-a-decir/20160229/oir/3072856.aspx)

**Fabian A. Soto**  
Assistant Professor  
Department of Psychology  
Florida International University  
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Miami, FL 33199  
E-mail: [fasoto@fiu.edu](mailto:fasoto@fiu.edu)  
Website: <http://ccnlab.fiu.edu>

*May, 2020*

### Academic Employment.

2015-	Assistant Professor, Florida International University, Department of Psychology.
2013-2015	Postdoctoral researcher, Laboratory for Computational Cognitive Neuroscience, University of California Santa Barbara, Department of Psychological and Brain Sciences.
2011-2013	Sage Junior Research Fellow, University of California Santa Barbara, Department of Psychological and Brain Sciences.

### Education

2011	Ph.D. in Psychology , University of Iowa, Department of Psychology.
2006	Psychologist, Universidad de Chile, Department of Psychology.
2005	Licentiate (BS) in Psychology, Universidad de Chile. Graduated with maximum distinction.
2009	Advanced Course in Computational Neuroscience, Freiburg, Germany.
2010	ACCN Internship at Yael Niv's lab in Princeton University, working on Bayesian models of learning and generalization.

### Research interests

Visual object encoding, learning and generalization, computational cognitive neuroscience.

### Honors & Awards

2018	Elected Fellow of the Psychonomic Society.
2017	CASE Award for Research, from the College of Arts, Sciences & Education at Florida International University.
2016	Distinguished Scientific Award for Early Career Contribution to Psychology in the area of animal learning and behavior, from the American Psychological Association.
2015	Rising Star in Psychology, from the Association for Psychological Science.

2013	SEAB Basic Dissertation Award in the Experimental Analysis of Behavior, from the Division of Behavior Analysis of the American Psychological Association.
2012	D.C. Spriestersbach Dissertation Award in the Social Sciences, from the Graduate College at the University of Iowa.
2012	Brenda A. Milner Award (Young Investigator Award), from the Division of Behavioral Neuroscience and Comparative Psychology of the American Psychological Association.
2011-2013	Sage Junior Research Fellowship, from the Sage Center for the Study of the Mind at the University of California, Santa Barbara.
2011	New Investigator Award, from the Division of Experimental Psychology of the American Psychological Association.
2010	D. Lewis Dissertation Award, from the Psychology Department at the University of Iowa.
2010	Full fellowship for the Advanced Course in Computational Neuroscience Internship Program, supported by the German Federal Ministry for Education and Research and the Gatsby Charitable Foundation.
2009	Graduate College Summer Fellowship, from the University of Iowa.
2009	Full fellowship for the Advanced Course in Computational Neuroscience, supported by the German Federal Ministry for Education and Research and the Gatsby Charitable Foundation.
2008	J. R. Simon Early Scholarship Potential Award, from the Psychology Department at the University of Iowa.
2002-2005	President of the Republic Scholarship, from the Government of Chile.

## Research Funding

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2018-2019	R21 Grant from NIMH (1R21MH112013-01A1) – <i>Perceptual and decisional processes underlying face perception biases in clinical depression</i> . Role: PI (with Christopher Beavers).
2017-2018	Collaborative Research Award, internal grant from the Psychology Department at FIU – <i>Controlling generalization of fear learning and extinction in people with and without anxiety</i> . Role: PI (with Jeremy Pettit).
2010	Grant-in-Aid of Research (G20101015155129) from the National Academy of Sciences, administered by Sigma Xi, The Scientific Research Society – <i>General principles of visual object recognition</i> . Role: PI.

## Professional Affiliations

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Association for Psychological Science, Comparative Cognition Society, Psychonomic Society, Sigma Xi, Society for Computational Modeling of Associative Learning, Society for Neuroscience, Society for Mathematical Psychology, Society for the Quantitative Analysis of Behavior, Vision Sciences Society.

## Teaching Experience

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2015-	Instructor, Florida International University, FL. <i>Introduction to Computational Cognitive Neuroscience</i> <i>Visual Cognitive Neuroscience</i> <i>Neurobiology of Learning and Memory</i> <i>Cognitive Processes</i>
2013	Invited Lecturer (by Prof. F. G. Ashby), University of California, Santa Barbara, CA. <i>Computational Neuroscience</i>
2012-2013	Co-Lecturer (with Prof. M. Gazzaniga and Sage Junior Fellows), University of California, Santa Barbara, CA <i>Intersections in Mind-Brain Research</i>
2006-2009	Teaching Assistant, University of Iowa, IA. <i>Introduction to Cognitive Psychology (2009).</i> <i>Elementary Psychology (2006, 2008-2009).</i> <i>Psychology of Learning (2008).</i> <i>Research Methods in Psychology (2007).</i> <i>Evaluating Psychological Research (2007).</i>
2008	Instructor, University of Iowa, IA. <i>Elementary Psychology.</i>
2006	Instructor, Universidad de las Américas, Santiago, Chile. <i>Psychology of Learning.</i>
2005-2006	Laboratory Instructor, Universidad de Talca, Talca, Chile. <i>Psychological Processes II.</i>
2006-2006	Instructor, Universidad La Republica, Santiago, Chile. <i>Psychology of Learning.</i>
2002-2005	Teaching Fellow, Universidad de Chile, Santiago, Chile. <i>Statistics.</i> <i>Methodology of Scientific Research.</i>
2003-2004	Teaching Fellow, Universidad La Republica, Santiago, Chile. <i>Psychology of Learning.</i>

## Students Supervised

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Undergraduate	Veronica Bonilla (University of Iowa Graduate College's Research Opportunities Program, 2009), Jeffrey Y. M. Siow (ICRU Research Fellow, 2010-2011), Sam Handelman (2012-2013), Meghan Lew (2012-2013), Mike Ortiz (2012-2013), Christopher Do (2012-2013), Karim Farrag (2012-2013), Carina Jette (2012-2013), Matt Lyulkin (2012-2013), Scott Mendoza (2012-2013), Maia Moog (2012-2013), Molly O'Grady (2012-2013), Brendan Scolari (2012-2013), Seju Shah (2012-2013), Tomomi Suzuki (2012-2013), Christine Tran (2012-2013), Emily Zheng (2014-2015), Omar Perez (2012- ), Sangeeth Jeevan (2015-2016) , Johnny Fonseca (2016), Jefferson Salan (2016-2017), Claudia Wong (2016-2018), Lily Delgado (2016-2017), Karla Escobar (2016-2019), Daniel Rhenals (2017), Mark Burnard (2017-2018), Mariana Londono (2017-2018), Karla Molina (2017-2019), Zev Chesal (2018), Manuel Merino (2018-2019), Michael Chakoff (2018-2019), Andrea Birriel-Sanchez (2018-2019), Adam Medina (2019-), Nikita Borisenko (2019-), Quinttin Ramdass (2019-), Christian Sanchez (2019-), Giselle Prida (2019-).
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Graduate Jason Hays (2016- )  
Sanjay Narasiwodeyar (2016- )  
Sanaz Hosseini (2017- )  
Ali Pournaghdali (2019- )

## Ad-hoc Reviewer

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Journals: Animal Cognition; Attention, Perception, & Psychophysics; Behavior Research Methods; Behavioural Brain Research; Behavioural Processes; Brain and Cognition; Frontiers in Cognition; Cognitive Psychology; Frontiers in Emotion Science; Frontiers in Human Neuroscience; Frontiers in Quantitative Psychology and Measurement; Journal of Cognitive Neuroscience; Journal of Experimental Child Psychology; Journal of Experimental Psychology: Animal Behavior Processes; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Learning, Memory & Cognition; Journal of Experimental Social Psychology; Journal of Mathematical Psychology; Journal of Vision; Learning and Behavior; Network Neuroscience; NeuroImage; Neuropsychologia; Neuroscience; PLOS Computational Biology, PLOS One, Psychological Bulletin, Psychological Review, Psychological Science; Psychonomic Bulletin & Review, Quarterly Journal of Experimental Psychology.

Conferences: Cognitive Science Society.

Grants: National Science Foundation – Reviewer and panelist for the Perception, Action and Cognition program.  
Comisión Nacional de Investigación Científica y Tecnológica (CONICYT-Chile).

## Editorial and Organizational Service

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2019 Organizer. *What Can Be Inferred About Neural Population Codes From Psychophysical and Neuroimaging Data?* Symposium at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society. May 2019, St. Pete Beach, FL.

2018 Editorial Board, *PLOS One*.

2018 Guest Academic Editor, *PLOS One*.

2013 International Editorial Board. *Revista de Psicología de la Universidad de Chile*.

2013 Co-organizer. *Sage JRF Workshop - The Human Condition as a Network of Networks: From Genes to Brains to Behavior to Social Groups to Cultures*. April 2013, Santa Barbara, CA.

## Software and Electronic Resources

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GRTools v. 0.2.1 (<https://github.com/fsotoc/grtools>): An R package for analysis of perceptual independence using general recognition theory.

FaReT v. 0.1.2 (<https://github.com/fsotoc/FaReT>): A free and open-source toolkit of three-dimensional models and software to study face perception.

## Publications

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Hays, J., Wong, C., & Soto, F. A. (in press). FaReT: A free and open-source toolkit of three-dimensional models and software to study face perception. *Behavior Research Methods*.



- Perez, O. D., & Soto, F. A. (2020). Evidence for a dissociation between causal beliefs and instrumental actions. *Quarterly Journal of Experimental Psychology*, 73(4), 495-503.
- Soto, F. A. (2019). Beyond the “conceptual nervous system”: Can computational cognitive neuroscience transform learning theory? *Behavioral Processes*, 167, 103908.
- Soto, F. A. (2019). Categorization training changes the visual representation of face identity. *Attention, Perception, & Psychophysics*, 81(5), 1220-1227.
- Soto, F. A., & Ashby, F. G. (2019). Novel representations that support rule-based categorization are learned on-the-fly during category learning. *Psychological Research*, 83(3), 544-566.
- Perez-Riveros, O., Aitken, M. R. F., Zhukovsky, P., Soto, F. A., Urcelay, G. P., & Dickinson, A. (2019). Human instrumental performance in ratio and interval contingencies: a challenge for associative theory. *Quarterly Journal of Experimental Psychology*, 72(2), 311-321.
- Soto, F. A., Vukovich, L., & Ashby, F. G. (2018). Linking signal detection theory and encoding models to reveal independent neural representations from neuroimaging data. *PLoS Computational Biology*, 14(10), e1006470.
- Perez-Riveros, O., San Martin, R., & Soto, F. A. (2018). Exploring the effect of stimulus similarity on the summation effect in human causal learning. *Experimental Psychology*, 65(4), 183-200.
- Soto, F. A. (2018). Contemporary associative learning theory predicts failures to obtain blocking. Comment on Maes et al. (2016). *Journal of Experimental Psychology: General*, 147(4), 597-602.
- Soto, F. A., Zheng, E., Fonseca, J., & Ashby, F. G. (2017). Testing separability and independence of perceptual dimensions with general recognition theory: A tutorial and new R package (grtools). *Frontiers in Psychology*, 8:696.
- Soto, F. A., Bassett, D. S., & Ashby, F. G. (2016). Dissociable changes in functional network topology underlie early category learning and development of automaticity. *NeuroImage*, 141, 220-241.
- Ashby, F. G., & Soto, F. A. (2016). The neural basis of general recognition theory. In J. W. Houpt and L. M. Blaha (Eds.), *Mathematical models of perception and cognition, Volume II: A festschrift for James T. Townsend* (pp. 1-31). Routledge: New York, NY.
- Soto, F. A., & Wasserman, E. A. (2016). Promoting rotational-invariance in object recognition despite experience with only a single view. *Behavioural Processes*, 123, 107-113.
- Soto, F. A., Quintana, G. R., Ponce, F. P., Perez, A. M., Vogel, E. H. (2015). Why are some dimensions integral? Testing two hypotheses through causal learning experiments. *Cognition*, 143, 163-177.
- Soto, F. A., & Ashby, F. G. (2015). Categorization training increases the perceptual separability of novel dimensions. *Cognition*, 139, 105-129.
- Soto, F. A., Musgrave, R., Vucovich, L., & Ashby, F. G. (2015). General recognition theory with individual differences: A new method for examining perceptual and decisional interactions with an application to face perception. *Psychonomic Bulletin & Review*, 22(1), 88-111.
- Ashby, F. G., & Soto, F. A. (2015). Multidimensional signal detection theory. In J. R. Busemeyer, J. T. Townsend, Z. J. Wang, & A. Eidels (Eds.), *Oxford handbook of computational and mathematical psychology* (pp. 13-34). Oxford University Press: New York, NY.
- Soto, F. A., & Wasserman, E. A. (2014). Mechanisms of object recognition: What we have learned from pigeons. *Frontiers in Neural Circuits*, 8:122.
- Soto, F. A., Gershman, S. J., & Niv, Y. (2014). Explaining compound generalization in associative and causal learning through rational principles of dimensional generalization. *Psychological Review*, 121(3), 526-558.
- Soto, F. A., Waldschmidt, J. G., Helie, S., & Ashby, F. G. (2013). Brain activity across the development of automatic categorization: A comparison of categorization tasks using multi-voxel pattern analysis. *NeuroImage*, 71, 284-297.

- Soto, F. A., & Wasserman, E. A. (2012). A category-overshadowing effect in pigeons: Support for the Common Elements Model of object categorization learning. *Journal of Experimental Psychology: Animal Behavior Processes*, 38(3), 322-328.
- Soto, F. A., Siow, J. Y. M., & Wasserman, E. A. (2012). View invariance learning in object recognition by pigeons depends on error-driven associative learning processes. *Vision Research*, 62, 148-161.
- Soto, F. A., & Wasserman, E. A. (2012). Categorical learning in pigeons. In N. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 512-515). Springer: Boston, MA.
- Soto, F. A., & Wasserman, E. A. (2012). Visual object categorization in birds and primates: Integrating behavioral, neurobiological, and computational evidence within a “general process” framework. *Cognitive, Affective, and Behavioral Neuroscience*, 12(1), 220-240.
- Soto, F. A., & Wasserman, E. A. (2011). Asymmetrical interactions in the perception of face identity and emotional expression are not unique to the primate visual system. *Journal of Vision*, 11(3), 1-18.
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- Soto, F. A., & Wasserman, E. A. (2010). Missing the forest for the trees: Object discrimination learning blocks categorization learning. *Psychological Science*, 21(10), 1510-1517.
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- Soto, F. A., & Wasserman, E. A. (2010). Error-driven learning in visual categorization and object recognition: A common elements model. *Psychological Review*, 117(2), 349-381.
- Soto, F. A., & Wasserman, E. A. (2010). Integrality/separability of stimulus dimensions and multidimensional generalization in Pigeons. *Journal of Experimental Psychology: Animal Behavior Processes*, 36(2), 194-205.
- Soto, F. A., Vogel, E. H., Castillo, R. D., & Wagner, A. R. (2009). Generality of the summation effect in human causal learning. *Quarterly Journal of Experimental Psychology*, 62(5), 877-889.
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- Vogel, E. H., Soto, F. A., Castro, M. E., & Solar, P. (2006). Modelos matemáticos del condicionamiento clásico: Evolución y desafíos actuales [Mathematical models of classical conditioning: Evolution and current challenges]. *Revista Latinoamericana de Psicología*, 38, 215-243.
- Soto, F. A. (2005). Aprendizaje Asociativo: Modelos Explicativos del Condicionamiento Clásico. Reseña de libro. [Associative Learning: Explanatory Models of Classical Conditioning. Invited Book Review]. *Revista Latinoamericana de Psicología*, 37, 620-623.
- Soto, F. A., & Saavedra, M. A. (2005). Variabilidad de los efectos de la motivación sobre las estrategias desarrolladas por ratas en el laberinto radial [Variability of food motivation effects on the strategies developed by rats in the radial maze]. *Revista de Psicología de la Universidad de Chile*, 4, 61-71.

#### Submitted and in Preparation:

Pournaghdali, A., Schwartz, B. L., Hays, J., & Soto, F. A. (in revision). Sensitivity vs. awareness curve: A novel model-based analysis to uncover the processes underlying nonconscious perception. <https://psyarxiv.com/akem2>

Perez, O. D., Narasiwodeyar, S., & Soto, F. A. (submitted). Visual search mimics configural processing in

human associative learning. <https://www.biorxiv.org/content/10.1101/713420v1>

Soto, F. A., Stewart, R. A., Hosseini, S., Hays, J., & Beevers, C. G. (in revision). A computational account of the mechanisms underlying face processing biases in depression. <https://psyarxiv.com/9gxmy/>

Soto, F. A., Escobar, K., & Salan, J. (submitted). Adaptation aftereffects reveal how categorization training changes the encoding of face identity.

Soto, F. A. (in preparation). An observer model version of general recognition theory.

von Meer, S. S., Ashby, F. G., & Soto, F. A. (in preparation). Influence of transcranial magnetic stimulation to a prefrontal cortex connector hub on learning of a rule-based categorization task.

## Presentations in Scientific Meetings

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Soto, F. A., & Pournaghdali, A. (2020, May). Sensitivity vs. awareness curve: a novel model-based analysis to uncover the processes underlying nonconscious perception. Talk accepted at the 19th Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL. (Conference cancelled).

Narasiwodeyar, S., & Soto, F. A. (2020, May). A neurocomputational model of hippocampal field CA1 during context fear conditioning. Poster accepted at the 13th Annual Meeting of the Social and Affective Neuroscience Society, Santa Barbara, CA. (Conference cancelled).

Soto, F. A., Stewart, R. A., Hosseini, S., Hays, J., Beevers, C. G. (2020, May). A neurocomputational account of the mechanisms underlying face perception biases in depression. Poster accepted at the 13th Annual Meeting of the Social and Affective Neuroscience Society, Santa Barbara, CA. (Conference cancelled).

Hays, J., & Soto, F. A. (2019, May). What can be inferred about changes in neural population codes from psychophysical threshold studies? Talk presented at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Soto, F. A., & Narasiwodeyar, S. (2019, May). What can be inferred about invariance of visual representations from fMRI decoding studies? Talk presented at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Narasiwodeyar, S., & Soto, F. A. (2019, May). What can be inferred about independence and invariance of brain representations from fMRI decoding studies? Poster presented at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Soto, F. A. (2019, May). Linking general recognition theory and classification images to study invariance and configural of visual representations. Poster presented at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Hays, J., Wong, C., & Soto, F. A. (2019, May). A free and open-source toolkit of three-dimensional models and software to study face perception. Poster presented at the 19<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Soto, F. A. (2019, May). An observer model version of general recognition theory. Talk presented at MODVIS 2019: Computational and Mathematical Models in Vision, St. Pete Beach, FL.

Hays, J., & Soto, F. A. (2019, May). Differentiating changes in population encoding models with psychophysics and neuroimaging. Talk presented at MODVIS 2019: Computational and Mathematical Models in Vision, St. Pete Beach, FL.

Soto, F. A., & Wong, C. (2018, November). Are face identity and expression perceived separately? A study controlling stimulus and decisional factors. Poster presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans, LA.

- Soto, F. A., Hays, J., & Wong, C. (2018, November). A free and open-source toolkit of three-dimensional models and software to study face perception. Talk presented at the 48th Annual Meeting of the Society for Computers in Psychology, New Orleans, LA.
- Soto, F. A., Stewart, R. A., & Beevers, C. G. (2018, November). Perceptual interactions between face identity and emotional expression in depression. Poster presented at the Annual Object Perception, Attention, and Memory (OPAM) Workshop, New Orleans, LA.
- Soto, F. A. (2018, November). Liking general recognition theory and observer models to study representational separability and configural. Talk presented at the Annual Configural Processing Consortium Workshop, New Orleans, LA.
- Soto, F. A., & Narasiwodeyar, S. (2018, November). What can be inferred about independence and invariance of brain representations from fMRI decoding studies? Poster presented at the 48th Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Soto, F. A. (2018, July). Linking general recognition theory and encoding models to reveal independent neural representations. Talk presented at the 51<sup>st</sup> Annual Meeting of the Society for Mathematical Psychology, Madison, WI.
- Narasiwodeyar, S., & Soto, F. A. (2018, May). The role of hippocampal field CA1 in controlling memory specificity: A neurocomputational model. Poster presented at the 41<sup>st</sup> Annual Meeting of the Society for the Quantitative Analyses of Behavior, San Diego, CA.
- Hosseini, S., & Soto, F. A. (2018, May). Comparing the perceptual separability of familiar and unfamiliar face dimensions. Poster presented at the 18<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Soto, F. A. (2018, May). Does categorization training change the encoding of face identity? Poster presented at the 18<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Wong, C., & Soto, F. A. (2018, May). Are face identity and expression processed independently or interactively? A study controlling stimulus and decisional factors. Poster presented at the 18<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Soto, F. A. (2018, May). Linking signal detection theory and encoding models to reveal independent neural representations from neuroimaging data. Talk presented at MODVIS 2018: Computational and Mathematical Models in Vision, St. Pete Beach, FL.
- Narasiwodeyar, S., & Soto, F. A. (2018, April). The role of hippocampal field CA1 in controlling memory specificity: A neurocomputational model. Poster presented at the International Conference on Learning and Memory, Huntington Beach, CA.
- Soto, F. A. (2017, May). Classification images reveal changes in the encoding of newly learned face dimensions. Poster presented at the 17<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Hays, J. S., & Soto, F. A. (2017, May). Modeling the mechanisms of reward learning that bias visual attention. Talk presented at MODVIS 2017: Computational and Mathematical Models in Vision, St. Pete Beach, FL.
- Hays, J. S., & Soto, F. A. (2017, May). Modeling the mechanisms of reward learning that bias visual attention. Poster presented at the 17<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Soto, F. A., & Ashby, F. G. (2016, November). Novel representations that support rule-based categorization are acquired on-the-fly during category learning. Poster presented at the 46th Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Soto, F. A., Vucovich, L., & Ashby, F. G. (2016, May). Testing the independence of neural representations of face identity and expression through multidimensional signal detection theory. Poster presented at the 16<sup>th</sup> Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

- Soto, F. A., Vucovich, L., Musgrave, R., & Ashby, F. G. (2013, November). Independent processing of stimulus dimensions: A new signal detection model applied to the perception of face identity and expression. Poster presented at the 43rd Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Soto, F. A., Waldschmidt, J. G., Helie, S., & Ashby, F. G. (2012, October). Multi-voxel pattern analysis of fMRI data reveals changes in category representations accompanying the development of automaticity. Poster presented at the 42nd Annual Meeting of the Society for Neuroscience, New Orleans, LA.
- Soto, F. A., & Wasserman, E. A. (2011, November). View-invariant object recognition is learned by pigeons through reward prediction error. Poster presented at the 52th Annual Meeting of the Psychonomic Society, Seattle, WA.
- Soto, F. A., & Wasserman, E. A. (2011, November). Spatial frequency use in categorizing human faces: Comparing people and pigeons. Talk presented at the Fall Meeting of the Comparative Cognition Society, Seattle, WA.
- Soto, F. A., & Wasserman, E. A. (2011, May). The role of error-driven learning in object categorization by primates and birds. Poster presented at the 11<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.
- Soto, F. A., & Wasserman, E. A. (2010, November). Perception of human face identity and expression by a nonprimate biological vision system. Poster presented at the 51th Annual Meeting of the Psychonomic Society, St. Louis, MO.
- Soto, F. A., & Wasserman, E. A. (2010, November). Pigeons' use of spatial frequency information in the discrimination of identity and emotion of human faces. Talk presented at the Fall Meeting of the Comparative Cognition Society, St. Louis, MO.
- Soto, F. A., & Wasserman, E. A. (2010, March). Interaction between identity and emotional expression in pigeons' perception of human faces. Talk presented at the 17th Annual International Conference on Comparative Cognition, Melbourne, FL.
- Soto, F. A., & Wasserman, E. A. (2009, November). Associative learning in human natural image categorization. Poster presented at the 50th Annual Meeting of the Psychonomic Society, Boston, MA.
- Soto, F. A., & Wasserman, E. A. (2009, November). The relative-validity effect in natural image categorization by pigeons. Talk presented at the Fall Meeting of the Comparative Cognition Society, Boston, MA.
- Soto, F. A., & Wasserman, E. A. (2009, March). A common-elements model of visual category learning in pigeons. Talk presented at the 16th Annual International Conference on Comparative Cognition, Melbourne, FL.
- Wasserman, E. A., & Soto, F. A. (2009, March). Blocking of categorical control by prior individual exemplar learning. Talk presented at the 16th Annual International Conference on Comparative Cognition, Melbourne, FL.
- Soto, F. A., & Wasserman, E. A. (2009, March). Pigeons' discrimination of identity and emotion in photographs of human faces. Poster presented at the 16th Annual International Conference on Comparative Cognition, Melbourne, FL.
- Soto, F. A., & Wasserman, E. A. (2008, November). Competition between stimulus- and category-specific attributes in pigeons' categorization of natural images. Poster presented at the 49th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Soto, F. A., & Wasserman, E. A. (2008, November). Stimulus generalization in two axes of rotation of a three-dimensional object by pigeons. Talk presented at the Fall Meeting of the Comparative Cognition Society, Chicago, IL.

- Lazareva, O. F., Soto, F. A., & Wasserman, E. A. (2008, November). Between-category similarity determines basic-level superiority. Talk presented at the 49th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Soto, F. A., & Wasserman, E. A. (2008, May). Application of an elemental model of associative learning to perceptual categorization in pigeons. Talk presented at the 49th Annual Meeting of the Society for Quantitative Analyses of Behavior, Chicago, IL.
- Castro, L., Soto, F. A., & Wasserman, E. A. (2008, March). Associations between absent events in contingency judgment. Poster presented at the Annual Meeting of the Eastern Psychological Association, Boston, MA.
- Lazareva, O. F., Soto, F. A., & Wasserman, E. A. (2008, March). Basic-level superiority: Effect of between-category similarity. Talk presented at the 15th Annual International Conference on Comparative Cognition, Melbourne, FL.
- Castro, L., Soto, F. A., & Wasserman, E. A. (2007, November). Associations between absent events in contingency judgment. Poster presented at the 48th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Soto, F. A., Pérez-Acosta, A. M., & Vogel, E. H. (2005, December). Sumatoria de estímulos en el aprendizaje causal humano [Stimulus summation in human causal learning]. Poster presented at IV Jornada de Investigación y Asistencia Técnica y I Jornada Regional de Ciencia y Tecnología, Universidad de Talca, Talca.
- Vogel, E. H., Soto, F. A., Castro, M. E., & Solar, P. A. (2005, December). Especificidad del estímulo en la adquisición y extinción de la respuesta condicionada de aversión al sabor en ratas [Stimulus specificity in the acquisition and extinction of a conditioned taste aversion response in rats]. Poster presented at IV Jornada de Investigación y Asistencia Técnica y I Jornada Regional de Ciencia y Tecnología, Universidad de Talca, Talca.
- Soto, F. A., & Saavedra, M. A. (2004, November). Variabilidad de los efectos del nivel de motivación en ratas sobre el uso de estrategias en el laberinto radial [Variability of motivation level effects over the use of strategies in the radial maze]. Poster presented at VII Jornadas de Etología, Universidad de Concepción, Concepción.
- Soto, F. A., & Hamamé, C. (2002, October). Relevancia de la contingencia entre estímulo discriminativo y una respuesta instrumental con múltiples consecuencias [Relevance of the contingency between discriminative stimulus and an instrumental response with multiple consequences]. Talk presented at VI Jornadas de Etología, Universidad de Chile, Santiago.

## Invited Talks

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| 2018 | Mathematical and Computational Cognitive Science (MCCS) Colloquium, Department of Psychology, Purdue University. <i>What can be inferred about neural encoding from psychophysics and neuroimaging studies?</i>        |
| 2018 | 41 <sup>st</sup> Annual Meeting of the Society for the Quantitative Analyses of Behavior, San Diego, CA. <i>Beyond the "Conceptual Nervous System": Promises and pitfalls of computational cognitive neuroscience.</i> |
| 2017 | The Sense of Memory: Integration and Representation of Sensory Processes. SFB 874 / IGSN Conference, Ruhr University, Bochum, Germany. <i>Object categorization and perceptual separability: A two-way street.</i>     |
| 2017 | Department of Computer Science, University of Miami. <i>Extending multidimensional signal detection theory to study the independence of brain representations.</i>   |

- 2013 Vision and Image Understanding Lab (Eckstein lab), University of California, Santa Barbara. *Independent processing of stimulus dimensions: A new signal detection model and applications to face perception.*
- 2013 Biopsychology Laboratory (Güntürkun lab), Institute of Cognitive Neuroscience, Ruhr University, Bochum, Germany. *Mechanisms of object category learning in birds and primates: A "general process" approach.*
- 2013 Department of Psychology, University of Iowa. *Category learning and dimension learning: Two sides of the same coin?*
- 2011 Center for Evolutionary Psychology, University of California, Santa Barbara. *Object categorization in birds and people: A comparative approach.*
- 2010 Niv Lab, Princeton University. *Error-driven learning in object categorization by pigeons and people.*

**MATTHEW T. SUTHERLAND, DEPARTMENT OF PSYCHOLOGY**  
**FIU-STYLE CURRICULUM VITAE**

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**CONTACT INFORMATION**

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**BIOGRAPHICAL INFORMATION**

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DOB: 1980  
Birth place: Ohio

Marital status: Married (Dr. Bethany Reeb-Sutherland)  
Children: Eli (2013), Jonah (2016)

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**EDUCATION**

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Ph.D.	<i>University of New Mexico</i>	Psychology (Cognitive Neuroscience)	06/2005 – 12/2007
M.S.	<i>University of New Mexico</i>	Psychology (Cognitive Neuroscience)	08/2002 – 05/2005
B.A.	<i>Ohio University</i>	Psychology (Honors, Magna Cum Laude)	08/1998 – 06/2002

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**FULL-TIME ACADEMIC EXPERIENCE**

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<i>Florida International University</i> <b>Associate Professor</b> , Department of Psychology, Cognitive Neuroscience Area <b>Associate Professor</b> , Department of Neuroscience (secondary appointment)	08/2019 – present
<i>Florida International University</i> <b>Assistant Professor</b> , Department of Psychology, Cognitive Neuroscience Area <b>Assistant Professor</b> , Department of Neuroscience (secondary appointment)	08/2014 – 08/2019
<i>Florida International University</i> <b>Research Assistant Professor</b> , Department of Physics, Cognitive Neuroscience	05/2013 – 08/2014
<i>Florida International University</i> <b>Visiting Professor</b> , Department of Psychology	08/2012 – 04/2013
<i>National Institute on Drug Abuse, Intramural Research Program, NIH</i> <b>IRTA Postdoctoral Fellow</b> , Neuroimaging Research Branch (Chief: Dr. Elliot A. Stein)	12/2007 – 07/2012

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**PART-TIME ACADEMIC EXPERIENCE**

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<i>University of New Mexico</i> , Graduate Research Assistant Dr. Akaysha C. Tang (EEG, signal processing: 2002-2007) Dr. Derek Hamilton (nicotine withdrawal, hippocampal function: 2005)	08/2002 – 12/2007
<i>University of New Mexico</i> , Graduate Teaching Assistant/Instructor Undergraduate Stats Class (Primary Instructor: Sutherland, 2005-2006) Graduate Stats Lab (Primary Instructors: Drs. Timothy Goldsmith & Harold Delaney, 2004-2006)	08/2004 – 05/2006



Ohio University, Undergraduate Research Assistant  
 Dr. Steven Patterson (stress, cardiovascular reactivity: 2001-2002)  
 Dr. Danny Moates (psycholinguistics: 2001-2002)  
 Dr. Frank Bellezza (cued-recall memory: 2000-2002)

08/2000 – 06/2002

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## NON-ACADEMIC EXPERIENCE

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N/A

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## EMPLOYMENT RECORD AT FIU

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Associate Professor, Department of Psychology, Cognitive Neuroscience Area	08/2019 – present
Assistant Professor, Department of Psychology, Cognitive Neuroscience Area	08/2014 – 08/2019
Research Assistant Professor, Department of Physics, Cognitive Neuroscience	05/2013 – 08/2014
Visiting Professor, Department of Psychology	08/2012 – 04/2013

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## PUBLICATIONS

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**Summary:**     **47 publications** (21 first/senior author, 1 in submission, Google Scholar Citations: 1,433; H-index: 20; i10-index 26)

**Trainee level:** \*Post-baccalaureate, \*\*Graduate Student, \*\*\*Postdoctoral mentee

### Peer-Reviewed Articles

- 1) Sutherland, B.D.\* (no relation), **Sutherland, M.T.**, and Trucco, E.M. (*in submission*). Internalizing symptoms moderate the association between low self-control and adolescent electronic use intentions. Submitted: May 12, 2020.
- 2) Hawes, S.W., Waller, R., Byrd, A.L., Bkork, J.M., Dick, A.S., **Sutherland, M.T.**, Riedel, M.C.\*\*\*, Tobia, M.J.\*\*\*, Thomson, N., Laird, A.R., and Gonzalez, R. (*in press*). Reward processing among children with disruptive behavior disorder and callous-unemotional traits in the ABCD Study. *American Journal of Psychiatry*. Accepted: April 23, 2020.
- 3) Poudel, R.\*\*, Riedel, M.C.\*\*\*, Salo, T.\*\*, Flannery, J.S.\*\*, Hill-Bowen, L.D.\*\*, Eickhoff, S.B., Laird, A.R., and **Sutherland, M.T.** (2020). Common and distinct brain activity associated with risky and ambiguous decision-making. *Drug & Alcohol Dependence* 209, 107884, pp. 1-15. doi:10.1016/j.drugalcdep.2020.107884
- 4) Lesage, E., **Sutherland, M.T.**, Ross, T.J., Salmeron, B.J., and Stein, E.A. (2020). Nicotine dependence (trait) and acute nicotinic stimulation (state) modulate attention but not cognitive control in smokers: Converging evidence from Go-Nogo and Flanker fMRI tasks. *Neuropsychopharmacology*, 45(5), pp. 857-865 doi:10.1038/s41386-020-0623-1
- 5) Flannery, J.S.\*\*, Riedel, M.C.\*\*\*, Bottenhorn, K.L.\*\*, Poudel, R.\*\*, Salo, T.\*\*, Hill-Bowen, L.D.\*\*, Laird, A.R., and **Sutherland, M.T.** (2020). Meta-analytic clustering dissociates brain activity and behavioral profiles across reward processing paradigms. *Cognitive, Affective, and Behavioral Neuroscience*, 20(2), pp. 215-235, <https://doi.org/10.3758/s13415-019-00763-7>.
- 6) Waller, R., Hawes, S.W., Byrd, A.L., Dick, A.S., **Sutherland, M.T.**, Riedel, M.C.\*\*\*, Tobia, M.J.\*\*\*, Bottenhorn, K.L.\*\*, Laird, A.R., and Gonzalez, R. (2020). Disruptive behavior problems, callous-unemotional traits, and regional gray matter volume in the ABCD Study. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, S2451-9022(20)30020-3, online publication, <https://doi.org/10.1016/j.bpsc.2020.01.002>.

- 7) Bartley, J.E.\*\*, Riedel, M.C.\*\*\*, Salo, T.\*\*, Boevig, E.R.\*\*, \*\*Bottenhorn, K.L., Bravo, E.I., Odean, R., Nazareth, A., Laird, R.W., **Sutherland, M.T.**, Pruden, S.M., Brewe, E., and Laird, A.R. (2019). Brain activity links performance in science reasoning with conceptual approach. *NPJ Science of Learning*, 4(20), pp. 1-8, <https://doi.org/10.1038/s41539-019-0059-8>.
- 8) Gonzalez, A.A.\*\*, Bottenhorn, K.L.\*\*, Bartley, J.E.\*\*, Hayes, T., Riedel, M.C.\*\*\*, Salo, T.\*\*, Bravo, E., Odean, R., Nazareth, A., Laird, R.W., **Sutherland, M.T.**, Brewe, E., Pruden, S.M., and Laird, A.R. (2019). Sex differences in brain correlates of STEM anxiety. *NPJ Science of Learning*, 4(18). <https://doi.org/10.1038/s41539-019-0058-9>
- 9) Flannery, J.S.\*\*, Riedel, M.C.\*\*\*, Poudel, R.\*\*, Laird, A.R., Ross, T.J., Salmeron, B.J., †Stein, E.A., and †**Sutherland, M.T.** (2019). Habenular and striatal activity during performance feedback are differentially linked with state-like and trait-like aspects of tobacco use disorder. *Science Advances*, 5(10), pp. 1-15, eaax2084, <https://doi.org/10.1126/sciadv.aax2084>. †These individuals made equal 'senior author' contributions to this work.
- 10) Hagler D.J., Hatton S., Cornejo M.D., Makowski C., Fair D.A., Dick A.S., **Sutherland M.T.**, Casey B.J., Barch D.M., Harms M.P., Watts R., Bjork J.M., Garavan H.P., Hilmer L., Pung C.J., Sicat C.S., Kuperman J., Bartsch H., Xue F., Heitzeg M.M., Laird A.R., Trinh T.T., Gonzalez R., Tapert S.F., Riedel M.C.\*\*\*, Squeglia L.M., Hyde L.W., Rosenberg M.D., Earl E.A., Howlett K.D., Baker F.C., Soules M., Diaz J., de Leon O.R., Thompson W.K., Neale M.C., Herting M., Sowell E.R., Alvarez R.P., Hawes S.W., Sanchez M., Bodurka J., Breslin F.J., Morris A.S., Paulus M.P., Simmons W.K., Polimeni J.R., van der Kouwe A., Nencka A.S., Gray K.M., Pierpaoli C., Matochik J.A., Noronha A., Aklin W.M., Conway K., Glantz M., Hoffman E., Little R., Lopez M., Pariyadath V., Weiss S.R., Wolff-Hughes D.L., DelCarmen-Wiggins R., Feldstein Ewing S.W., Miranda-Dominguez O., Nagel B.J., Perrone A.J., Sturgeon D.T., Goldstone A., Pfefferbaum A., Pohl K.M., Prouty D., Uban K., Bookheimer S.Y., Dapretto M., Galvan A., Bagot K., Giedd J., Infante M.A., Jacobus J., Patrick K., Shilling P.D., Desikan R., Li Y., Sugrue L., Banich M.T., Friedman N., Hewitt J.K., Hopfer C., Sakai J., Tanabe J., Cottler L.B., Nixon S.J., Chang L., Cloak C., Ernst T., Reeves G., Kennedy D.N., Heeringa S., Peltier S., Schulenberg J., Sripada C., Zucker R.A., Iacono W.G., Luciana M., Calabro F.J., Clark D.B., Lewis D.A., Luna B., Schirda C., Brima T., Foxe J.J., Freedman E.G., Mruzek D.W., Mason M.J., Huber R., McGlade E., Prescott A., Renshaw P.F., Yurgelun-Todd D.A., Allgaier N.A., Dumas J.A., Ivanova M., Potter A., Florsheim P., Larson C., Lisdahl K., Charness M.E., Fuemmeler B., Hettema J.M., Maes H.H., Steinberg J., Anokhin A.P., Glaser P., Heath A.C., Madden P.A., Baskin-Sommers A., Constable R.T., Grant S.J., Dowling G.J., Brown S.A., Jernigan T.L., and Dale A.M. (2019). Image processing and analysis methods for the Adolescent Brain Cognitive Development Study. *Neuroimage*, 202:116091. doi: 10.1016/j.neuroimage.2019.116091. PMID: 31415884; PMCID: PMC6981278.
- 11) Yanes, J.A.\*, McKinnell, Z.E., Reid, M.A., Busler, J.N., Michel, J.S., Pangelinan, M.M., **Sutherland, M.T.**, Younger, J.W., Gonzalez, R., and Robinson, J.L. (2019). Effects of cannabinoid administration for pain: A meta-analysis and meta-regression. *Experimental and Clinical Psychopharmacology*, 27(4), pp. 370-382, <https://doi.org/10.1037/pha0000281>.
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### Proceedings

- 40) Tang, A.C., **Sutherland, M.T.**, Sun, P., Zhang, Y., Nakazawa, M., Korzekwa, A., Yang, Z., and Ding, M. (2007). Top-down versus bottom-up processing in the human brain: Distinct directional influences revealed by integrating SOBI and Granger causality. In: Independent Component Analysis and Signal Separation: 7<sup>th</sup> International Conference, ICA 2007, London, UK, September 9-12, 2007, Proceedings. Eds: M.E. Davies, C.J. James, S.A. Abdallah, and M.D. Plumbley. Springer, Berlin, Germany. (ISBN 978-3-540-74493-1), pp. 802-809; DOI: 10.1007/978-3-540-74494-8\_100.
- 41) Tang, A.C., **Sutherland, M.T.**, McKinney, C.J., Liu, J.Y., Wang, Y., Parra, L.C., Gerson, A.D., and Sajda, P. (2006). Classifying single-trial ERPs from visual and frontal cortex during free viewing. In: IEEE Proceedings of the International Joint Conference on Neural Networks, Vancouver, BC, Canada; July 16-21; pp. 1376-1383. DOI:10.1109/IJCNN.2006.246853.
- 42) **Sutherland, M.T.**, and Tang, A.C. (2006). Blind source separation can recover systematically distributed neuronal sources from "resting" EEG. In: EURASIP Proceedings of the Second International Symposium on Communications, Control, and Signal Processing, Marrakech, Morocco; March 13-15; <http://www.fsr.ac.ma/ISCCSP2006/>. DOI: 10.13140/2.1.1542.7369.

- 43) **Sutherland, M.T.**, Liu, J.Y., and Tang, A.C. (2004). Temporal delays in blind identification of primary somatosensory cortex. In: IEEE Proceedings of the Third International Conference on Machine Learning and Cybernetics, Shanghai, China; August 26-29; Vol. 7, pp. 4222-4227. DOI: 10.1109/ICMLC.2004.1384580.
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### **Book Chapters**

- 45) **Sutherland, M.T.**, \*Yanes, J.A., and Stein, E.A. (2016). Neuroimaging insights into the multifaceted nature of the nicotine withdrawal syndrome. In F.S. Hall, J.W. Young, & A. Der-Avakian (Eds.), *Negative Affective States and Cognitive Impairments in Nicotine Dependence*. ISBN: 0128026693, ISBN-13: 9780128026694 New York, NY: Elsevier.
- 46) **Sutherland, M.T.**, Liang X., Yang, Y., and Stein, E.A. (2015). Beyond functional localization: Advancing the understanding of addiction-related processes by examining brain connectivity. In S. Wilson (Ed.), *The Wiley-Blackwell Handbook on the Neuroscience of Addiction*. ISBN13 : 9781118472248. Hoboken, NJ: Wiley-Blackwell.
- 47) Tang, A.C., **Sutherland, M.T.**, and Yang, Z. (2011). Capturing “trial-to-trial” variations in human brain activity: From laboratory to real world. In M. Ding & D. L. Glanzman (Eds.), *The Dynamic Brain: An exploration of neuronal variability and its functional significance* (pp. 183-213). New York, NY: Oxford University Press; DOI: 10.1093/acprof:oso/9780195393798.003.0009.

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### **PRESENTED LECTURES, TALKS, AND POSTERS**

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**Summary:** 112 presentations (9 invited lectures, 22 unique conference oral presentations, and 81 conference posters).

**Roles:** <sup>U</sup>Undergraduate, \*Post-baccalaureate, \*\*Graduate Student, \*\*\*Postdoctoral mentee

### **Invited Scientific Lectures**

- 1) Trucco, E.M. and **Sutherland, M.T.** (March 30, 2020) “The ACE Project: Antecedents and consequences of Electronic Nicotine Delivery Systems” Consortium for a Healthier Miami-Dade, Tobacco Free Workgroup Meeting; Miami, FL (online); Host: Takyah Smith, MPH.
- 2) Trucco, E.M. and **Sutherland, M.T.** (Feb 3, 2020) “The ACE Project: Community Outreach and Partnerships” FIU-RCMI Health Equity Symposium; Miami, FL; Host: FIU-RCMI.
- 3) Trucco, E.M. and **Sutherland, M.T.** (Nov. 2019) “What everyone needs to know about e-cigarette use among teens” FIU-RCMI’s Community Engagement Speaker Series; Miami, FL; Host: Dr. Melissa Howard).
- 4) **Sutherland, M.T.** (Sept, 2016). “*Emerging brain network-level targets for smoking cessation.*” NIDA/NIAAA The Neuroscience Consortium Cutting Edge Symposium; Bethesda, MD; Host: Dr. Vani Pariyadath (NIDA Program Officer).

- 5) **Sutherland, M.T.** (May, 2016). "*Neurobiological targets for smoking cessation.*" Neuroscience Focus Series, Neuroscience Center, Baptist Hospital; Miami, FL; Host: Dr. Sergio Gonzalez-Arias.
- 6) **Sutherland, M.T.** (Jan, 2015). "*Neuroimaging for theranostics in personalized medicine: Emerging neurobiological targets for smoking cessation interventions.*" The 2<sup>nd</sup> Annual Personalized NanoMedicine Symposium. Florida International University; Miami, FL; Host: Dr. Madhavan Nair.
- 7) **Sutherland, M.T.** (May, 2014). "*Neurobiological underpinnings of nicotine addiction: A brain network-level perspective.*" University of Miami; Miami, FL; Host: Dr. Jennifer Britton.
- 8) **Sutherland, M.T.** (Oct, 2011). "*One drug, two actions: Varenicline attenuates the impact of nicotine abstinence and administration on amygdala- and insula-centered dynamics.*" Center for Interdisciplinary Research on Nicotine Addiction (CIRNA), University of Pennsylvania; Philadelphia, PA; Host: Dr. Caryn Lerman.
- 9) **Sutherland, M.T.** (Nov, 2010). "*Varenicline and nicotine reduce amygdala reactivity and amygdala-insula functional connectivity in acutely abstinent smokers.*" National Institute on Alcohol Abuse and Alcoholism (NIAAA); Bethesda, MD; Host: Dr. Markus Heilig.

#### **Conference Oral Session Presentations**

- 1) **Sutherland, M.T.** (2020). An early career reviewer's perspective on NIH peer review. Workshop: Demystifying the NIH Peer Review Process (Speakers: Mintzer, Prentice, Kautz, Stoops, Sutherland). Workshop to be presented at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.
- 2) \*\*Flannery, J.S., Villar, M., \*Madan, B., \*Sutherland, B.D. (no relation), \*\*Viera Perez, P., \*\*Crooks, K., Trucco, E.M., and **Sutherland, M.T.**, (2020). Peer influences on adolescents' intentions for future electronic nicotine delivery system use. Oral presentation to be delivered at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL; June 20-24.
- 3) \*\*Hill-Bowen, L.D, \*\*\*Riedel, M.C, \*\* Salo, T., \*\*Flannery, J.S., \*\* Poudel, R., Laird, A.R., and **Sutherland, M.T.** (2020). Convergent network-level brain alterations across drugs of abuse: A meta-analysis of structural MRI studies. Oral presentation to be delivered at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL; June 20-24.
- 4) \*\*\*Tobia, M.J., Ross, T.J., Salmeron, B.J., Laird, A.R., Stein, E.A., and **Sutherland, M.T.** (2020). Functional connectivity of the brain's olfactory networks is linked with craving variability among abstinent smokers: A resting-state fMRI investigation. Oral presentation to be delivered at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL; June 20-24.
- 5) Trucco, E.M., \*\*Cristello, J., and **Sutherland, M.T.** (2020). Do parents still matter? The impact of parents and peers on electronic cigarette use attitudes and intentions. Symposium paper to be presented at the Biennial Meeting of the *Society for Research on Adolescence* (SRA) (Symposium title: Blowing smoke: Individual, social, and biological factors linked to electronic cigarette use among teens and young adults, Symposium Chair: Trucco), San Diego, CA; March 19-21 (cancelled, COVID-19).
- 6) \*Madan, B., **Sutherland, M.T.**, & Trucco, E.M. (2020). Outcome expectancies mediate the impact of hopelessness and impulsivity on e-cigarette use intentions. Oral presentation to be delivered at the Biennial Meeting of the *Society for Research on Adolescence* (SRA), San Diego, CA; March 19-21 (cancelled, COVID-19).

- 7) \*Sutherland, B.D. (no relation), **Sutherland, M.T.**, & Trucco, E.M. (2020). The synergistic effect of low self-control and internalizing symptoms on adolescent electronic-cigarette use intentions. Oral presentation to be delivered at the Biennial Meeting of the *Society for Research on Adolescence* (SRA), San Diego, CA; March 19-21 (cancelled, COVID-19).
- 8) Zapata, M.F., Hartmann, S., **Sutherland, M.T.**, and Trucco, E. (2020). Social Goals and Vulnerability to Peer Influence: Adolescent Substance Use Initiation. Oral presentation to be delivered at the University of Maryland National Conference for McNair Scholars, College park, MD; March 12-15 (cancelled, COVID-19).
- 9) Trucco, E.M., and **Sutherland, M.T.** (2020). What everyone needs to know about e-cigarette use and vaping among teens. Workshop presented at the *Miami International Child and Adolescent Mental Health* (MICAMH) Conference, Miami, FL; February 5-7.
- 10) Dick, A.S., Comer, J., Silva, K., Gonzalez, R., **Sutherland, M.T.**, Laird, A.R., Gurwitch, R., La Greca, A., Squeglia, L., Gray, K., Nixon, S.J., Cottler, L., and Tapert, S. (2019). Leveraging the ABCD Study to Examine the Effects of Hurricane Irma Exposure. Oral presentation delivered at the Biennial Meeting of the *Society for Research in Child Development*, Baltimore, MD; March 21-23.
- 11) Dick, A.S., Garcia, N., Pruden, S., Thompson, W., Hawes, S., **Sutherland, M.T.**, \*\*\*Riedel, M.C., Laird, A.R., and Gonzalez, R. (2019). No bilingual advantage for executive function: Evidence from the ABCD Study. Oral presentation delivered at the Biennial Meeting of the *Society for Research in Child Development*, Baltimore, MD; March 21-23.
- 12) **Sutherland, M.T.**, \*\*\*Riedel, M.C., and Dick, A.S. (2018). Task-based neuroimaging probes of the developing brain in the ABCD study. Oral presentation delivered at the annual meeting of the *Research Society on Alcoholism*, San Diego, CA, June 16-20.
- 13) \*\*†Flannery, J.S., \*\*\*Riedel, M.C., \*\*Poudel, R., \*\*Salo, T., \*\*Bottenhorn, K.L., \*\*Hill, L., Laird, A.R., and **Sutherland, M.T.** (2017). Meta-analytic clustering dissociates activation and behavior profiles across reward processing data. Oral presentation delivered at:
  - a. The annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada, June 25-29, 2017. † **Merit abstract award to J.S.F.**
  - b. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 28, 2017.
  - c. The Global BrainHack Meeting, Florida International University, Miami, FL, March 3, 2017. † **Best trainee presentation award to J.S.F.**
- 14) \*\*†Boeving, E.R., Toma, A., \*\*\*Riedel, M.C., \*\*Bottenhorn, K.L., Bzdok, D., Eickhoff, S.B., **Sutherland, M.T.**, Glahn, D.C., and Laird, A.R. (2017). Social neuroimaging meta-analysis through the RDoC lens yields distinct cliques in the social brain. Oral presentation delivered at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada, June 25-29, 2017. † **Merit abstract award to E.R.B.**
- 15) \*\*†Salo, T., \*\*\*Riedel, M.C., \*\*Bartley, J.E., \*\*Bottenhorn, K.L., Yarkoni, T., Turner, M.D., Turner, J.A., **Sutherland, M.T.**, and Laird, A.R. (2017). A quantitative evaluation of Neurosynth's annotation methods. Oral presentation delivered at:
  - a. The annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada, June 25-29, 2017. † **Merit abstract award to T.S.**
  - b. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 28, 2017.
- 16) \*\*Poudel, R., \*\*\*Riedel, M.C., \*\*Hill, L., \*\*Flannery, J.S., \*\*Salo, T., Laird, A.R., and **Sutherland, M.T.** (2017). Behavioral decoding of functionally related brain areas consistently linked to drug cue reactivity. Oral presentation delivered at:
  - a. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 28, 2017.



- b. The Global BrainHack Meeting, Florida International University, Miami, FL; March 3, 2017.
- 17) \*\*†Bartley, J.E., \*\*\*Riedel, M.C., \*\*Salo, T., \*\*Boeving, E.R., Odean, R., Bravo, E., Laird, R.W., Pruden, S.M., Brewe, E., **Sutherland, M. T.**, and Laird, A.R. (2017). Understanding the neural substrates of physics problem solving: Brain mechanisms and behavior correlates. Oral presentation delivered at:
    - a. The Florida Statewide Graduate Student Research Symposium, Tampa, FL, April 21, 2017. † **Second Place award to J.E.B., Category: Education.**
    - b. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 28, 2017. † **First Place award to J.E.B., Category: Education.**
    - c. The Global BrainHack Meeting, Florida International University, Miami, FL, March 3, 2017.
  - 18) \*\*Bottenhorn, K.L., Robinson, J.L., \*\*Flannery, J.S., \*\*\*Riedel, M.C., \*Yanes, J.A., **Sutherland, M. T.**, and Laird, A.R. (2017). A multimodal connectivity investigation of the habenula. Oral Presentation delivered at:
    - a. The Global BrainHack Meeting, Florida International University, Miami, FL, March 3, 2017.
    - b. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 29, 2016.
  - 19) \*\*Flannery, J.S., **Sutherland, M.T.**, \*\*\*Riedel, M.C., Laird, A.R., Salmeron, B.J., Ross, T. J., and Stein, E.A. (2016). Habenula activity following positive and negative feedback among abstinent smokers. Oral presentation delivered at:
    - a. The Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 29, 2016.
    - b. The Global BrainHack Meeting, University of Miami, Miami, FL, October 23, 2015.
  - 20) \*\*Boeving, E.R., \*\*Bartley, J.E., \*\*\*Riedel, M.C., **Sutherland, M.T.**, and Laird, A.R. (2016). Neural mechanisms for reasoning and problem solving as revealed by meta-analytic connectivity modeling of the dorsal medial cortex. Oral presentation delivered at the Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 26, 2016.
  - 21) \*\*†Bartley, J.E., \*\*\*Riedel, M.C., \*Falcone, K., MacNamara, K., Pruden, S.M., Brewe, E., **Sutherland, M.T.**, and Laird A.R. (2016). Physics classroom learning promotes posterior medial cortex activity during problem-solving: An fMRI investigation of physics learning. Oral presentation delivered at the Graduate Student Scholarly Forum, Florida International University, Miami, FL, March 26, 2016. † **Third Place award to J.E.B., Category: Education.**
  - 22) \*\*†Bartley, J.E., **Sutherland, M.T.**, \*Falcone, K., \*\*\*Riedel, M.C., Laird, R.W., Marguglio, D., MacNamara, K., Nazareth A., Pruden, S.M., Brewe, E., and Laird, A.R. (2015). Physics learning facilitates enhanced resting-state brain connectivity in problem solving network. Oral presentation delivered at the Physics Department Graduate Student Research Competition, Florida International University, Miami, FL, April 22, 2015. † **First place award to J.E.B.**

### **Conference Poster Presentations**

- 1) \*\*Cristello, J.V., **Sutherland, M.T.**, and Trucco, E.M. (2020). The impact of Instagram content on perceived harm due to alcohol and marijuana use among adolescents. Poster to be presented at the annual meeting of the American Psychological Association, Washington, D.C.; August 6-9.
- 2) \*\*\*Riedel, M.C., \*\*Flannery, J.S., Laird, A.R., Gonzalez, R., and **Sutherland, M.T.**, (2020). Independent and combined effects of chronic cannabis use and HIV on insular functional connectivity. Poster to be presented at the annual meeting of the *Organization for Human Brain Mapping*, Montreal, Canada (online); June 26-30.
- 3) Poudel, R.\*\*, Riedel, M.C.\*\*, Salo, T.\*\*, Flannery, J.S.\*\*, \*\*Hill-Bowen, L.D., Eickhoff, S.B., Laird, A.R., and **Sutherland, M.T.** (2020). The impact of substance abuse on brain activity during risky-decision making: A

neuroimaging meta-analysis. Poster to be presented at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.

- 4) Riedel, M.C.<sup>\*\*\*</sup>, Hawes, S., Duperrouzel, J., Laird, A.R., Gonzalez, R., and **Sutherland, M.T.**, (2020). Cannabis use among emerging adults is linked with altered insula activity during effort-based decision-making. Poster to be presented at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.
- 5) <sup>\*\*</sup>Crooks, K., <sup>\*\*</sup>Flannery, J.S., <sup>\*</sup>Sutherland, B.D. (no relation), Villar, M., <sup>\*</sup>Madan, B., <sup>\*\*</sup>Viera Perez, P., Trucco, E.M., and **Sutherland, M.T.**, (2020). Interdependent effects of worry/fear and obsessive-compulsive symptomatology on adolescent electronic nicotine delivery system use intentions. Poster to be presented at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.
- 6) <sup>\*\*</sup>Viera Perez, P., <sup>\*\*</sup>Crooks, K., <sup>\*\*</sup>Flannery, J.S., Villar, M., <sup>\*</sup>Madan, B., <sup>\*</sup>Sutherland, B.D. (no relation), Trucco, E.M., and **Sutherland, M.T.**, (2020). Parental monitoring and peer influences mediate intentions for future electronic nicotine delivery system (ENDS) use among adolescents with ADHD symptomatology. Poster to be presented at the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.
- 7) del Valle, N., <sup>\*\*</sup>Cristello, J.V., <sup>\*</sup>Madan, B., <sup>\*</sup>Sutherland, B.D. (no relation), **Sutherland, M.T.**, and Trucco, E.M. (2020). An examination of caregiver-adolescent discrepancies on internalizing behaviors and adolescents' intentions to use e-cigarettes. Poster to be presented at to the Annual Meeting of The *College on Problems of Drug Dependence* (CPDD), Hollywood, FL (online); June 20-24.
- 8) <sup>\*\*</sup>Cristello, J.,V., **Sutherland, M.T.**, & Trucco, E. M. (2020). Validation of the Adolescent E-cigarette Consequences Questionnaire (AECQ). Poster to be presented at the *Collaborative Perspectives on Addiction* (CPA) Conference, San Diego, CA; April 2-4 (cancelled, Covid-19).
- 9) Echevarria, B., Fava, N.M., **Sutherland, M.T.**, & Trucco, E.M. (2020). Trauma symptom severity mediates the association between cumulative exposure to adversity and e-cigarette use intentions. Poster to be presented at the Biennial Meeting of the *Society for Research on Adolescence* (SRA), San Diego, CA; March 19-21 (cancelled, COVID-19).
- 10) Madan, B., Sutherland, M.T., & Trucco, E.M. (2020). Outcome expectancies mediate the impact of hopelessness and impulsivity on e-cigarette use intentions. Poster presented at the Miami International Child & Adolescent Mental Health (MICAMH) Conference, Miami, FL; Feb. 5-7.
- 11) Sutherland, B.D., Sutherland, M.T., & Trucco, E.M. (2020). The synergistic effect of low self-control and internalizing symptoms on adolescent electronic cigarette use intentions. Poster presented at the Miami International Child & Adolescent Mental Health (MICAMH) Conference, Miami, FL; Feb. 5-7.
- 12) Lesage, E., **Sutherland, M.T.**, Ross, T.J., Salmeron, B.J., and Stein, E.A. (2019). Nicotine dependence (trait) and acute nicotinic stimulation (state) modulate attention but not cognitive control in smokers: Converging evidence from Go-NoGo and Flanker fMRI tasks. Poster presented at the annual meeting of the *American College of Neuropsychopharmacology*, Orlando, FL; December 8-11.
- 13) <sup>\*\*</sup>Poudel R., <sup>\*\*\*</sup>Tobia, M.J., <sup>\*\*\*</sup>Riedel, M.C., <sup>\*\*</sup>Salo, T., <sup>\*\*</sup>Flannery, J.S., <sup>\*\*</sup>Hill-Bowen, L.D., Laird, A.R., Dick, A.S., Parra, C.M., & **Sutherland, M.T.** (2019). Neural correlates of risky decision-making and relations with risk- and reward-related behaviors among individuals with low SES. Poster presented at the annual meeting of the *Society for Neuroscience*, Chicago, IL; Oct. 19-23.

- 14) \*\*Flannery, J.S., \*\*\*Tobia, M.J., \*\*\*Riedel, M.C., \*\*Poudel, R., \*\*Hill-Bowen, L.D., Laird, A.R., Gonzalez, R., and **Sutherland, M.T.**, (2019). Interactive effects of cannabis and HIV infection on striatal-cortical functional connectivity. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Rome, Italy; June 9-13.
- 15) \*\*Hill-Bowen, L.D., \*\*\*Tobia, M.J., Laird, A.R., Salmeron, B.J., Ross, T.J., Stein, E.A., and **Sutherland, M.T.**, (2019). Chronic and acute nicotine alters intra- and inter-regional resting-state fMRI of the vmPFC. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Rome, Italy; June 9-13.
- 16) \*\*Bottenhorn, K.L., \*\*Bartley, J.E., \*\*\*Riedel, M.C., \*\*Salo, T., Bravo, E., Odean, R., Nazareth, A., Laird, R., Pruden, S., **Sutherland, M.T.**, Brews E., and Laird, A. R. (2019). Large-scale brain networks underlying domain-specific memory, intelligence, and academic performance. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Rome, Italy; June 9-13.
- 17) \*\*Bartley, J.E., \*\*\*Riedel, M.C., \*\*Salo, T., \*\*Bottenhorn, K.L., Bravo, E., Odean, R., Nazareth, A., Laird, R., **Sutherland, M.T.**, Pruden, S., Brews E., and Laird, A. R. (2019). Brain networks underlying sex and pedagogy differences in physics learning. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Rome, Italy; June 9-13.
- 18) \*\*Salo, T., Yarkoni, T., Kent, J.D., Gorgolewski, K.J., Glerean E., \*\*Bottenhorn, K.L., Bilgel, M., Wright, J., Reeders, P., Nielson, D.N., Nichols, T.E., \*\*\*Riedel, M.C., **Sutherland, M.T.**, and Laird, A.R., (2019). NiMARE: A Neuroimaging meta-analysis research environment. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Rome, Italy; June 9-13.
- 19) \*\*Flannery, J.S., \*\*\*Riedel, M.C., Laird, A.R., Ross, T.J., Salmeron, B.J., Stein, E.A., and **Sutherland, M.T.** (2019). Striatal and habenular activity are differentially linked with state- and trait-like aspects of nicotine addiction. Poster presented at the annual meeting of the *Social and Affective Neuroscience Society*, Miami, FL; May 2-4.
- 20) \*\*Hill-Bowen, L.D., \*\*\*Tobia, M.J., Laird, A.R., Salmeron, B.J., Ross, T.J., Stein, E.A., and **Sutherland, M.T.** (2019). Local and remote resting-state functional alterations in the vmPFC and middle temporal gyrus among abstinent cigarette smokers. Poster presented at the annual meeting of the *Social and Affective Neuroscience Society*, Miami, FL; May 2-4.
- 21) \*\*Poudel R., \*\*\*Riedel, M.C., \*\*Salo, T., \*\*Flannery, J.S., \*\*Hill-Bowen, Laird, A.R., and **Sutherland, M.T.** (2019). Common and distinct brain region associated with risky and ambiguous decision-making. Poster presented at the annual meeting of the *Social and Affective Neuroscience Society*, Miami, FL; May 2-4.
- 22) \*\*Bottenhorn, K.L., \*\*\*Riedel, M.C., **Sutherland, M.T.**, Gonzalez, R., and Laird, A. R. (2019). Uncovering a latent factor structure underlying pre-adolescent self-regulation and its neural substrates. Poster presented at the annual meeting of the *Social and Affective Neuroscience Society*, Miami, FL; May 2-4.
- 23) **Sutherland, M.T.**, \*\*Flannery, J.S., \*\*\*Riedel, M.C., Laird, A.R., Ross, T.J., Salmeron, B.J., and Stein, E.A. (2018). Nicotine reduces habenula activity among abstinent cigarette smokers during performance feedback. Poster presented at the annual meeting of the *American College of Neuropsychopharmacology*, Hollywood, FL; December 9-13.
- 24) \*\*Poudel, R., \*\*\*Tobia, M.J., \*\*\*Riedel, M.C., Laird, A.R., Ross, T.J., Salmeron, B.J., Stein, E.A., and **Sutherland, M.T.** (2018). Functional connectivity of the human ventral striatum during smoking abstinence and pharmacologic administration. Poster presented at the annual meeting of the *Society for Neuroscience*, San Diego, CA; November 3-7.

- 25) \*\*\*Riedel, M.C., \*\*Salo, T., Turner, M.D., **Sutherland, M.T.**, Turner, J.A., and Laird, A.R., (2018). Automated, efficient, and accelerated knowledge modeling of the cognitive neuroimaging literature using the ATHENA toolkit. Poster and oral presentation delivered at *NeuroInformatics*, Montreal, Canada; August 9-10.
- 26) \*\*Bottenhorn, K.L., \*\*Salo, T., **Sutherland, M.T.**, and Laird, A.R., (2018). Quantitative comparison of functional decoding approaches across meta-analytic frameworks. Poster presented at *NeuroInformatics*, Montreal, Canada; August 9-10.
- 27) \*\*Salo, T., \*\*Bottenhorn, K.L., Nichols, T.E., \*\*\*Riedel, M.C., **Sutherland, M.T.**, Yarkoni, T., and Laird, A.R., (2018). NiMARE: Neuroimaging meta-analysis research environment. Poster presented at *NeuroInformatics*, Montreal, Canada; August 9-10.
- 28) Steele, V.R., Maxwell, A.M., **Sutherland, M.T.**, Ross, T.J., Salmeron, B.J., and Stein, E.A. (2018). Acute nicotine abstinence decreases neural correlates of response inhibition diagnostic of relapse. Poster presented at the annual meeting of the *Society of Biological Psychiatry*, New York, NY; May 10-12.
- 29) \*\*\*Riedel, M.C., \*\*Flannery, J.S., Gonzalez, R., Laird, A.R., and **Sutherland, M.T.** (2017). Combined impact of HIV and cannabis use on insular functional connectivity. Poster presented at the annual meeting of the *Society for Neuroscience*, Washington, DC; November 11-15.
- 30) \*\*Flannery, J.S., **Sutherland, M.T.**, \*\*\*Riedel, M.C., Laird, A.R., Salmeron, B.J., Ross, T.J., and Stein, E.A. (2017). Abstinent smokers show reduced brain responses to positive feedback and enhanced responses to negative feedback. Poster presented at the annual meeting of the *Society for Neuroscience*, Washington, DC; November 11-15.
- 31) \*\*†Flannery, J.S., \*\*\*Riedel, M.C., \*\*Poudel, R., \*\*Salo, T., \*\*Bottenhorn, K.L., \*\*Hill, L., Laird, A.R., and **Sutherland, M.T.** (2017). Meta-analytic clustering dissociates activation and behavior profiles across reward processing data. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29. † **Merit abstract award to J.S.F.**
- 32) \*\*Poudel, R., \*\*\*Riedel, M.C., \*\*Hill, L., \*\*Flannery, J.S., \*\*Salo, T., Laird, A.R., and **Sutherland, M.T.** (2017). Behavioral decoding of functionally related brain areas consistently linked to drug cue reactivity. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29.
- 33) \*\*Bartley, J.E., \*\*\*Riedel, M.C., \*\*Salo, T., \*\*Boevig, E.R., Odean, R., Bravo, E., Laird, R., Pruden, S., Brewe, E. **Sutherland, M.T.**, and Laird, A.R. (2017). Uncovering the neural substrates of physics problem solving: A new paradigm with behavior correlates. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29.
- 34) \*\*Bottenhorn, K.L., Robinson, J.L., \*\*Flannery, J.S., \*\*Boevig, E.R., \*\*Salo, T., \*\*\*Riedel, M.C., Eickhoff, S.B., \*Yanes, J.A., **Sutherland, M.T.**, and Laird, A.R. (2017). Connectivity of the human habenula using 7T resting state and meta-analytic coactivation modeling. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29.
- 35) \*\*†Boevig, E.R., Toma, A., \*\*\*Riedel, M.C., \*\*Bottenhorn, K.L., Bzdok, D., Eickhoff, S.B., **Sutherland, M.T.**, Glahn, D.C., and Laird, A.R. (2017). Social neuroimaging meta-analysis through the RDoC lens yields distinct cliques in the social brain. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29. † **Merit abstract award to E.R.B.**
- 36) \*\*†Salo, T., \*\*\*Riedel, M.C., \*\*Bartley, J.E., \*\*Bottenhorn, K.L., Yarkoni, T., Turner, M.D., Turner, J.A., **Sutherland, M.T.**, and Laird, A.R. (2017). A quantitative evaluation of Neurosynth's annotation methods.

Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Vancouver, Canada; June 25-29. † **Merit abstract award to T.S.**

- 37) \*\*†Flannery, J.S., **Sutherland, M.T.**, \*\*\*Riedel, M.C., Laird, A.R., Salmeron, B.J., Ross, T. J., and Stein, E.A. (2016). Habenula activity following positive and negative feedback among abstinent smokers. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30. † **Merit abstract award to J.S.F.**
- 38) Lesage, E., Aronson, S.E., **Sutherland, M.T.**, Ross, T. J., Salmeron, B.J., and Stein, E.A. (2016). Effects of smoking status and nicotinic receptor stimulation on probabilistic reversal learning. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30.
- 39) \*\*\*Riedel, M.C., \*\*Poudel, R., \*\*Salo, T., Eickhoff, S.B., Fox, P.T., Laird, A.R., and **Sutherland, M.T.** (2016). Co-activation based parcellation of the human insula. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30.
- 40) \*\*Bartley, J.E., \*\*\*Riedel, M.C., \*Falcone, K., MacNamara, K., Pruden, S., Brewe, E. **Sutherland, M.T.**, and Laird, A.R. (2016). Physics classroom learning promotes posterior medial cortex activity during problem-solving. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30.
- 41) \*\*Bottenhorn, K.L., **Sutherland, M.T.**, and Laird, A.R. (2016). Naturalistic paradigms in fMRI research: An ALE meta-analysis. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30.
- 42) \*Falcone, K., \*\*Poudel, R., Laird, A.R., and **Sutherland, M.T.** (2016). Functional and structural neurobiological impact of mindfulness meditation: An ALE meta-analysis. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland; June 26-30.
- 43) \*Yanes, J.A. \*\*\*Riedel, M.C., Ray, K.L., Fox, P.M., **Sutherland, M.T.**, and Laird, A.R. (2016). Large-scale data mining reveals distinct neural networks supporting emotional processing: A meta-analytic study. Poster presented at the Annual Meeting of the *Social & Affective Neuroscience Society*, New York, NY; April 28-30.
- 44) \*Yanes, J.A. \*\*\*Riedel, M.C., Ray, K.L., Robinson, J.L., Laird, A.R., and **Sutherland, M.T.** (2016). Neurobiological impacts of chronic cannabis use: A meta-analysis of functional neuroimaging studies. Poster presented at the *NIH Marijuana and Cannabinoids: A Neuroscience Research Summit*, Bethesda, MD; March 22-23.
- 45) Duperrouzel, J.C., Laird, A.R., **Sutherland, M.T.**, Ross, M., and Gonzalez, R. (2016). Functional neuroimaging consensus regarding executive function alterations among cannabis using adolescents and young adults. Poster presented at annual meeting of the *International Neuropsychological Society*, Boston, MA; February 3-6.
- 46) **Sutherland, M.T.**, \*\*Flannery, J.S., \*\*\*Riedel, M.C., \*Falcone, K., <sup>u</sup>Garcia, I., <sup>u</sup>Garcia, K., Stein, E.A. and Laird, A.R. (2015). Common grey matter reductions across addictive disorders converge in the insula, vmPFC, and thalamus. Poster presented at the annual meeting of the *American College of Neuropsychopharmacology*, Hollywood, FL; December 6-10.
- 47) Lesage, E., Aronson, S.E., **Sutherland, M.T.**, Ross, T. J., Salmeron, B.J., and Stein, E.A. (2015). Nicotinic receptor stimulation affects reversal learning in smokers. Poster presented at the annual meeting of the *American College of Neuropsychopharmacology*, Hollywood, FL; December 6-10.

- 48) **Sutherland, M.T.**, \*\*Ray, K.L., \*\*Riedel, M.C., \*Yanes, J.A., Stein, E.A. and Laird, A.R. (2015). nAChR agonists induce heterogeneous functional alterations across the brain: An ALE meta-analysis. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Honolulu, Hawaii; June 14-18.
- 49) \*\*Bartley, J.E., **Sutherland, M.T.**, \*Falcone, K., \*\*Riedel, M.C., Laird, R.W., Marguglio, D., MacNamara, K., Brewe, E., and Laird, A.R. (2015). Physics learning facilitates enhanced resting state connectivity in problem solving network. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Honolulu, Hawaii; June 14-18.
- 50) \*Yanes, J.A., \*\*Riedel, M.C., \*\*Ray, K.L., Fox, P., **Sutherland, M.T.**, and Laird, A.R. (2015). Cognitive control of emotion: A meta-analytic network approach to understanding emotion. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Honolulu, Hawaii; June 14-18.
- 51) Lesage, E., **Sutherland, M.T.**, Ross, T.J., Salmeron, B.J., and Stein, E.A. (2015). Inhibitory control networks are unaffected by nicotinic receptor modulation in smokers. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Honolulu, Hawaii; June 14-18.
- 52) **Sutherland, M.T.**, Rasgon, A., Frangou, S., Glahn, D.C., and Laird, A.R. (2014). Common and distinct alterations across anxiety disorders: An ALE meta-analysis. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Hamburg, Germany; June 8-12.
- 53) Fedota, J., **Sutherland, M.T.**, Ross, T.J., and Stein, E.A. (2014). Anticipatory reward processing is modulated by varenicline and nicotine in cigarette smokers. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Hamburg, Germany; June 8-12.
- 54) **Sutherland, M.T.**, \*Carroll, A.J., Salmeron, B.J., Ross, T.J., and Stein, E.A. (2011). Insula functional connectivity with default-mode network is modulated by varenicline and nicotine in abstinent smokers. Poster presented at the annual meeting of the *American College of Neuropsychopharmacology*, Waikoloa, Hawaii; December 4-8.
- 55) **Sutherland, M.T.**, \*Carroll, A.J., Salmeron, B.J., Ross, T.J., and Stein, E.A. (2011). Differential amygdala responses to varenicline and nicotine in acutely-abstinent smokers: Implications for personalized smoking cessation treatment? Poster presented at the annual *Society for Neuroscience* meeting, Washington, D.C.; November 12-16.
- 56) \*Carroll, A.J., **Sutherland, M.T.**, Salmeron, B.J., Ross, T.J., and Stein, E.A. (2011). Externalizing traits negatively correlate with error-related anterior cingulate cortex and insula activity in acutely abstinent smokers. Poster presented at the annual *Society for Neuroscience* meeting, Washington, D.C.; November 12-16.
- 57) **Sutherland, M.T.**, \*Carroll, A.J., Salmeron, B.J., Ross, T.J., Hong, L.E., and Stein, E.A. (2011). Is Response feedback processing in abstinent smokers under nicotinic modulation? Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Quebec City, Canada; June 26-30.
- 58) †**Sutherland, M.T.**, Salmeron, B.J., Gu, H., Y. Yang, Ross, T.J., and Stein, E.A. (2010). Varenicline and nicotine reduce amygdala reactivity and amygdala-insula functional connectivity in acutely abstinent smokers. Poster presented at the annual *Society for Neuroscience* meeting, San Diego, CA; November 13-17. † “Hot Topic” media material selection.

- 59) †**Sutherland, M.T.**, Salmeron, B.J., Ross, T.J., and Stein, E.A. (2010). Varenicline and nicotine reduce amygdala reactivity in acutely abstinent smokers. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Barcelona, Spain; June 6-10. † **Merit abstract award to M.T.S.**
- 60) **Sutherland, M.T.**, Flannery, B.A., Matochik, J.A., and Fishbein, D.H. (2009). High trait psychopathy is associated with reduced orbital frontal, ventral striatal, and cingulate activity in a risky decision-making task. Poster presented at the annual *Society for Neuroscience* meeting, Chicago, IL; October 17-21.
- 61) **Sutherland, M.T.**, Ross, T.J., and Stein, E.A. (2009). Nicotine does not modulate attention switching in the context of a working memory task. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, San Francisco, CA; June 18-23.
- 62) **Sutherland, M.T.**, Yang, Z., and Tang, A.C. (2008). When more stress hormone is good: Reduced interference in a Stroop task is associated with higher salivary cortisol. Poster presented at the annual *Society for Neuroscience* meeting, Washington, DC; November 15-19.
- 63) **Sutherland, M.T.**, and Tang, A.C. (2007). Limited modulation of Stroop interference effects by up to 3 preceding trials. Poster presented at the annual *Society for Neuroscience* meeting, San Diego, CA; November 3-7.
- 64) Sun, P., Yang, Z., Korzekwa, A.M., **Sutherland, M.T.**, Nakazawa, M., and Tang, A.C. (2007). Determining gender from local network synchronization in the frontal cortex. Poster presented at the annual *Society for Neuroscience* meeting, San Diego, CA; November 3-7.
- 65) Tang, A.C., **Sutherland, M.T.**, Sun, P., Zhang, Y., Nakazawa, M., Korzekwa, A.M., Yang, Z., and Ding, M. (2007). Feed-forward versus feedback processing in the human brain: Distinct directional influences revealed by integrating SOBI and Granger causality. Poster presented at the annual *Society for Neuroscience* meeting, San Diego; November 3-7.
- 66) **Sutherland, M.T.**, and Tang, A.C. (2006). Reliable detection of bilateral activation in human primary somatosensory cortex by unilateral median nerve stimulation. Poster presented at the annual *Society for Neuroscience* meeting, Atlanta, GA; October 14-18.
- 67) Hamilton, D.A., Akers, K.G., **Sutherland, M.T.**, and Allan, A.M. (2006). Effects of chronic nicotine exposure on place learning and memory in the rat. Poster presented at the annual *Society for Neuroscience* meeting, Atlanta, GA; October 14-18.
- 68) Zhang, Y., **Sutherland, M.T.**, Tang, A.C., and Ding, M. (2006). Spatiotemporal Dynamics of SOBI recovered EEG components: A coherence and Granger Causality analysis. Poster presented at the annual *Society for Neuroscience* meeting, Atlanta, GA; October 14-18.
- 69) Hamilton, D.A., Akers, K.G., **Sutherland, M.T.**, and Savage, D.D. (2006). Spatial memory impairment in rats exposed to moderate levels of ethanol *in utero*. Poster presented at the annual meeting for the *Research Society on Alcoholism*, Baltimore, MD; June 23-29.
- 70) **Sutherland, M.T.**, Zhang, Y., Ding, M., and Tang, A.C. (2006). Characterization of cortical network dynamics: Integrating SOBI and Granger Causality. Poster presented at the meeting of the *Organization for Human Brain Mapping*, Florence, Italy; June 11-15.
- 71) **Sutherland, M.T.**, and Tang, A.C. (2005). What's going on in your head while you are "resting"? Decomposing high density EEG data using blind source separation. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Toronto, Ontario, Canada; June 12-16.

- 72) Tang, A.C., Chang, K.C., **Sutherland, M.T.**, and McKinney, C.J. (2004). Predicting single-trial performance in a target detection task from high density EEG. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*, Budapest, Hungary; June 13-17.
- 73) **Sutherland, M.T.**, McKinney, C.J., and Tang, A.C. (2004). Blind source separation allows for the reliable detection of ipsilateral primary somatosensory cortex activation. Poster presented at the annual meeting of the *Cognitive Neuroscience Society*, San Francisco, CA; April 18-20.
- 74) **Sutherland, M.T.**, McKinney, C.J., and Tang, A.C. (2003). Evidence for plasticity in somatosensory cortex after paired right and left median nerve stimulation. Poster presented at the annual *Society for Neuroscience* meeting, New Orleans, LA; November 8-12.
- 75) McKinney, C.J., **Sutherland, M.T.**, Malaszenko, N.A., Reeb, B.C., and Tang, A.C. (2003). SOBI analysis of electroencephalographic data and exploration of critical parameters. Poster presented at the annual *Society for Neuroscience* meeting, New Orleans, LA; November 8-12.
- 76) Tang, A.C., McKinney, C.J., **Sutherland, M.T.**, Parra, L., Reeb, B.C., Malaszenko, N.A., Sajda, P., and Gerson, A. (2003). Source localization from high density EEG data during a real world task. Poster presented at the annual *Society for Neuroscience* meeting, New Orleans, LA; November 8-12.
- 77) **Sutherland, M.T.**, McKinney, C.J., and Tang, A.C. (2003). Interhemispheric associative learning in human somatosensory event-related potentials. Poster presented at the annual *Cognitive Neuroscience Society* meeting, New York, NY; March 29-April 1.
- 78) McKinney, C.J., **Sutherland, M.T.**, and Tang, A.C. (2003). Somatosensory to visual cross-modal interaction: Evidence of visual alpha resetting by median nerve stimulation. Poster presented at the annual *Cognitive Neuroscience Society* meeting, New York, NY; March 29-April 1.
- 79) Tang, A.C., McKinney, C.J., and **Sutherland, M.T.** (2003). Application of an ICA algorithm for the analysis of electroencephalographic data. Poster presented at the annual *Cognitive Neuroscience Society* meeting, New York, NY; March 29-April 1.
- 80) Moates, D.R., **Sutherland, M.T.**, Bond, Z.S., and Stockmal, V. (2002). The feature [continuant] in word reconstruction. Poster presented at the *Mental Lexicon Conference*, Banff, Alberta, Canada; October 6-8.
- 81) Vanderkaay, M.M., Patterson, S.M., Shanholtzer, B.A., Tulodziecki, B.A., Arnott, L.F., and **Sutherland, M.T.** (2002). Relationships between fluid hydration status and cardiovascular reactivity. Poster presented at the *American Psychological Society* Conference, New Orleans, LA; June.

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## WORKS IN PROGRESS

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### Manuscripts in preparation

- 1) \*\*Poudel, R., \*\*\*Tobia, M.J., \*\*\*Riedel, M.C., \*\*Flannery, J.S., Laird, A.R., Ross, T.J., Salmeron, B.J., Stein, E.A., and **Sutherland, M.T.**, (*in prep*). Functional connectivity of the human striatum during smoking abstinence and pharmacologic administration. Target Journal: *Drug and Alcohol Dependence*.



- 2) \*\*Hill-Bowen, L.D., \*\*Poudel, R., \*\*\*Riedel, M.C, \*\*Flannery, J.S., Salo, T., Laird, A.R., and **Sutherland, M.T.** (*in prep*). Common and distinct brain networks contributing to drug and natural cue reactivity: A meta-analysis of functional MRI studies. Target Journal: *Neuroscience and Biobehavioral Reviews*.
- 3) \*\*Hill-Bowen, L.D., Tobia, M.J., \*\*\*Riedel, M.C, \*\*Poudel, R., \*\*Flannery, J.S., Laird, A.R., Ross, T.J., Salmeron, B.J., Stein, E.A., and **Sutherland, M.T.** (*in prep*). Regional Homogeneity estimates from resting-state fMRI data are modulated by nicotine dependence and acute pharmacological manipulations. Target Journal: *Nicotine and Tobacco Research*.
- 4) **Sutherland, M.T.**, \*\*Hill, L., \*\*\*Riedel, M.C., Tobia, M., \*\*Flannery, J.S., \*\*Poudel, R., Stein, E.A. and Laird, A.R. (*in prep*). Common grey matter reductions across addictive disorders converge in the ventromedial PFC and anterior cingulate cortex. Target Journal: *Addiction Biology*.

### Grant Award Proposals Under Review

<u>Grant Number/Funding Agency/Title/Summary</u>	<u>Role</u>	<u>Amount</u>	<u>Dates</u>
1) U54 MD012393 (PI: Wagner) <u>Supplement to Sub-Project 5378</u> NIH/NIMHD <b>Antecedents and consequences of electronic nicotine delivery systems in underrepresented youth: COVID-19 response</b> The coronavirus pandemic has disrupted communities nationwide, altered most people's lives and livelihoods, and led to school closures forcing children and parents to face many uncertainties, new sources of worry, and added burdens. Understanding the effects of these COVID-19-related stressors on adolescents and caregivers, particularly those from lower income and/or minority households, and the associated risk/protective factors for/against poor psychological outcomes may identify strategies to promote wellbeing. This study utilizes an ongoing longitudinal study focused on teen e-cigarette use to now better understand coronavirus experiences that influence adolescent and caregiver substance use, mental health, and adolescent brain outcomes which could ultimately provide useful information to local, state, and federal agencies responsible for disaster response. This research project is one component of FIU's larger Research Center in Minority Institutions (RCMI) award titled: 'FIU center for reducing health disparities in substance abuse & HIV in South Florida.'	mPIs: <b>Sutherland</b> , Trucco	<u>\$183,027</u>	Submitted: 05/08/20 07/2020 - 06/2021
2) 2-R01DA041353 (mPIs: Laird, <b>Sutherland</b> ) NIH/NIDA <b>(Competitive renewal) Neuroimaging meta-analytics for addiction: Nodes, networks, and new heuristics</b> Brain imaging has contributed important insight into how long-term use of various addictive drugs impacts the human brain, yet there remains a need to integrate this accumulated knowledge in a cohesive fashion. Towards this goal, the current project uses emerging neuroimaging analysis tools to combine data from many studies and sources to characterize the common and distinct brain changes across addictive drugs and related disorders. Improved understanding of the brain changes associated with addiction is important to inform the development of new models, the evolution of improved treatment interventions, and strategies to identify individuals at high risk for addiction.	mPI	<u>\$2,414,168</u>	Submitted: 03/05/2020 12/2020 - 11/2025
3) FIU ORED (PI: Trucco) Faculty Grantsmanship Development Program <b>Development and empirical support for an intervention to help teens quit vaping</b> The goals of this mixed-methods study are to: 1) Conduct focus groups with multiple stakeholders (youth, parents, teachers) to generate new insight into factors impacting e-cigarette use, 2) Form an advisory group	collaborator	<u>\$24,991</u>	Submitted: 02/20/2020

to adapt vaping interventions that address the specific needs of Latinx youth, and 3) Conduct a pilot trial of the adapted intervention to assess feasibility, acceptability, and preliminary outcomes among Latinx youth.

4) FIU ORED (PI: DeCaprio)

Faculty Grantsmanship Development Program collaborator \$25,000 Submitted: 02/20/2020  
**Identification of exposure/adverse effect biomarker in exhaled breath condensate and oral fluid of cannabis users**

Given the increasing use of recreational and medical cannabis in the U.S., there is an urgent need in forensic, clinical, and behavioral toxicology for biomarkers that reliably detect time frame of cannabis use, that correlate with impairment or adverse health effects, and that are easily sampled. The goals of this project are to: 1) Establish a human participant cohort with well-characterized recreational and medical cannabis exposure via smoking or e-cigarette routes, 2) Develop analytical methods for a battery of cannabinoids in EBC and OF as cannabis exposure biomarkers, and 3) Develop analytical methods to measure oxidative stress biomarkers in EBC from cannabis users as adverse effect indicators.

### Grant Award Proposals Under Development

1) NIDA R01

(mPIs: Gonzalez, **Sutherland**) mPI To be submitted: 2020

**Longitudinal effects of cannabis use on motivation during adolescence**

For decades, popular culture has linked cannabis use with amotivation and promulgated the stereotype of the amotivated “slacker stoner.” While there is a clear link between lower achievement among cannabis users compared to non-users, there is currently a lack of scientific evidence supporting an association between cannabis use and motivation: broadly defined as cognitions, emotions, and behaviors involved in the activation, execution, and persistence of goal-directed behavior. The major goal of this research project is to better understand how cannabis use among adolescents adversely affects goal-directed motivation, impacts brain function during effort-based decision-making, and whether cannabis-associated alterations in motivation and/or brain function are linked with academic achievement.

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### FUNDED RESEARCH

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**Summary:** **11 grant awards received** (including 5 as PI, 4 as Co-I, and 2 as mentor) totaling \$29,172,886.

**Roles:** \*\*Graduate Student, \*\*\*Postdoctoral mentee

<u>Grant Number/Funding Agency/Title/Summary</u>	<u>Role</u>	<u>Amount</u>	<u>Dates</u>
<b>Current</b>			
1) U01 DA041156 (mPIs: Gonzalez, Laird) NIH/NIDA <b>(Competitive Renewal) Adolescent Brain Cognitive Development Study: FIU</b> This project serves as a data collection site for NIDA’s Adolescent Brain Cognitive Development (ABCD) study, which will follow approximately 11,000 children for 10 years beginning at ages 9-10 to characterize, among other aspects, the impact of exposure to drugs of abuse on academic achievement, cognitive abilities, mental health, and brain structure and function.	Co-I	<u>\$12,426,367</u>	04/01/20 - 03/31/27
2) FIU-RCMI Pilot Project Program (NIMHD, U54MD012393) (PI: ***Tobia) (Mentors: <b>Sutherland</b> , Laird, Gonzalez-Arias) <b>Olfactory functioning and brain network connectivity as biomarkers for senescent racial/ethnic health disparities</b>	mentor	<u>\$49,509</u>	07/01/2019 - 12/31/2020

Olfactory dysfunction, a risk factor for many neuropsychiatric diseases, disproportionately impacts minority groups including aging Hispanics and African Americans. This goal of this study is to elucidate brain mechanisms contributing to olfactory dysfunction which may serve as a potential early biomarker for aging-related health disparities (e.g., Alzheimer's Disease, dementia) among Hispanic and African American populations.

- 3) NIH Loan Repayment Program Award PI \$11,852 07/01/19 – 06/30/2020  
NIDA/Clinical Research (competing renewal)

**Antecedents and consequences of drug abuse in the brain**

This award facilitates retention in a biomedical research career by providing relief from student loan debt while engaging in NIH mission-relevant research. The research endeavors covered under this support period will involve 3 NIH-funded projects (K01DA037819 [PI: Sutherland], R01DA041353 [PIs: Laird, Sutherland], U54 MD012393-subproject 5378 [PIs: Trucco, Sutherland]) unified by the general programmatic theme of enhancing insight into the brain mechanisms that lead to and maintain drug abuse.

- 4) FIU-CRUSADA Pilot Studies Program (NIMHD, P20MD002288)  
(PI: \*\*\*Riedel, Co-I \*\*Flannery) mentor \$49,918 04/01/2019 - 03/31/2021  
(Mentors: **Sutherland**, Trucco)

**Sociocultural factors impacting reward processing and electronic nicotine delivery system use among Latino teens.**

The goal of this two-year pilot project is to examine the degree to which sociocultural factors impact neurocognitive measures of reward processing and/or nicotine use motivations. This study will collect new behavioral data (questionnaire and task performance data) and also leverage data already being collected under the parent project.

- 5) U54 MD012393 (PI: Wagner) Core Team Member \$13,116,387 10/2017 - 09/2022  
Sub-Project 5378 (mPIs: Trucco, **Sutherland**) mPI \$2,266,067  
NIH/NIMHD

(Sub-Project Impact Score: 10, original submission)

**Antecedents and consequences of electronic nicotine delivery systems in underrepresented youth**

The major goal of this R01-level research project is to utilize a prospective longitudinal study component and a cross-sectional study component to identify antecedents and consequences of electronic cigarette (e-cigarette; ACE Project) use at multiple assessment levels including personality, personal beliefs, social factors, and neurobiological characteristics assessed with MRI. This research project is one component of FIU's larger Research Center in Minority Institutions (RCMI) award titled: 'FIU center for reducing health disparities in substance abuse & HIV in South Florida.'

- 6) R01 DA041353 (mPIs: Laird, **Sutherland**) mPI \$644,950 06/2017 - 05/2020  
NIH/NIDA (Impact Score: 20, resubmission)

**Neuroimaging meta-analytics for addiction: Nodes, networks, and new heuristics**

Brain imaging has contributed important insight into how long-term use of various addictive drugs impacts the human brain, yet there remains a need to integrate this accumulated knowledge in a cohesive fashion. Towards this goal, the current project uses emerging neuroimaging analysis tools to combine data from many studies and sources to characterize the common and distinct brain changes across addictive drugs and related disorders. Improved understanding of the brain changes associated with addiction is important to inform the development of new models, the evolution of improved treatment interventions, and strategies to identify individuals at high risk for addiction.

**Completed**

- 7) U01 DA041156 (mPIs: Gonzalez, Laird) Co-I \$12,689,357 09/2015 - 05/2020  
NIH/NIDA

Updated: 05/12/20

**FIU-ABCD: Pathways and mechanisms to addiction in the Latino youth of South Florida**

This project serves as a data collection site for NIDA's Adolescent Brain Cognitive Development (ABCD) study, which will follow approximately 11,000 children beginning at ages 9-10 to characterize, among other aspects, the impact of exposure to drugs of abuse on academic achievement, cognitive abilities, mental health, and brain structure and function.

- 8) K01 DA037819 (PI: **Sutherland**) PI \$784,002 05/2014 - 04/2019  
NIH/NIDA (Impact Score: 20, original submission)  
**Impact of HIV and cannabis on brain function: Regions, networks, and the connectome**  
Lagging behind rapid changes to state laws, societal views, and medical practice is scientific investigation of marijuana's impact on brain function, especially in patients with HIV/AIDS. The current project addresses this knowledge gap by using task-based and resting-state fMRI techniques to rigorously assess brain activity at the regional, network, and global levels in a sample of adults stratified by marijuana use and HIV-serostatus. Understanding the impact of marijuana use and HIV infection on the brain is important for developing treatments to improve patients' mental functions, identifying poor candidates for medical marijuana, and providing patients, healthcare providers, and policymakers with scientific information allowing for informed decision-making regarding marijuana use.
- 9) BCS-1805645 (mPIs: Dick, Comer) Co-I \$179,982 01/2018 - 12/2018  
NSF  
**RAPID: Leveraging the ABCD study to examine the effects of Hurricane Irma exposure: The Disaster and Youth, Neural and Affective Maturation In Context (DYNAMIC) Study.**  
This award supports research on children and families affected by Hurricane Irma, which hit the Southeastern United States in September 2017. This research project will study how natural disasters affect brain, thinking, and mood. Natural disasters are disruptive and affect millions of people worldwide each year, including children. Disaster experiences are associated with youth feeling vulnerable and experiencing problems at school, at home, and with peers, as well as problems with mental health and substance use. This research also examines how pre-disaster brain functioning and thinking may protect against some of the effects of disaster-related stress on youth. The funded work will likely inform local, state, and national responses to disasters, identify youth at greatest risk after a disaster, reveal patterns of resilience, and strengthen our understanding of typical child development.
- 10) FIU-AWARD000000006374 (PI: Parra) Co-I \$50,000 07/2016 - 06/2018  
Catalyst Miami Foundation (NGO)  
**My mind & my money**  
This pilot project examines cognitive and neurobiological factors contributing to real-world financial decision-making among low-income individuals. The ability of financial coaching to augment such factors and behaviors is also considered. This project seeks to develop protocols and pilot data for future larger-scale grant submissions.
- 11) NIH Loan Repayment Program Award PI \$20,882 07/2015 - 06/2017  
NIDA/Clinical Research  
**Neurobiological impact of drug abuse and HIV infection**  
This award facilitates retention in a biomedical research career by providing relief from student loan debt while engaging in NIH mission-relevant research. The research endeavors covered under this support period involved using neuroimaging techniques to better understand the consequences of drug use/abuse (e.g., nicotine, marijuana) and associated conditions (e.g., HIV infection) on human brain function.

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**PROPOSALS SUBMITTED BUT NOT FUNDED**


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**Summary: 20 grant/award proposals submitted but not funded** (including 15 federal, 2 state, and 3 foundation / industry submissions) totaling \$34,890,406.

<u>Grant Number/Funding Agency/Title/Summary</u>	<u>Role</u>	<u>Amount</u>	<u>Dates</u>
1) Youth Vaping and Nicotine Research Initiative American Heart Association (PI: Maziak) <u>Study #1</u> of 10 (mPI: <b>Sutherland</b> , Trucco) Outcome: Not Selected to proceed <b>"End the Lies", Responding to the e-cigarette epidemic among US youth. Study #1: Nicotine's impact on youth brain function.</b> Neurobiological theories highlight the role of the dopamine system and alterations in reward related brain regions (e.g., the striatum) as factors impacting the transition from drug initiation to addiction. It remains unknown if ENDS use is linked with similar striatal alterations, if more severe alterations are linked with greater use, and if such alterations are intensified by continued use. The objective of this proposal is to define striatal alterations linked with ENDS use thereby identifying modifiable brain targets that could be leveraged for interventions.	Co-I (Study Lead) (Study Lead)	\$10,000,000 <u>\$999,311</u>	Submitted: Jan. 2020 06/2020 - 05/2022
2) DA040381 NIH/NIDA (PI: Baum) Outcome: Not funded (Advised to submit as a R01) <b>Cohort studies on HIV/AIDS and substance abuse in Miami</b> The object of this proposal is to investigate neurocognitive impairments, structural and functional brain alterations, and relations with liver function linked to opioid use among HIV and/or HCV infected and uninfected persons.	Co-I	<u>\$12,480,266</u>	Submitted: Aug. 2019 06/01/2021 - 05/31/2026
3) NIH/NIDA (mPIs: Laird, Musser, Reeb-Sutherland) (Co-Is: Gonzalez, <b>Sutherland</b> , Timmons) Impact Score: 51 <b>FIU-HBCD: Culturally responsive protocols to study maternal-infant interactions and their impact on the developing brain</b> The HBCD Study will be the first large-scale, long-term, prospective study of typical and atypical infant brain development and related outcomes, while responding to the sharp increase in the prevalence of neonatal abstinence syndrome (NAS) and prenatal drug exposures (PDE) over the last decade. The overarching goal of the FIU-HBCD is to develop inter-related, culturally responsive protocols to address three major barriers to success in the broader HBCD framework, including issues related to: 1) recruitment and retention, 2) ethical and legal considerations, and 3) implementing a developmentally appropriate, feasible multi-modal assessment.	Co-I	<u>\$509,988</u>	Submitted: March 2019 09/14/2019 - 03/31/2021
4) NSF-1926728 (mPIs: Laird, <b>Sutherland</b> , D'Cunha, Kirgan) <b>NCS-FO: A virtual reality system for functional neuroimaging research and dissemination</b> To enhance understanding of the brain, the objective of this proposal is to use integrative multidisciplinary approaches to develop a virtual reality environment for visualizing, analyzing, and interacting with MRI data.	mPI	<u>\$884,408</u>	Submitted: Feb. 2019 09/01/2019 - 08/31/2022
5) R61 MH118384-01 NIH/NIMH (mPIs: Reeb-Sutherland, Pettit, <b>Sutherland</b> ) Impact Score: 50 <b>Neuromodulatory effects of tDCS on dIPFC-amygdala connectivity in adolescents with anxiety</b>	mPI	<u>\$3,472,209</u>	01/01/17 – 12/31/2022 Submitted: 2/14/18

Current evidence-based treatments for anxiety are efficacious; however, up to half of adolescents continue to experience anxiety symptoms and impairment after these treatments. This R61/R33 application proposes to collect critical data on transcranial direct current stimulation (tDCS) of the dorsolateral prefrontal cortex (dlPFC) as a potential treatment for anxiety during adolescence, an optimal developmental window for targeting anxiety-related neural circuitry and thereby leading to improvement in anxiety outcomes. Findings of the proposed research are expected to contribute to the development of a novel treatment strategy for anxious adolescents and to inform a decision about whether to pursue tDCS in a confirmatory efficacy trial.

- 6) NIH Loan Repayment Program Award PI \$20,000 08/01/18 – 07/31/20  
 NIDA/Clinical Research (competing renewal, PI: **Sutherland**) Submitted: 11/15/17  
 Scores: N/A

**Antecedents and consequences of drug abuse in the brain**

This award facilitates retention in a biomedical research career by providing relief from student loan debt while engaging in NIH mission-relevant research. The research endeavors covered under this support period will involve 3 NIH-funded projects (K01DA037819 [PI: Sutherland], R01DA041353 [PIs: Laird, Sutherland], U54 MD012393-subproject 5378 [PIs: Trucco, Sutherland]) unified by the general programmatic theme of enhancing insight into the brain mechanisms that lead to and maintain drug abuse.

- 7) R61 MH115118 (*resubmission 2*) mPI \$3,462,095 01/2018 - 12/2022  
 NIH/NIMH (mPIs: Pettit, Reeb-Sutherland, **Sutherland**) Submitted: 02/15/2017  
 Impact Score: 44

**Enhancing ABM with transcranial direct current stimulation in anxious adolescents**

Attention Bias Modification (ABM) is an efficacious treatment for anxiety and its disorders in adolescents. However, effect sizes on the target, neural circuitry subserving attention to threat, and anxiety outcomes are in the small to medium range. This R61/R33 application proposes to collect critical data on transcranial direct current stimulation (tDCS) of the dorsolateral prefrontal cortex (dlPFC) as an ABM augment to enhance ABM's engagement of neural circuitry subserving attention to threat and thereby improve anxiety outcomes. Findings of the proposed research are expected to contribute to the development of a novel treatment strategy for anxious adolescents and to inform a decision about whether to pursue tDCS augmentation of ABM in a confirmatory efficacy trial.

- 8) GFRP NSF-16-588 mentor \$138,000 05/2017 - 4/2020  
 NSF (Student PI: Flannery) Submitted: 10/27/2016  
 Scores: Intellectual Merit, Very Good, Good, Good  
 Broader impacts, Good, Fair, Very Good

**Neurobiological impact of nicotine withdrawal and HIV infection on reward processing**

This Graduate Research Fellowship Program (GRFP) proposal involves examining the brain activity of abstinent cigarette smokers and HIV+ individuals while they perform cognitive tasks and undergo administrations of two different smoking cessation aids to better understand neurobiological alterations associated with nicotine withdraw, HIV infection, and the co-morbidity of both conditions.

- 9) J. & E. King Biomedical Research Program mPI \$1,499,310 3/2017 - 2/2020  
 Florida Department of Health (mPIs: Trucco, **Sutherland**) Submitted: 08/29/2016  
 Impact score: 4 (similar to NIH system w/out multiplying by 10)

**Antecedents and consequences of electronic nicotine delivery systems among vulnerable youth**

The recent introduction and rapid escalation of electronic nicotine delivery systems (ENDS) usage has resulted in a new nicotine product landscape. Currently, few studies examine factors that impact the onset of ENDS use (antecedents), transitions from ENDS use to combustible cigarette use, and the consequences of ENDS use. This project will determine risk and protective factors associated with the onset of ENDS use, identify key factors impacting the transition from ENDS to cigarette use, and quantify the impact of ENDS use on brain structure and functioning among vulnerable youth in a high-risk geographical area.

- 10) R61 MH110614 (*resubmission 1*) Co-I \$3,041,266 04/2017 - 03/2022  
 NIH/NIMH (mPIs: Pettit, Reeb-Sutherland) Submitted: 06/15/2016  
 Impact score: 38 (second revision submitted)  
**Enhancing ABM with transcranial direct current stimulation in anxious adolescents.**  
 This proposal is the first re-submission of the revision described above (#1).
- 11) R61 MH110614 (*original*) Co-I \$2,317,166 07/2016 - 06/2021  
 NIH/NIMH (mPIs: Pettit, Reeb-Sutherland) Submitted: 10/14/2015  
 Impact score: 42 (revision submitted)  
**Enhancing ABM with transcranial direct current stimulation in anxious adolescents.**  
 This proposal is the original submission of the revision described above (#4).
- 12) J. & E. King Biomedical Research Program PI \$1,362,348 03/2016 - 02/2019  
 Florida Department of Health (PI: **Sutherland**) Submitted: 09/02/2015  
 Impact score: 4 (similar to NIH system w/out multiplying by 10)  
**Multimodal neuroimaging of brain networks maintaining cigarette smoking.**  
 Lagging behind the urgent need for improved interventions that will help more people stop smoking is scientific investigation of the human brain mechanisms contributing to nicotine withdrawal symptoms which perpetuate cigarette smoking and precipitate relapse. The objective of this project is to characterize the brain mechanisms contributing to withdrawal-induced cognitive impairments, reward processing deficits, and alterations in the processing of information about the physiological state of the body utilizing multiple noninvasive neuroimaging techniques. Specifically, we will use magnetic resonance imaging (MRI) methods to interrogate the functional activity of specific brain areas associated with these psychological processes, the neurochemical makeup of those areas, and the way those areas interact with other brain structures.
- 13) Global Research Awards for Nicotine Dependence PI \$153,291 12/2015 - 11/2016  
 Pfizer (PI: **Sutherland**) Submitted: 07/01/2015  
 Merit score: 8/9 (1=poor, 9=exceptional)  
**Neurobiological impact of varenicline and nicotine on reward processing in abstinent smokers**  
 Although most cigarette smokers endorse a desire to quit and half try to do so each year, the vast majority will return to smoking within days of a quit attempt because of withdrawal symptoms. Emerging evidence implicates the habenula, a small and understudied brain region, as critically linked with reward processing, tobacco addiction, and nicotine withdrawal. Specifically, the habenula inhibits dopamine-releasing neurons in the midbrain following the absence of expected reward and also plays a role in more protracted alterations in dopamine neurotransmission. The objective of this proposal is to examine the impact of nicotine withdrawal and pharmacotherapy administration (varenicline and nicotine) on habenula activity during reward processing using fMRI data.
- 14) R01 DA041353 (*original*) mPI \$639,333 02/2016 - 01/2019  
 NIH/NIDA (mPIs: Laird, **Sutherland**) Submitted: 06/05/2015  
 Impact score: 40 (revision submitted)  
**Neuroimaging meta-analytics for addiction: Nodes, networks, and new heuristics**  
 This original submission was revised and resubmitted (see description in Funded Research #3 above).
- 15) Grants for Learning and Change-Smoking Cessation PI \$128,000 04/15 - 03/17  
 Pfizer (PI: **Sutherland**) Submitted: 10/22/2014  
 Not Scored  
**Development of a meditation program to help Hispanic smokers quit**  
 This project will develop and assess the neurobiological impact of an innovative meditation training program to facilitate tobacco cessation among Hispanic smokers. The project's goal is to provide brain-based evidence for the effectiveness of meditation training as a smoking cessation intervention. By demonstrating changes in brain structure, function, and chemical makeup following meditation training, this project will serve

as a catalyst to increase the availability, further evaluation, and ultimately widespread application (via adaptation to DVD and web-based dissemination) of this intervention by local, state, and national agencies.

- 16) NSF 14-562 Consultant \$174,913 04/2015 - 03/2017  
 NSF/CRII (PI: Fang) Submitted: 09/24/2014  
**SCH: Artifact invariant restoration (AIR) intelligent framework to improve functional neuroimaging quantification**  
 The objective of the project is to directly address the problem of "improving the accuracy of functional neuroimaging by learning from the data structure." In particular, this research will demonstrate and advance the capability of machine learning, computer vision, sparse and low-rank methods for automatically learning structure from a large amount of medical image repository, possibly generated from different healthcare centers, hospitals and with different scanners and parameters.
- 17) R01 DC014066 (*resubmission 1*) Co-I \$1,465,785 04/2015 - 03/2019  
 NIH/NIDCD (PI: Dick) Submitted: 07/07/2014  
 Not Discussed  
**Cerebellar contributions to language development following early stroke**  
 We propose to study post-stroke plasticity of the human brain with a focus on the contributions of the cerebellum to language recovery following early pre- or perinatal brain injury. Language function is resistant to lesions that destroy classical speech areas of the brain, provided these lesions occur early in development. But how the developing brain accomplishes this remains a mystery. The proposed work aims to fill a very notable gap in knowledge of cerebellar function and connectivity, its relation to high-level cognitive function, and to language recovery following stroke. We will use structural magnetic resonance imaging (MRI) to investigate regional atrophy of the cerebellum, and functional MRI to investigate cortico-cerebellar connectivity during receptive and expressive language fMRI tasks.
- 18) R01 DC014066-01 (*original*) Co-I \$1,449,589 07/2014 - 06/2018  
 NIH/NIDCD (PI: Dick) Submitted: 10/05/2013  
 Not Discussed  
**Cerebellar contributions to language development following early stroke**  
 This original submission was revised and resubmitted (see #11 above).
- 19) NSF-13-555 Co-I \$1,498,623 04/2014 - 03/2018  
 NSF (PI: Laird) Submitted: 07/12/2013  
**Neuroimaging of knowledge organization in Modeling Instruction for introductory university physics**  
 This project will utilize task-based and resting-state fMRI to elucidated alterations in brain function following completion of an introductory physics course for undergraduates utilizing Modeling Instruction or traditional lecture classrooms.
- 20) NARSAD Young Investigator Award PI \$29,879 01/2014 - 01/2015  
 Brain and Behavior Research Foundation (PI: **Sutherland**) Submitted: 01/18/2013  
**Nicotinic modulation of the habenula during performance monitoring in abstinent cigarette smokers**  
 Hallmark features of the tobacco abstinence syndrome include depression, anxiety, and irritability which make short-term cessation difficult for most smokers. While the amygdala, insula, and ventral striatum are regarded as critical constituents in the neurocircuitry of addiction, emerging views implicate the habenula (an epithalamic nucleus rich in nicotinic acetylcholine receptors) as a contributor to negative reinforcement mechanisms perpetuating cigarette smoking. However, to date no human investigations have examined the impact of nicotine withdrawal or pharmacotherapy administration on habenula activity. This proposal aims to fill this knowledge gap and examine the role of the habenula using task-related fMRI and its potential contribution to withdrawal symptoms such as depression, anxiety, and irritability.



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**PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS**


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2019-20	NIH Loan Repayment Program (LRP) Clinical Research, Renewal (\$11,852), <i>NIDA</i>
2018	Faculty Senate Award for Excellence in Research and Creativity Activity (\$5,000), <i>FIU</i>
2018	Service Excellence Team Award nomination, MRI Team - Center for Imaging Science, <i>FIU</i>
2017	College of Arts, Sciences & Education (CASE) Faculty Award for Research, <i>FIU</i>
2017	Mentee Jessica Flannery, Merit Abstract Award, <i>Organization for Human Brain Mapping</i>
	Co-mentee Taylor Salo, Merit Abstract Award, <i>Organization for Human Brain Mapping</i>
	Co-mentee Emily Boeving, Merit Abstract Award, <i>Organization for Human Brain Mapping</i>
2017	NIH Early Career Review Program, Invited Participant (SRO: Prentice)
2016	Mentee Jessica Flannery, Merit Abstract Award, <i>Organization for Human Brain Mapping</i>
2015	Outstanding Reviewer Status Award: <i>Drug &amp; Alcohol Dependence, Biological Psychiatry</i>
2015-17	NIH Loan Repayment Program (LRP) Clinical Research Award, (\$20,882) <i>NIDA</i>
2015	"Top Scholar" Award, <i>FIU</i>
2014-19	K01 Research Scientist Career Development Award, <i>NIDA/NIH</i>
2012	Fellows Award for Research Excellence, <i>NIH</i>
2011	Mentee Allison Carrol, Outstanding Presentation Award, <i>NIH</i> Post-bac Poster Day
2010	"Hot Topic" Media Materials Selection, <i>Society for Neuroscience</i>
2010	Trainee Merit Abstract Travel Award <i>Organization for Human Brain Mapping</i>
2007-12	Intramural Research Training Award (IRTA), Postdoctoral Fellow, <i>NIDA/NIH</i>
2007	Wisconsin Symposium on Health and Emotion Travel Award
2006	Comprehensive Examination passed with distinction, <i>University of New Mexico</i>
2005	Masters Degree awarded with distinction, <i>University of New Mexico</i>
2004	Research/Projects/Travel (RPT) grant award, <i>University of New Mexico</i>
2003	Research/Projects/Travel (RPT) grant award, <i>University of New Mexico</i>
2002	Graduated with honors in Psychology, Magna Cum Laude, <i>Ohio University</i>
2001	David J. Kucharski Memorial Graduating Senior Award, <i>Ohio University</i>
2001	Gaige B. Paulsen Endowed Scholarship, <i>Ohio University</i>
2000-02	Dean's Scholarship, <i>Ohio University</i>
2001	Phi Beta Kappa, member, <i>Ohio University</i>
2000	Psi Chi Honor Society, member, <i>Ohio University</i>

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**OFFICES HELD IN PROFESSIONAL SOCIETIES**


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N/A

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**OTHER PROFESSIONAL ACTIVITIES AND SERVICE**


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**Department Service**

2017-P	Member, By-laws task force committee
2017	Reviewer, Graduate Student Seed Fund & Dissertation Awards
2016-P	Faculty Mentor, Addictions Journal Club
2016-P	Faculty Mentor, Cognitive Neuroscience Graduate Student Colloquium series
2015	Assisted CogNeuro Area Head (Dr. Dick) with recruitment of inaugural Ph.D. class
2015	Assisted CogNeuro Area Head (Dr. Dick) with Ph.D. Program Brochure production
2014	Member, Search and Screen Committee, Cognitive Neuroscience
2014-P	Member, Cognitive Neuroscience Area

**University Service**

2019-P	Member, Center for Imaging Science (CIS) Steering Committee
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2019-P Associate Director of Computational Technology, Center for Imaging Science (CIS)  
 2018-20 FIU-RCMI, Development Core, Pilot Grant Program Reviewer (local NIH-style review)  
 2017 Reviewer, Biomedical Research Initiative Summer Research Awards, NIGMS-RISE  
 2016-19 Member, Center for Imaging Science (CIS) Steering Committee (3 year appointment)  
 2016 Member, Center for Imaging Science (CIS) MRI Facility Design and Installation Team  
 2015 Dissertation Advisor Status Approved, University Graduate School  
 2015 Banner Marshal, University Graduate School, Spring Commencement  
 2015 Mentor Status Approved, Minority Biomedical Research Support Program  
 2014-17 Member, Faculty Mentor Program

### **Community Service**

2020 FIU-RCMI Community Research Enhancement Grant to Ms. Lissette Gil (M-DCPS): *The MacCares: Mental health initiatives and research project on the effects of drug use on the adolescent brain project*, \$5,000, Faculty Sponsors: **Sutherland**, Trucco  
 2019-P Presentations ( $n=37$ , >6,300 community members reached) to Miami-Dade County Public Schools (MDCPS) about nicotine and e-cigarette use. Title: *What [parents/educators/students] need to know about vaping*.  
 2019 Grant Reviewer, Miami/Ft. Lauderdale Chapter of Susan G. Komen Foundation  
 2019 Field Trip Chaperone, Ethel Koger Beckman (K-8 Center) Miami-Dade County Public Schools  
 2018,9 Career Day Presenter, Ethel Koger Beckman (K-8 Center) Miami-Dade County Public Schools  
 2017-P Volunteer, Miami/Ft. Lauderdale Chapter of Susan G. Komen Foundation  
 2015 Discussion Moderator, "The brain and addiction", *Patricia and Phillip Frost Museum of Science*, Miami, FL. Curator: Dr. Angela Colbert.  
 2015 Brain Day Exhibitor, *Patricia and Phillip Frost Museum of Science*, Miami, FL. Curator: Dr. Angela Colbert.

### **Professional Affiliations**

Organization for Human Brain Mapping Cognitive Neuroscience Society  
 Society for Neuroscience American Psychological Association  
 ABCD Neuroimaging Workgroup, Member (<https://abcdstudy.org/scientists-workgroups.html>)

### **Professional Society Service: Conference Reviewer**

2015-8 Abstract Reviewer, *Organization for Human Brain Mapping*  
 2014, 2018 Abstract Reviewer, *Society for Research on Nicotine and Tobacco*

### **Reviewer for Granting Agencies**

2020 *NIH*, NIDA CEBRA, Temporary Member, Virtual meeting (SRO: McGuire)  
 2020 *NIH*, ZDA1-HXO-H (02)R, Special Emphasis Panel, cannabis & HIV, Virtual Meeting (SRO: Ono)  
 2020 *NIH*, ZRG1-BBBP-Y03, Special Emphasis Panel, substance abuse, Virtual Meeting (SRO: Kelly)  
 2019 *NIH*, CVRS-H 50 R, Special Emphasis Panel, e-cigarettes, Virtual Meeting (SRO: Dirami)  
 2019 *NIH*, ZDA1-SXM-M(22), NIDA CEBRA, Temporary Member, Virtual meeting (SRO: McGuire)  
 2019 *NIH*, ZRG1-BDCN-J-02, Temporary Member, Virtual Meeting (SRO: Kramer)  
 2019 *NIH*, Addiction Risks and Mechanism Study Section, Temporary Member (SRO: Prentice)  
 2018 *NIH*, ZDA1-SXM-M(09), NIDA CEBRA Special Emphasis Panel, *ad hoc* Member (SRO: McGuire)  
 2018 *NIH*, ZAT1-PJ-02-1, Temporary Member, Virtual Meeting (SRO: Jeter)  
 2018 *Luxembourg National Research Fund*, CORE program, Remote *ad hoc* Reviewer (SRO: Sapcaru)  
 2018 *NIH*, ZRG1-BDCN-J-02, Temporary Member, Virtual Meeting (SRO: Kramer)  
 2018 *NIH*, Addiction Risks and Mechanisms Study Section, Temporary Member (SRO: Prentice)  
 2018 *NIH*, ZRG1-RPHB-N(55) Special Emphasis Panel, Temporary Member (SRO: Prentice)  
 2017 *Luxembourg National Research Fund*, CORE program, Remote *ad hoc* Reviewer (SRO: Glod)  
 2017 *NIH*, Addiction Risks and Mechanisms Study Section, Temporary Member (SRO: Prentice)  
 2017 *NIH*, ZRG1-RPHB-N(55) Special Emphasis Panel, Temporary Member (SRO: Prentice)

2016 *NIH* Early Career Reviewer (ECR) program, Member.  
 2016 *NSF*, Panelist  
 2013 *NSF*, Cognitive Neuroscience Program, 'Mail-in' Reviewer  
 2012 *NIH*, Fellows Award for Research Excellence, Reviewer

2019-2020 Continuous submission designee for substantial NIH service to peer review, *NIH* CSR.

### **Reviewer for Journals**

**Summary: 163 total manuscripts reviewed** (including original and resubmissions) for 37 different journals, <https://publons.com/a/433968>.

<i>Biological Psychiatry</i>	<i>Am. J. of Drug &amp; Alcohol Abuse</i>	<i>Psychopharmacology</i>
<i>American Journal of Psychiatry</i>	<i>Neuropsychiatric Disease</i>	<i>Clinical Neurophysiology</i>
<i>Psychiatry Research: Neuroima.</i>	<i>and Treatment</i>	<i>Brain Imaging and Behavior</i>
<i>Neuropsychopharmacology</i>	<i>Brain Connectivity</i>	<i>Journal of Neuroimaging</i>
<i>Neuroscience Letters</i>	<i>NeuroImage</i>	<i>Nicotine and Tobacco Research</i>
<i>BMC Neuroscience</i>	<i>Behavioral Brain Research</i>	<i>American Journal on Addictions</i>
<i>Human Brain Mapping</i>	<i>Psychology of Addictive Behaviors</i>	<i>Neurological Science</i>
<i>Addiction Biology</i>	<i>Schizophrenia Research</i>	<i>European Journal of Neuroscience</i>
<i>Journal of Abnormal Psychology</i>	<i>American Journal on Addictions</i>	<i>Brain</i>
<i>Behavioral and Brain Functions</i>	<i>Neuropharmacology</i>	<i>Neurosci &amp; Biobehav Reviews</i>
<i>Progress in Neurobiology</i>	<i>Int. J. of Envir. Research &amp; Public</i>	<i>Brain Research</i>
<i>Drug and Alcohol Dependence</i>	<i>Health</i>	<i>Brain Sciences</i>
<i>PLOS One</i>	<i>Scientific Reports</i>	

2018 Publons Peer Review Award, Top 1% of reviewers in neuroscience & behavior.  
 2017 Publons Peer Review Award, Top 1% of reviewers in multidisciplinary science.  
 2016 Publons Peer Review Award (Sentinel of Science), Top 10% of reviewers in medicine.  
 2015 Elsevier Outstanding Reviewer Status Award, *Drug and Alcohol Dependence*.  
 2015 Elsevier Outstanding Reviewer Status Award, *Biological Psychiatry*.

### **Section Editor for Journals**

2015-P *Behavioral and Brain Functions*, Section: "Neurobiology of Brain Disorders"  
<http://www.behavioralandbrainfunctions.com/about/edboard>.

### **Outreach/Media (links)**

- Links regarding efforts to increase awareness of FIU's neuroscience research:
  - <https://news.fiu.edu/2016/05/fiu-takes-an-interdisciplinary-approach-to-neuroscience-research/100063>
  - [http://issuu.com/fiupublications/docs/sish\\_yearinreview-final\\_issuu\\_01221?e=0/33070417](http://issuu.com/fiupublications/docs/sish_yearinreview-final_issuu_01221?e=0/33070417)
  - <http://casenews.fiu.edu/index.php/2017/09/26/case-awards-recipients/>
  - <https://provost.fiu.edu/faculty-honors/top-scholars-2015.html>
  - <https://news.fiu.edu/2019/medicines-to-help-smokers-quit-only-fight-half-the-battle>
  - [https://www.drugabuse.gov/news-events/latest-science/healing-altered-brains-smokers?utm\\_source=daRSS&utm\\_medium=email&utm\\_campaign=da-researcherdigest](https://www.drugabuse.gov/news-events/latest-science/healing-altered-brains-smokers?utm_source=daRSS&utm_medium=email&utm_campaign=da-researcherdigest)
  - <https://irp.drugabuse.gov/hot-off-the-press-10-2019/>
  - [https://www.youtube.com/watch?time\\_continue=1&v=\\_pLteLraHiU&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=1&v=_pLteLraHiU&feature=emb_logo)
  - <https://www.univision.com/local/miami-wltv/estudio-de-fiu-podria-revelar-la-razon-por-la-que-tantos-adictos-no-pueden-dejar-de-fumar>
- Links regarding efforts to increase awareness of FIU research in general and the ABCD study in particular:

- <https://news.fiu.edu/2016/09/researchers-embark-on-national-landmark-study-of-adolescent-brain-development/103974>
- <https://news.fiu.edu/2015/09/fiu-to-examine-substance-use-in-youths-as-part-of-national-landmark-study-on-brain-development/92605>
- <https://www.today.com/video/new-study-looks-at-how-teen-brains-function-1150262339631>.
- <http://www.miamiherald.com/news/local/education/article164089052.html>
- <https://news.fiu.edu/2018/12/major-data-release-set-for-early-2019-as-recruitment-wraps-up-for-nations-largest-adolescent-brain-study/128440>
- Links regarding efforts increase awareness of women's health issues in the context of academic and scientific pursuits:
  - <https://news.fiu.edu/2017/04/1-year-1-newborn-2-awards-1-cancer-diagnosis/110276>
  - <https://news.fiu.edu/2017/10/young-women-breast-cancer-doesnt-care-how-old-you-are/116614>
- Links regarding efforts to increase awareness of FIU research in general and FIU-RCMI and the ACE project in particular:
  - <https://news.fiu.edu/2017/12/researchers-investigate-effects-of-e-cigarettes-on-adolescent-brains/117752>
  - <https://news.fiu.edu/2017/10/fius-stempel-college-to-build-health-disparities-research-center-with-13-1-million-grant/116111>
  - [https://issuu.com/fiupublications/docs/fiu\\_case\\_magazine\\_2018](https://issuu.com/fiupublications/docs/fiu_case_magazine_2018) (pp. 20-21)
  - <https://news.fiu.edu/2018/12/researchers-clear-the-air-about-vaping/128469>
  - <https://news.fiu.edu/2019/researchers-warn-teens-about-the-potential-harms-of-vaping>
- Links regarding efforts to increase awareness of FIU engagement activities about the brain and/or addiction:
  - <http://miami.cbslocal.com/2014/12/18/technology-addicts-getaway-with-weekend-disconnect/>
  - <https://news.fiu.edu/2015/03/fiu-scientists-light-up-the-brain-at-science-museum/86523>
  - [https://issuu.com/fiupublications/docs/fiu\\_case\\_magazine\\_2018](https://issuu.com/fiupublications/docs/fiu_case_magazine_2018) (pp. 46-47)

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## MENTORING

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**Undergraduate research assistants** (only individuals listed with substantive interactions as opposed to all undergraduate lab volunteers): Kevin Garcia (FIU, 2015-2016), Ilan Garcia (FIU, 2015-2016), Karina Falcone (FIU, 2014-2016), Haven Blackmon (FIU, 2020-P, McNair Scholar).

<b><u>Post-baccalaureate trainees:</u></b>	Allison J. Carrol	NIDA	2010-2	Matriculated at Northwestern University
	Julio A. Yanes	FIU	2014-6	Matriculated at Auburn University

<b><u>Paid research associates:</u></b>	Nasreen Hidmi	FIU	2018-p	Program Coordinator, ACE Project
	Brigette Madan	FIU	2018-p	Research Assistant, ACE Project
	Benjelene Sutherland	FIU	2018-2020	Research Assistant, ACE Project
	Odette Manresa	FIU	2019-p	Research Assistant, ACE Project
	Chelsea Greaves	FIU	2016-p	Neuroimaging Coordinator, ABCD Study
	Laura Ucros	FIU	2017-p	Administrative Coordinator, ABCD Study
	Rosario Pintos Lobo	FIU	2016-8	Research Assistant, ABCD Study

<b><u>Graduate students</u></b> (MS, PhD)	Jessica S. Flannery	FIU	2015-p	Primary mentee, Psych Dept, Cog Neuro
	Ranjita Poudel	FIU	2015-p	Primary mentee, Psych Dept, Cog Neuro
	Lauren D. Hill	FIU	2016-p	Primary mentee, Psych Dept, Cog Neuro
	Katherine Crooks	FIU	2019-p	Primary mentee, Psych Dept, Cog Neuro
	Patricio Viera Perez	FIU	2019-p	Primary mentee, Psych Dept, Cog Neuro
	Benjelene Sutherland	FIU	2020-p	Primary mentee, Psych Dept, Cog Neuro
	Jessica E. Bartley	FIU	2014-9	Co-mentee, Physics Dept, Cog Neuro

Katherine Bottenhorn	FIU	2015-p	Co-mentee, Psych Dept, Cog Neuro
Taylor Salo	FIU	2015-p	Co-mentee, Psych Dept, Cog Neuro

**Post-doctoral Trainees:**

Michael C. Riedel	FIU	2015-p	Co-mentee, CIS, Cog Neuro
Michael J. Tobia	FIU	2017-p	Co-mentee, CIS, Cog Neuro

**Master's Thesis Committees:**

- 1) Katharine Crooks (FIU, Psychology, Committee Chair: **Sutherland**, 2020-p)  
*Title:* TBD: HIV, neuroinflammation, and hippocampal connectivity.  
*Committee Members:* Sutherland, Mattfeld, Laird, Gonzalez, Campa  
*Status:* committee formed
- 2) Patricio Viera Perez (FIU, Psychology, Committee Chair: **Sutherland**, 2020-p)  
*Title:* TBD: HIV and structural connectivity.  
*Committee Members:* Sutherland, Cano, Dick, Laird  
*Status:* committee formed
- 3) Donisha Smith (FIU, Psychology, Committee Chair: Laird, 2020-p)  
*Title:* TBD.  
*Committee Members:* Laird, Markowitz, Musser, Sutherland  
*Status:* committee formed
- 4) Ariel Gonzalez (FIU, Psychology, Committee Chair: Laird, 2020-p)  
*Title:* TBD.  
*Committee Members:* Laird, Hayes, Musser, Simpson, Sutherland  
*Status:* committee formed
- 5) Sarah Hartman (FIU, Psychology, Committee Chair: Trucco, 2020-p)  
*Title:* TBD.  
*Committee Members:* Trucco, Musser, Sanchez, Sutherland  
*Status:* committee formed
- 6) Alexandra Lutz (FIU, Psychology, Committee Chair: Dick, 2019-p)  
*Title:* Relationship between white matter microstructure and the development of executive function.  
*Committee Members:* Dick, Sutherland  
*Status:* committee formed
- 7) Jessica S. Flannery (FIU, Psychology, Committee Chair: **Sutherland**, 2016-2018)  
*Title:* Nicotinic modulation of brain activity to positive and negative feedback among abstinent smokers.  
*Committee Members:* Sutherland, Laird, Dick  
*Status:* Defended 04/30/18
- 8) Ranjita Poudel (FIU, Psychology, Committee Chair: **Sutherland**, 2016-2018)  
*Title:* Functional connectivity of the human striatum during smoking abstinence and pharmacologic administration.  
*Committee Members:* Sutherland, Laird, Mattfeld  
*Status:* Defended 08/13/18
- 9) Lauren D. Hill-Bowen (FIU, Psychology, Committee Chair: **Sutherland**, 2017-2018)  
*Title:* Common and distinct brain networks contributing to drug and natural cue-reactivity: A meta-analysis of functional MRI studies.

*Committee Members:* Sutherland, Laird, Trucco  
*Status:* Defended 04/30/18

- 10) Katherine L. Bottenhorn (FIU, Psychology, Committee Chair: Laird, 2016-2018)  
*Title:* Cooperating yet distinct brain networks engaged during naturalistic paradigms: A meta-analysis of functional MRI results.  
*Committee Members:* Laird, Sutherland, Musser  
*Status:* Defended 05/09/18
- 11) Taylor Salo (FIU, Psychology, Committee Chair: Laird, 2016-2018)  
*Title:* Quantitative systematic comparison of the neuroimaging meta-analysis frameworks Neurosynth and BrainMap.  
*Committee Members:* Laird, Sutherland, Allen  
*Status:* Defended 08/22/18
- 12) Michelle L. Ramos (FIU, Psychology, Committee Chair: Reeb-Sutherland, 2016-2017)  
*Title:* Error monitoring and attentional control in youth with and without anxiety: An examination of the ERN component.  
*Committee Members:* Reeb-Sutherland, Pettit, Nelson, Sutherland  
*Status:* Defended 07/07/17

#### **Doctoral Dissertation Committees:**

- 1) Ranjita Poudel (FIU, Psychology, Committee Chair: **Sutherland**, 2020-P)  
*Title:* Neurobiological correlates of low socioeconomic status and its relation to laboratory and real-world behavior  
*Committee Members:* Sutherland, Gonzalez, Hospital, Laird  
*Status:* Proposed 03/09/20
- 2) Jessica Flannery (FIU, Psychology, Committee Chair: **Sutherland**, 2020-P)  
*Title:* Neurocognitive impact of HIV infection and chronic cannabis use.  
*Committee Members:* Sutherland, Laird, Mattfeld, Maziak  
*Status:* Proposed 02/03/20
- 3) Katie Bottenhorn (FIU, Psychology, Committee Chair: Laird, 2019-P)  
*Title:* Understanding individual differences within large-scale brain networks supporting intelligence, mood, and emotion regulation.  
*Committee Members:* Laird, Mattfeld, R. Laird, Musser, Sutherland  
*Status:* Proposed 12/04/19
- 4) Prem Gautam (FIU, Epidemiology, Committee Chair: Maziak, 2019-P)  
*Title:* Nicotine dependence among Lebanese Youth who use waterpipe and smoke cigarettes.  
*Committee Members:* Maziak, Cano, Li, Sutherland  
*Status:* Proposed 12/12/19.
- 5) Taylor Salo (FIU, Psychology, Committee Chair: Laird, 2019-P)  
*Title:* Decoding neural representations using an open-source, multi-echo, dense sample dataset.  
*Committee Members:* Laird, Mattfeld, R. Laird, Musser, Sutherland  
*Status:* Proposed 10/17/19
- 6) Wei Li (FIU, Epidemiology, Committee Chair: Maziak, 2019-P)

*Title:* Characterizing the development and trajectories of nicotine dependence among a cohort of adolescent e-cigarette users.

*Committee Members:* Maziak, Cano, Li, Sutherland

*Status:* Committee formed.

- 7) Ileana Pacheco-Colon (FIU, Psychology, Committee Chair: Gonzalez, 2019-P)

*Title:* Exercise, cognition, and cannabis use in adolescents.

*Committee Members:* Gonzalez, Coxe, Laird, Sutherland

*Status:* Proposed 06/20/19.

- 8) Mohammad Ebrahimi Kalan (FIU, Epidemiology, Committee Chair: Maziak, 2018-P)

*Title:* Characterizing the development and trajectories of nicotine dependence among a cohort of adolescent waterpipe smokers.

*Committee Members:* Maziak, Cano, Bursac, Fennie, Sutherland

*Status:* Proposed 04/24/19.

- 9) Michelle L. Ramos (FIU, Psychology, Committee Chair: Reeb-Sutherland, 2018-P)

*Title:* The development of reward processing and risky behavior.

*Committee Members:* Reeb-Sutherland, Musser, Nelson, Wagner, Sutherland

*Status:* Proposed 06/21/18

- 10) Daniella Vaclavik (FIU, Psychology, Committee Chair: Pettit, 2018-P)

*Title:* Neuromodulation to enhance attention training in socially anxious adolescents.

*Committee Members:* Pettit, Reeb-Sutherland, Silverman, Sutherland

*Status:* Committee Formed

- 11) Travis C. Evans (University of Miami, Psychology, Committee Chair: Britton, 2017-P)

*Title:* Neural circuitry underlying implicit social cognition and behavioral avoidance in social anxiety.

*Committee Members:* Britton, Carver, Timpano, Heller, Sutherland

*Status:* Defended 06/24/19

- 12) Jessica E. Bartley (FIU, Physics, Committee Chair: Laird, 2016-P)

*Title:* Exploring the neural mechanisms of Physics learning.

*Committee Members:* Laird, Brewe, Sutherland, Potvin, Raue

*Status:* Defended 11/08/2018

- 13) Michele Bechor (FIU, Psychology, Committee Chair: Pettit, 2016-2018)

*Title:* Identifying and intervening on neural markers of attention to threat in children with anxiety disorders.

*Committee Members:* Pettit, Reeb-Sutherland, Silverman, Laird, Sutherland

*Status:* Defended 03/26/2018

- 14) Michael C. Riedel (UTHSCSA, Committee Chair: Laird, 2013-2015)

*Title:* Hierarchical perspectives in intrinsic brain organization.

*Committee Members:* Laird, Fox, Lancaster, Roberts, Sutherland

*Status:* Defended 01/07/2015

### **Trainee Awards/Grants**

*Summary:* **21 Awards** (including research funds, travel funds, and cash prizes) totaling **\$156,572**

2020	Julie Cristello, NIAAA R13-travel award for the APA Annual Convention	\$750
2019-20	Jessica Flannery, FIU-CCF Graduate Student Pilot Seed Fund Grant	\$5,000

2019-20	Lauren Hill-Bowen & Ranjita Poudel, FIU-CCF Graduate Student Pilot Seed Fund Grant	\$5,000
2019-20	Sarah Hartmann, FIU-CCF Graduate Student Pilot Seed Fund Grant	\$4,999
2019	Ranjita Poudel, Edward & Rita Girden Travel Scholarship (SfN), FIU, Psychology Dept.	\$500
2019-20	Benjelene Sutherland (no relation), International Psi Chi Research Award	\$2,000
2019	Ranjita Poudel, Graduate & Professional Student Committee Travel Award, FIU, UGS	\$600
2019-20	Michael Riedel, NIH Loan Repayment Program (LRP) Clinical Research, NIDA	\$25,473
2019	Michael Tobia, FIU-RCMI Pilot Research Project Program, FIU via NIMHD	\$50,000
2019	Jessica Flannery, Graduate & Professional Student Committee Travel Award, FIU, UGS	\$850
2019	Michael Riedel, FIU-CRUSADA Pilot Research Project Program, FIU via NIMHD	\$50,000
2018	Ranjita Poudel, Graduate & Professional Student Committee Travel Award, FIU, UGS	\$500
2017	Jessica Flannery, Edward & Rita Girden Travel Scholarship (SfN), FIU, Psychology Dept.	\$500
2017	Jessica Flannery, Merit Abstract Award, Organization of Human Brain Mapping	\$2,000
2017	Taylor Salo, Merit Abstract Award, Organization of Human Brain Mapping	\$2,000
2017	Emily Boeving, Merit Abstract Award, Organization of Human Brain Mapping	\$2,000
2017	Ranjita Poudel, Edward&Rita Girden Travel Scholarship (OHBM), FIU, Psychology Dept.	\$1,000
2017	Jessica Bartley, 2 <sup>nd</sup> Place Award (Education), Florida Statewide Grad Student Symposium	
2017	Jessica Bartley, 1 <sup>st</sup> Place Award (Education), Graduate Student Scholarly Forum, FIU	
2017	Jessica Flannery, Best Trainee Presentation Award, FIU & UM Global BrainHack Event	\$300
2016	Jessica Flannery, Merit Abstract Award, Organization of Human Brain Mapping	\$1,000
2016	Jessica Flannery, Edward & Rita Girden Scholarship (OHBM), FIU, Psychology Dept.	\$1,500
2016	Jessica Bartley, 3 <sup>rd</sup> Place Award (Education), Graduate Student Scholarly Forum, FIU	\$100
2015	Jessica Bartley, Top Presentation, Physics Dept. Grad Student Research Competition	\$500

### Trainee Initiated Grants

- 1) \*\*Flannery, J.S. (PI). Behavioral approach toward electronic nicotine delivery system stimuli and future use intentions among middle schoolers. FIU's Center for Children and Families graduate student pilot seed grant, 2019-2020, \$5,000, Faculty Mentors: **Sutherland**, Trucco.
- 2) \*\*Hill-Bowen, L.D., & \*\*Poudel, R. (PIs). Altered reward processing and chronic nicotine use: Training, preprocessing, and analysis of an existing simultaneous EEG-fMRI dataset. FIU's Center for Children and Families graduate student pilot seed grant, 2019-2020, \$5,000, Faculty Mentor: **Sutherland**.
- 3) \*\*Hartman, S. (PI). Focus groups and cognitive interviews to inform development and refinement of interventions and assessments for vaping among Latinx youth. FIU's Center for Children and Families graduate student pilot seed grant, 2019-2020, \$4,999, Faculty Mentors: Trucco, **Sutherland**.
- 4) \*\*\*Tobia, M.J. (PI). Olfactory functioning and brain network connectivity as biomarkers for senescent racial/ethnic health disparities. FIU's Research Center in Minority Institutions Pilot Research Project Program, 2019-2020, \$50,000, Faculty Mentor: **Sutherland**, Laird, Gonzalez-Arias
- 5) \*\*\*Riedel, M.C. (PI). Sociocultural factors impacting reward processing and electronic nicotine delivery system use among Latino teens. FIU's CRUSADA Pilot Research Project Program, 2019-2020, \$50,000, Faculty Mentor: **Sutherland**, Trucco.

### Trainee (solo-)Initiated Papers

- 1) \*\*Hill-Bowen, L.D., \*\*Flannery, J.S., & \*\*Poudel, R. (2020). Paraventricular thalamus activity during motivational conflict highlights the nucleus as a potential constituent in the addiction neurocircuitry (Journal Club Format). *Journal of Neuroscience*, 40(4), 726–728. <https://doi.org/10.1523/JNEUROSCI.1945-19.2019>.



- 2) \*\*Flannery, J.S. (2019). Disregarding the impact of nicotine on the developing brain when evaluating costs and benefits of noncombustible nicotine products (Article commentary). *Preventative Medicine*, 120, 157-157, DOI: 10.1016/j.ypmed.2018.11.023.
- 3) \*\*Poudel, R. (2018). Gender differences in stress hormone response regulates effects of mindfulness in stress related disorder (Article commentary). *Psychiatry Research*, 262, 343-344, DOI: 10.1016/j.psychres.2017.07.042.

### **Mentoring Grant Participation**

GRANT	ROLE	AMOUNT	DATE
1) T32 DA043449 (PI: Pelham) NIH/NIDA Training program in adolescent substance use disorders and co-occurring mental and behavioral disorders.	primary mentor	<u>\$1,559,156</u>	08/2019 - 07/2024

---

### **TEACHING**

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#### **Principal Instructor**

- 1) **Sensation & Perception:** Undergraduate course on the principles underlying the transduction of energy in the environment into an electrochemical signal processed by the brain.
  - Psychology, FIU, Spring 2013, Summer 2013.
  - Student evaluation (averaged overall instructor assessment, 5=excellent): 4.98/5.0 (Spring), 4.74/5.0 (Summer).
- 2) **Advanced Experimental Psychology Lecture & Lab:** An extension on the fundamental tools used to collect, analyze, interpret, and disseminate empirical data in the behavioral sciences with an emphasis on 'hands-on' activities for undergraduates.
  - Psychology, FIU, Spring 2013.
  - Student evaluation (averaged overall instructor assessment, 5=excellent): 4.80/5.0.
- 3) **Research Methods:** Undergraduate lecture and lab-based course emphasizing the student's role as a wise consumer and trusted producer of scientific information in the behavioral sciences.
  - Psychology, FIU, Fall 2012.
  - Student evaluation (averaged overall instructor assessment, 5=excellent): 4.89/5.0.
- 4) **Cognitive Processes:** Undergraduate course on the cognitive phenomena that have fascinated behavioral scientists for decades.
  - Psychology, FIU, Fall 2012.
  - Student evaluation (averaged overall instructor assessment, 5=excellent): 4.92/5.0.
- 5) **Drugs and Behavior:** Survey of the fundamental neurobiological principles underlying psychoactive drug action.
  - Psychology, FIU, Fall 2012.
  - Student evaluation (averaged overall instructor assessment, 5=excellent): 4.95/5.0.
- 6) **Statistics Principles:** Introductory statistics course for undergraduate psychology majors.
  - Psychology, University of New Mexico, Fall 2005, Spring 2006.

- Student evaluation (averaged overall instructor assessment, 6=excellent): 5.6/6.0 (2005), 5.8/6.0 (2006).

**Lab Instructor**

- 7) **Design and Analysis of Experiments Lab:** First-year, second-semester graduate student statistics lab (Primary Instructor: Dr. Harold Delaney).
  - Psychology, University of New Mexico: Spring 2005, Spring 2006.
  - Student evaluation (averaged overall assessment of instructor, 6=excellent): 5.6/6.0 (2005), 5.9/6.0 (2006).
- 8) **Advanced Statistics Lab:** First-year, first-semester graduate student statistics lab (Primary Instructor: Dr. Timothy Goldsmith).
  - Psychology, University of New Mexico: Fall 2004.
  - Student evaluation (averaged overall assessment of instructor, 6=excellent): 5.2/6.0.

# Appendix D

## External Consultant's Report



# UNIVERSITY of CALIFORNIA • IRVINE

Craig Stark, Ph.D.  
Professor, Department of Neurobiology and Behavior  
James L. McGaugh Chair for the Neurobiology of Learning and Memory  
Director, Campus Center for Neuroimaging (CCNI)  
Director, Facility for Imaging and Brain Research (FIBRE)

1424 Biological Sciences 3  
Irvine, CA 92697-3800  
(949) 824-4201  
cestark@uci.edu

June 1, 2020

Dr. Michael Heithaus  
Dean of the College of Arts, Sciences & Education  
CASE 453  
Florida International University, Modesto Maidique Campus  
11200 SW 8th Street  
Miami, FL 33199

Re: External review of the proposed M.S./Ph.D. program in Cognitive Neuroscience

Dear Dr. Heithaus:

In late April, I was invited by Associate Vice President Susan Himburg and Senior Associate Dean Walter Van Hamme to serve as external review consultant for the Psychology Department's proposed Ph.D. in Cognitive Neuroscience. FIU currently has a Ph.D. in Psychology that has a specialization within Cognitive Neuroscience. The proposal here would move this into a separate STEM-based degree that is still granted from the Psychology Department, but is separate from the Psychology Ph.D., which must adhere to a number of guidelines that are highly relevant for your Clinical Psychology program, but less relevant for a Ph.D. in Cognitive Neuroscience. Note, that the proposal is for a Ph.D. (with a typical time to degree of 5-years), but with an optional (potentially terminal) M.S. along the way. An M.S. degree is not proposed as an option on its own.

While this external review typically would have been done during an on-site visit, the COVID-19 pandemic precluded a physical visit to the Florida International University. However, I visited FIU and the department recently (in 2018 I was an invited colloquium speaker), so I am somewhat familiar with the faculty, students, and facilities. For this review, I conducted a series of five videoconferences with members of your administration (Dean Walter Van Hamme, Associate Vice President Susan Himburg, Associate Dean Lidia Kos), faculty (Drs. Tim Allen, Leila Allen, Anthony Dick, Raul Gonzalez, Angie Laird, and Aaron Mattfeld), and with graduate students. This report is based on those meetings and the provided proposal, which was shared with me prior to the meetings and is directed towards six specific questions I was asked to respond to.

I should note at the outset that over the course of this review, I identified several issues related to the large amount of formal classwork proposed. After discussing these issues during the meetings, the proposed curriculum was revised, bringing it more in line with other programs, the strong demands on students' time for independent research, and the need for high-level, discussion-based instruction on advances in the field. The revised proposal is what is considered here.

*Are there external trends in the areas of academics, research, and program delivery that present opportunities and threats to our ability to achieve the goals identified in the program proposal?*

The proposal is well-suited to achieve its goal of training advanced researchers in the field of cognitive neuroscience. The field of Psychology has been broad one for many decades and as Cognitive

Neuroscience has grown, it has only expanded further. My own degrees are in Psychology and my initial faculty appointment was in the Department of Psychology at Johns Hopkins University, letting me witness the expansion first-hand. The tension motivating the creation of this degree is the same tension felt in my prior department when we renamed the department Psychological and Brain Sciences. Even though we did not have a clinical program to encompass the way you do at FIU, the extreme breadth of the term pushed us to rename the oldest Psychology department in the country.

The proposal here is responding to this same concern as the field of Cognitive Neuroscience has pushed to be even more tightly integrated with neurobiology and neuroscience. By bringing the degree into a STEM classified degree and by removing it from the requirements tied to your excellent Clinical Psychology program, FIU is responding well to the evolution of the field.

*Does the faculty possess the content strength to provide the instructional and graduate student learning/mentoring needed to accomplish this educational endeavor?*

The faculty certainly have the expertise needed to teach the proposed courses. You have a strong group of experts in the field that can readily cover these topics. The existing graduate students universally praise the faculty and the collaborative atmosphere present that allows them access to the needed expertise and mentoring.

*Is the curriculum well-conceived to meet emerging and future needs of the field? Will the curriculum, as presently designed, ensure that we are graduating competitive and highly trained students with the skills necessary for today's marketplace?*

and

*How does the proposed curriculum compare with other Ph.D. programs in Cognitive Neuroscience at comparable research universities? Is the curriculum situated at the cutting edge of the discipline? Should we consider a broader or a more narrow focus?*

I have grouped my response to these to questions together. The curriculum is well-designed and is in-line with other programs. I compared the proposed program to 4 other programs in detail (UCI, JHU, UCSD, and NYU). The topic areas proposed are excellent, with a strong background in statistics and methods required via the common core courses, a strong selection of specialized content courses, and a recurring discussion / topics course. Each of these sections is very well thought-out for the purpose of a Cognitive Neuroscience degree. In particular:

- Cognitive Neuroscience places very high demands on statistics, both because of the inherent nature and complexity of the processes under study and the multiple measures being collected simultaneously. Excellent programs in the area place a real emphasis on formal training in quantitative methods and statistics and the proposed program has a clear emphasis on this.
- Cognitive Neuroscience is, by definition, an integrative field that attempts to study complex processes of cognition from many different approaches. The content courses very nicely cover a range of topics and do so from this integrative approach.
- A Ph.D. is not merely about learning a large body information, but rather attempting to deeply understand that information and extract new knowledge and wisdom from it. The best way to get students to this, in my experience, come through mentored independent research and through well-designed topical discussion classes. The proposed program very nicely captures this via sufficient time in supervised research and via the Current Topics in Neuroscience series.

Finally, I should note here that the curriculum itself has an appropriate scope and should not be broadened or narrowed. The specific topic areas students are likely to do research in will be dictated not by the curriculum of formal courses, but by the expertise of the faculty and the research areas they cover.

*Are the resources we are requesting adequate for the tasks we are proposing? Are they comparable to other research institutions? What are the areas of resource weakness?*

The resources requested are based on the existing program and are well-described. Financial and administrative resources, along with lab resources are all suitable and in-line with other institutions.

The only area of potential concern here is in how the 13 faculty members will be able to cover the targeted courses as the program grows, given their own needs for research, the variable number of incoming students, and the minimum class size requirements (7 students). This is not a resource limitation in any way unique to FIU or to new, modest-sized programs. It will, however, require careful pre-planning of exactly which faculty will teach which courses in what terms and which students will take those courses. With an order of magnitude more faculty and more students, programs can have greater flexibility in allowing students to decide a plan of courses at any time. With fewer resources here, it will simply require sufficient pre-planning to make sure that the courses can be run and that students can get the required training and instruction.

*Is the physical space (laboratories, offices, and graduate student collaboration space) adequate for the level of graduate education in the proposal?*

In my visit and in discussion with the faculty and with the graduate students, I have found no concerns with the physical space. As this is a shift from one mechanism to another for an existing program rather than the creation of a wholly new program, any such issues should have been quite apparent if they existed. Therefore, I have no concerns here.

### **General Comments and Proposed Actions**

The proposed action is well-motivated and warranted. The transition to a STEM-based degree brings with it a number of justified benefits and allows FIU to create a modern Ph.D. program in the growing field of Cognitive Neuroscience. Students successfully trained in this program will be well-suited not only for careers in this field directly, but also for careers in information science, informatics / bio-informatics and other fields that make use of big-data and statistics. The students in the existing program are very supportive of the program and of the proposed refinements to it. Thus, I am wholly supportive of the proposed action.

This review has served as a chance for the faculty to re-tool the existing program and adapt it further to the needs of a Cognitive Neuroscience degree. As it stands, the program has excellent depth in certain areas within the field (e.g., developmental neuroscience) and there are extant mechanisms to integrate faculty with other areas of expertise. Given the highly integrative nature of the field and given the immense enthusiasm for the collaborative atmosphere at FIU amongst the graduate students, I would encourage the program to continue pushing towards more and more integration with other faculty and programs. Shifting the Ph.D. into a separate degree will clearly help this significantly, FIU's policies allow this, and the faculty and students I met with are all supportive of a push towards even broader integration. This will, of course, take time to develop carefully. For now, the proposed action is a necessary, major action and will help FIU recruit excellent students to the program and will help those students get the experience and training they need to successfully compete in this field.

Sincerely,



Craig Stark, Ph.D.

**Appendix E**  
**Supporting Documentation**

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## Letters of Support from the Profession and Industry



June 30, 2020

Dr. Kenneth G. Furton  
Provost and Executive Vice President  
Chief Operating Officer  
Florida International University  
Modesto A. Maidique Campus, PC 526  
Miami, Florida 33199

Dear Provost Furton,

I am writing in my capacity as President of the Flux Society for Developmental Cognitive Neuroscience to express my strong support for your proposed M.S./Ph.D. in Cognitive Neuroscience at Florida International University (FIU) in Miami, FL. The Flux Society is an academic society, the purpose of which is to advance the understanding of human brain development by serving as a forum for professional and student scientists, physicians, and educators. One of our charges is to educate the next generation of developmental cognitive neuroscience researchers.

The proposed program at FIU is directly in line with this charge. FIU in particular is a well-established hub of research in developmental cognitive neuroscience, which, as a sub-discipline of cognitive neuroscience more broadly defined, focuses on how maturational and experiential changes in the brain relate to behavior, and how knowledge in this domain can inform clinical management of developmental disorders, educational policy, juvenile law policy, parenting, and mental health treatment. Faculty at FIU contribute to this sub-discipline through their active research programs examining brain development in children as young as 4-years, in the process using a variety of neuroimaging tools (including MRI and electroencephalography). The faculty are supported by over \$35M in active grants from NIH and NSF, including the NIDA-funded Adolescent Brain and Cognitive Development (ABCD) study. This remarkable longitudinal study, entering its sixth year, has already contributed significantly to the understanding of brain development in a large national sample of adolescents, and will continue to do so as the next phase of the study begins. FIU's study site plays a significant role in the administration of this important research, adding to its reputation as a flagship research University. This reflects very positively on the reputation of the State of Florida in the training of the nation's scientists. The proposed program promises to continue a track record of excellence in the training of the next generation of cognitive neuroscientists, especially in the sub-discipline of developmental cognitive neuroscience.

We wish you success in this initiative and support the establishment of the proposed program!

Sincerely,



Beatriz Luna, Ph.D.  
Staunton Professor of Psychiatry and Pediatrics  
Professor of Psychology  
**President of The Flux Society for Developmental Cognitive Neuroscience**  
Editor-in-Chief of the Journal Developmental Cognitive Neuroscience  
Laboratory of Neurocognitive Development  
Western Psychiatric Hospital  
University of Pittsburgh Medical Center



Dr. Kenneth G. Furton  
Provost and Executive Vice President  
Chief Operating Officer  
Florida International University  
Modesto A. Maidique Campus, PC 526  
Miami, Florida 33199

Dear Provost Furton,

I am writing to express my strong support for your proposed M.S./Ph.D. in Cognitive Neuroscience at Florida International University (FIU) in Miami, FL. The Max Planck Florida Institute for Neuroscience is a non-profit research institution in Jupiter, FL, located about 80 miles from Miami. The institute conducts cutting edge neuroscience research in collaboration with area partners in the State University System (SUS), especially Florida Atlantic University (FAU). Thus, we are invested already in successful programs in neuroscience within the Florida SUS, and have found these initiatives to be incredibly beneficial to the State of Florida for building and maintaining an international reputation in scientific research.

With the addition of the FIU program, we expect to be able to regularly recruit and hire graduates to fill a number of positions, including post-doctoral research positions, research technician positions (especially for Masters-level students), advanced research scientist positions, and full-time faculty. A pipeline of well-trained graduates, especially from FIU laboratories specializing in animal and developmental neuroscience, will be a welcome addition to the State of Florida, as there continues to be a growing need to hire in this active area of scientific research. Indeed, a number of open positions for these jobs are currently advertised at Max Planck. The proximity of Max Planck to Miami (about 80 miles), and the excellent programs at FIU, portend a strong potential for a regular pipeline of talent.

We support the establishment of this proposed program, and hope for its continued success!

Sincerely,

Ryohei Yasuda, PhD  
Chair of Training Committee  
Scientific Director  
Max Planck Florida Institute for Neuroscience

## Letters of Support from South Florida Educational Partners

July 2, 2020

Dr. Kenneth G. Furton  
Provost and Executive Vice President  
Chief Operating Officer  
Florida International University  
Modesto A. Maidique Campus, PC 526  
Miami, Florida 33199

Dear Dr. Furton:

I am writing to express my strong support for your proposed M.S./Ph.D. in Cognitive Neuroscience.

As you know, Miami Dade County Public Schools (M-DCPS) is a consistent partner with Florida International University, especially as it pertains to work with faculty in the Department of Psychology and the Center for Children and Families (CCF). M-DCPS families regularly use the educational and clinical services available through the CCF. In addition, MDCPS has partnered with researchers in the CCF and the Department of Psychology as part of the landmark National Institutes of Health's (NIH) Adolescent Brain and Cognitive Development (ABCD; <https://abcdstudy.org/>) study conducted at FIU (one of 21 study sites across the United States). This is a longitudinal study of 11,800 children across the United States, including those in the M-DCPS school system. It has a strong cognitive neuroscience component, as every child participating in the study has an MRI scan to study brain development. Four of the Cognitive Neuroscience faculty in the proposed program are directly involved in the study. Additional faculty in the program conduct cognitive neuroscience research involving children attending M-DCPS as part of other NIH and National Science Foundation-funded research studies. This active partnership between M-DCPS and FIU fosters the advancement of knowledge that informs educational and clinical interventions for children and families, especially in the local Miami-Dade community.

The proposed M.S./Ph.D. program is a significant addition to this important partnership. Graduates from the program can give back to the local community by informing clinical and educational interventions that directly relate to their research. In addition, high school students in M-DCPS regularly participate in research with faculty in the Cognitive Neuroscience program through the FIU Summer Research Internship Program. This gives them a head start on college-level STEM education, which supports our next generation of scientists who often stay and work in the local community.

We wish you success in this initiative and support the advancement of STEM-related educational opportunities that have the potential to contribute to our local community. We value our current collaborations with Cognitive Neuroscience faculty and believe this new program will provide a plethora of opportunities for further collaboration in the future.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Alcarvalho', with a long horizontal flourish extending to the right.

Alberto M. Carvalho  
Superintendent of Schools

AMC:ym  
L1179

June 23, 2020

Dr. Kenneth G. Furton  
Provost and Executive Vice President  
Chief Operating Officer  
Florida International University  
Modesto A. Maidique Campus, PC 526  
Miami, Florida 33199

Dear Provost Furton,

I am writing to express my strong support for your proposed M.S./Ph.D. in Cognitive Neuroscience.

As you know, Miami Dade College (MDC) offers an A.A. pathway in psychology, as well as a B.S. degree in Biological Sciences. As the largest transfer partner to Florida International University (FIU), the majority of our A.A. graduates and many of our B.S. graduates go on to pursue advanced degrees at FIU.

Your proposed Ph.D. degree is exciting on two fronts. First, faculty and graduate students in the program, including those associated with FIU's Center for Children and Families, will have the opportunity to conduct cutting-edge research on the brain and cognitive neuroscience. Graduates with this experience can make significant impacts on our diverse Miami-Dade County population of children and adolescents through clinical practice, or continue to make strides in the advancement of cognitive neuroscience through employment in any of the various South Florida research hubs. Second, the structure of the program, requiring graduate coursework in psychology and brain science, along with potential graduate teaching assistantships, positions graduates of your M.S./Ph.D. program as outstanding candidates for faculty positions at MDC and throughout the state college and university systems.

We wish you success with the education and research initiatives that will flow from this new degree and are pleased that new avenues for continued advanced education for our graduates will exist right here in our Miami community.

Sincerely,



Lenore Rodicio, Ph.D.  
Executive Vice President and Provost

## Torrey Pines Description and FIU Connection

## **Torrey Pines @ FIU (formerly Torrey Pines Institute for Molecular Studies)**

On December 5, 2019, Florida International University's (FIU) Board of Trustees voted to acquire and establish Torrey Pines as a Special Purpose Center. Pursuant to Board of Governors Regulation 8.009, FIU must present their request to the Board of Governors (BOG) for approval. At its January 29-30, 2020 meeting, the Florida State University System BOG approved Florida International University's acquisition of Torrey Pines effective March 1, 2020.

Torrey Pines @ FIU is located in the Florida Center for Innovation and Tradition at 11350 SW Village Parkway in Port St. Lucie, Florida. The center provides FIU faculty with a state-of-the-art research facility that includes fully functional wet laboratories, a Nuclear Magnetic Resonance laboratory, vivarium, and auditorium. This facility enhances FIU's research base in the STEM fields of chemistry and chemical biology and accelerate FIU's translational medicinal chemistry and chemical biology research, drug discovery and basic research efforts leading to the cure of diseases in areas of cancer and neurodegenerative diseases. It also will be instrumental in providing an environment that can lead to commercialization opportunities and business development through new discoveries.

In addition to growing the research enterprise that can provide cures, relief of pathological symptoms, or protection from disease, Torrey Pines @ FIU also provides an opportunity for collaborations with Cleveland Clinic Research and Innovation Center and opportunities for graduate and post-doctoral training in these areas. <https://newsroom.clevelandclinic.org/2020/07/08/cleveland-clinic-florida-opens-florida-research-and-innovation-center/>

Attached is the supporting documentation presented in January to the BOG.



**STATE UNIVERSITY SYSTEM OF FLORIDA  
BOARD OF GOVERNORS  
January 30, 2020**

**SUBJECT:** Request for Classification of the Torrey Pines @ FIU as a Special Purpose Center by Florida International University

---

**PROPOSED COMMITTEE ACTION**

Consider approval of the Request for Classification of the Torrey Pines @ FIU as a Special Purpose Center by Florida International University.

**AUTHORITY FOR BOARD OF GOVERNORS ACTION**

Article IX, Section 7, Florida Constitution

**BACKGROUND INFORMATION**

Florida International University (FIU) requests the approval of Torrey Pines @ FIU as a Special Purpose Center pursuant to Board of Governors Regulation 8.009. A Special Purpose Center is a unit of a university, apart from the main campus, that provides certain special, clearly defined programs or services, such as research or public service, and reflects a relatively permanent commitment by a university for the foreseeable future. The facility must be university owned, leased, or jointly used with another public institution. Special Purpose Centers typically do not offer instructional programs or courses leading to a college degree.

Torrey Pines @ FIU will be located in the Florida Center for Innovation and Tradition at 11350 SW Village Parkway in Port St. Lucie, Florida. The center will provide FIU faculty with a state-of-the-art research facility that includes fully functional wet laboratories, a Nuclear Magnetic Resonance laboratory, vivarium, and auditorium. This facility will enhance FIU's research base in the STEM fields of chemistry and chemical biology and accelerate FIU's translational medicinal chemistry and chemical biology research, drug discovery and basic research efforts leading to the cure of diseases in areas of cancer and neurodegenerative diseases. FIU will not offer instructional programs or courses leading to a college degree at this location.

Effective upon approval from the Board of Governors, Torrey Pines @ FIU will open March 1, 2020.

---

<b>Supporting Documentation Included:</b>	Proposal to Establish a Special Purpose Center
<b>Facilitators/Presenters:</b>	University Representative

Edition 4/28/2014

# BOARD OF GOVERNORS, STATE UNIVERSITY SYSTEM OF FLORIDA PROPOSAL TO ESTABLISH A NEW TYPE I, II, OR III CAMPUS, OR SPECIAL PURPOSE CENTER

Florida International University  
University Submitting Proposal

Torrey Pines @ FIU

Proposed Name of Educational Site  
Special Purpose Center

Site ID

Proposed Type of Educational Site  
(Type I, II, or III Campus, or Special Purpose Center)

11350 SW Village Parkway  
Port St. Lucie, Florida 34987

March 1, 2020

Physical Address of Educational Site  
(US Site: address, city, state, zip) (International site: street  
address, number, city, county/province, country)

Proposed Opening Date  
(First date and term student instruction will be offered at  
the site)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing or relocating an educational site have been met prior to the initiation of the first course offerings.

December 5, 2019

Date Approved by the University Board of  
Trustees

President

12-5-19  
Date

Signature of Chair, Board of  
Trustees

Date

Vice President for Academic  
Affairs

12-5-19  
Date

Under Projected Enrollment, provide headcount (HC) and full-time equivalent (FTE) student enrollment estimates by level from Table 1 in Appendix A for Years 1 and 5, or the Final Year of implementation if it exceeds five. Under Projected Costs, provide revenues and expenses from Table 2 and capital project costs from Table 3 for Years 1 and 5, or the Final Year if it exceeds five.

Projected Site Enrollment (from Table 1)			
		HC	FTE
Undergraduate	Year 1	0	0
	Year 5	0	0
Graduate	Year 1	0	0
	Year 5	0	0

Projected Costs (from Tables 3 and 4)				
Operational				
	E&G Funding	Other (Contracts & Grants, Auxiliary)	Capital Projects	Total Cost
Year 1	1,102,086	1,587,988	0	2,690,074
Year 2	2,846,997	9,518,093	0	12,365,090
Year 3	4,070,131	12,683,357	0	16,753,488
Year 4	4,837,332	12,737,191	0	17,574,523
Year 5	3,573,213	12,734,796	0	16,308,009

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix A and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.

1

## BOARD OF GOVERNORS, STATE UNIVERSITY SYSTEM OF FLORIDA PROPOSAL TO ESTABLISH A NEW TYPE I, II, OR III CAMPUS, OR SPECIAL PURPOSE CENTER

Florida International University  
**University Submitting Proposal**

**Site ID**

11350 SW Village Parkway  
Port St. Lucie, Florida 34987

**Physical Address of Educational Site**

(US Site: address, city, state, zip) (International site: street  
address, number, city, county/province, country)

Torrey Pines @ FIU

**Proposed Name of Educational Site**  
Special Purpose Center

**Proposed Type of Educational Site**

(Type I, II, or III Campus, or Special Purpose Center)

March 1, 2020

**Proposed Opening Date**

(First date and term student instruction will be offered at  
the site)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing or relocating an educational site have been met prior to the initiation of the first course offerings.

**Date Approved by the University Board of Trustees**

**President**

**Date**

**Signature of Chair, Board of Trustees**

**Date**

**Vice President for Academic Affairs**

**Date**

Under Projected Enrollment, provide headcount (HC) and full-time equivalent (FTE) student enrollment estimates by level from Table 1 in Appendix A for Years 1 and 5, or the Final Year of implementation if it exceeds five. Under Projected Costs, provide revenues and expenses from Table 2 and capital project costs from Table 3 for Years 1 and 5, or the Final Year if it exceeds five.

Projected Site Enrollment (from Table 1)			
		HC	FTE
Undergraduate	Year 1	0	0
	Year 5	0	0
Graduate	Year 1	0	0
	Year 5	0	0

Projected Costs (from Tables 3 and 4)				
Operational				
	E&G Funding	Other (Contracts & Grants, Auxiliary)	Capital Projects	Total Cost
Year 1	1,102,086	1,587,988	0	2,690,074
Year 2	2,846,997	9,518,093	0	12,365,090
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Year 4	4,837,332	12,737,191	0	17,574,523
Year 5	3,573,213	12,734,796	0	16,308,009

*Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix A and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.*

## **I. Introduction**

### **A. Provide a short description of the project and rationale for the request to establish an educational site, including the main purpose for this site (research, instruction, administration, student services, etc.).**

Torrey Pines @ FIU is a 108,165 sq. ft. special purpose center located in the Florida Center for Innovation and Tradition at 11350 SW Village Parkway in Port St. Lucie, Florida. It provides FIU faculty a state-of-the-art research facility that includes fully functional wet laboratories, a Nuclear Magnetic Resonance (NMR) laboratory, vivarium and auditorium. This facility will enhance our research base in the STEM fields of chemistry and chemical biology and accelerate FIU's translational medicinal chemistry and chemical biology research, drug discovery and basic research efforts leading to the cure of diseases in areas of cancer and neurodegenerative diseases. It will provide further a venue for graduate students and postdocs to further their knowledge and training in this field while working on related sponsored research and scholarly activities.

The research facility is located on land in which currently there is a Ground Lease between the City of Port St. Lucie, as landlord, and TPIMS Land Company, LLC, as tenant. TPIMS Land Company, LLC will be assigning its interest in the Ground Lease to FIU, and FIU will be assuming the obligations as tenant thereunder. Previously, the City of Port St. Lucie transferred the title of the building located on the Ground Lease premises to TPIMS Land Company, LLC. TPIMS Land Company, LLC will be transferring the title of the building to FIU at no cost. The building has been recently appraised and has a current market value of \$16 million. Upon expiration of the Ground Lease in November 15, 2026, the City of Port St. Lucie will transfer title of the Ground Lease premises to FIU as specified in the Ground Lease.

### **B. Provide a short narrative assessment of how the establishment of the educational site supports the university mission and the goals incorporated into the university strategic plan and Board of Governors State University System Strategic Plan.**

The establishment of this site will enhance FIU's commitment to achieving excellence in the tripartite mission of teaching, research and public service. Specifically, it will provide much needed research space that will enhance and expand FIU's research portfolio along with improving the quality and reputation of scholarship, research and innovation which strongly align with the research-

related metrics of both the university's and Board of Governor's strategic plans. Specifically, Torrey Pines @ FIU will accelerate FIU's translational research, drug discovery and basic research efforts leading to the cure of diseases in areas of cancer and neurodegenerative diseases. In addition to growing the research enterprise that can provide cures, relief of pathological symptoms or protection from disease Torrey Pines @ FIU also provides an opportunity for collaborations with Cleveland Clinic and opportunities for graduate and post-doctoral training in these areas. It also will be instrumental in providing an environment that can lead to commercialization opportunities and business development through new discoveries.

- C. Provide a timetable of critical benchmarks that must be met for full implementation which can be used to monitor progress (planning, design, funding, construction, etc.). The timetable should also include ensuring appropriate accreditation of the proposed educational site and any proposed programs requiring specialized accreditation, if required.**

<b>Approval by BOG</b>	<b>Jan 30, 2020</b>
<b>Transfer of the Building to FIU</b>	<b>March 1, 2020</b>
<b>Transfer of Ground Lease and other assets to FIU</b>	<b>March 1, 2020</b>
<b>Building Improvements</b>	<b>Begin June 30, 2020</b>
<b>Faculty hiring completed</b>	<b>August 31, 2020</b>

## **II. Need and Demand Assessment**

- A. Provide a detailed assessment of unmet local student demand for access to academic programs in the vicinity of the proposed educational site. Complete Table 1 in Appendix A to enrollment projections for unduplicated student headcount and FTE by degree program and level.**  
Not applicable; instructional activities will not take place.

- B. Provide a detailed data-driven assessment that describes unmet local and regional workforce need for programs and services to be offered at the proposed educational site. In the appendices, provide letters of support from the local community and business interests.**  
Not applicable; instructional activities will not take place.

## **III. Academic Programs and Courses**

- A. Provide a list of the degree programs, partial programs, or college credit certificates and courses to be offered at the proposed educational site by year five or the Final Year of implementation if different, using Table 1 in Appendix A. The proposed degree programs must be identified by six-digit CIP Code, by program title, and degree level.**

Not applicable; instructional activities will not take place.

- B. Provide an explanation as to how the proposed degree programs and courses will be affiliated with similar programs offered on the central campus and/or other educational sites of the university. Will they be independent or an extension of existing programs?(Please see BOG regulation 8.011 (5))**

Not applicable; instructional activities will not take place.

- C. Provide an assessment, supported with data, that justifies any duplication of degree programs and services that might already be provided by an existing state university or Florida College System campus in the vicinity of the proposed educational site. Describe any discussions that have taken place with affected colleges and universities and provide letters of support or letters of concern in the appendices.**

Not applicable; instructional activities will not take place.

#### **IV. Administration and Student Support Services**

- A. Describe the administrative structure of the proposed educational site and how it will relate to the central administration of the university. Include any necessary funding in the financial plan outlined in Table 2 of Appendix A.**

The site will be a FIU research facility. Due to the location and research focus, it will be managed by the Office of the Vice President for Research and Economic Development with an on-site Director who will be responsible for the support staff, facility management, and operations on a daily basis. Capital improvements will be managed by Office of the Associate Vice President for Facilities Management operations in conjunction of the Office of the Vice President for Research and Economic Development. All support for the operations will come from the overhead produced from externally sponsored projects and existing E&G funds to support research.

- B. Describe how the proposed site will provide student services, either onsite or online from the central university campus.**

Not applicable; instructional activities will not take place.

- C. Provide a plan to provide library services and other instructional resources that will support the proposed programs. Include any necessary funding in the financial plan outlined in Table 2 of Appendix A.**

Not applicable; instructional activities will not take place.

## **V. Budget and Facilities**

- A. Provide a projected operational budget using Table 2 in Appendix A that includes revenues and expenses out to year five, or the final year of implementation if different. Provide a narrative that explains the cost assumptions reflected in Table 2. Include the operational costs on the proposal cover page.** FIU has already recruited four research faculty with total annual grant awards of \$3.5 million and is in the process of recruiting six additional research faculty that will be located in the research facility by the end of FY 19/20. By the end of FY 20/21, a grand total of 18 faculty, along with their research support staff, will occupy the facility. An administrative staff of 5.6 FTEs will initially support these research teams, which includes the Director of Torrey Pines @ FIU and will grow to a total of 8 FTEs by the end of FY 20/21. Total expenses, which includes facility operations, will increase from \$2.6 million to \$17.5 million during the start-up period and will stabilize around \$16 million based on research activity and capacity. Revenue to support this operation will come from two sources: overhead earned on increased sponsored research awards and current funding to support research.
- B. Use Table 3 in Appendix A, to identify each facility or facilities required to establish the proposed educational site, and any additional facilities that will be required once the site has reached its expected size and enrollments. Include capital facility costs on the proposal cover page.**  
There are no additional facilities needed.
- C. Describe ownership of the new location and provide documentation of ownership or lease agreements, to include any special clauses, easements, or deed restrictions. If the property is a gift, provide the gift agreement. Please provide information on the type of ownership if the site is leased or owned (if leased please provide information on the duration of the lease and the entity that owns the lease). If the site is joint-use please provide the name of the other entity in the joint agreement as well as the total number of students this site will serve from year 1 through year 5.**  
The research facility is located on land in which currently there is a Ground Lease between the City of Port St. Lucie, as landlord, and TPIMS Land Company, LLC, as tenant. TPIMS Land Company, LLC will be assigning its interest in the Ground Lease to FIU, and FIU will be assuming the obligations as tenant thereunder. Previously, the City of Port. St. Lucie transferred the title of the building located on the Ground Lease premises to TPIMS Land Company, LLC. TPIMS Land Company, LLC will be transferring the title of the building to FIU at no cost. Upon expiration of the Ground Lease in November 15, 2026, the

City of Port St. Lucie will transfer title of the Ground Lease premises to FIU as specified in the Ground Lease.

D.

E. **Are the facilities owned or leased by the University?** Upon transfer of title and assignment of lease as explained above.

(x)      Owned              ( x )      Leased

**VI. Addendum for International Campuses and Special Purpose Centers**

**If the proposed site is international, include a copy of any MOU or other agreements related to the site as an appendix** Not applicable.

**( x ) The University certifies that all requirements of BOG Regulation 8.009(3)(f) have been met.**



**APPENDIX A**  
**TABLE 1**  
**DEGREE PROGRAMS PLANNED AND PROJECTED ENROLLMENTS**  
**(Annual Unduplicated Headcount and FTE)**

CIP Code	Baccalaureate Degree Program Title	Degree Level	Year 1		Year 2		Year 3		Year 4		Year 5	
			Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	B	0	0	0	0	0	0	0	0	0	0
TOTAL BACCALAUREATE			0	0	0	0	0	0	0	0	0	0

CIP Code	Master's Degree Program Title	Degree Level	Year 1		Year 2		Year 3		Year 4		Year 5	
			Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	M	0	0	0	0	0	0	0	0	0	0
TOTAL MASTER'S			0	0	0	0	0	0	0	0	0	0

CIP Code	College Credit Certificate Program Title	Course Level	Year 1		Year 2		Year 3		Year 4		Year 5	
			Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE
xxxx	xxxxxxxxxx	G	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	G	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	G	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	G	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	G	0	0	0	0	0	0	0	0	0	0
xxxx	xxxxxxxxxx	UG	0	0	0	0	0	0	0	0	0	0
TOTAL MASTER'S			0	0	0	0	0	0	0	0	0	0

NOTE: Add Year columns as necessary to cover the period of time needed for full implementation.

Edition 04/15/14

## APPENDIX A

TABLE 4

## SUMMARY FINANCIAL PROJECTIONS TO FULL IMPLEMENTATION

Fiscal Year Ending June 30		Year 1	Year 2	Year 3	Year 4	Year 5
General Operations Revenues		2020	2021	2020	2021	2022
Carry Forward from Prior Year		0	0	0	0	0
General Revenue/Lottery						
	State Allocations (GR/Lottery)	1,102,086	2,846,997	4,070,131	4,837,332	3,573,213
Tuition/Tuition Differential and Fees						
	Tuition (Matriculation)	0	0	0	0	0
	Tuition (Differential, 70% UG Support)	0	0	0	0	0
	Out of State Student Tuition Fees	0	0	0	0	0
Research Trust Funds (by title)						
	XYZ Trust Fund	0	0	0	0	0
Financial Aid and Academic Related Fees						
	Financial Aid	0	0	0	0	0
	Tuition (Differential, 30% Financial Aid)	0	0	0	0	0
	Out of State Financial Aid	0	0	0	0	0
	Student Technology Fee	0	0	0	0	0
	Student Distance Learning Fee	0	0	0	0	0
	Other Fees (Material/Supply), Facility/Equipment, etc.)	0	0	0	0	0
Other Revenues						
	Grants and Overhead funds	908,427	7,175,011	10,267,905	12,272,655	12,456,745
	Rental Income	283,374	850,121	875,624	901,893	928,950
<b>Total Revenues</b>		<b>2,293,887</b>	<b>10,872,129</b>	<b>15,213,660</b>	<b>18,011,880</b>	<b>16,958,908</b>

General Operations Expenses						
	Compensation and Employee Benefits	972,131	5,091,801	7,037,681	8,222,681	8,232,287
	Shared Services	0	0	0	0	0
	Incremental Shared and/or Contractual Services Costs	0	0	0	0	0
	Library Services/e-Collections	0	0	0	0	0
	Contractual Services	0	0	0	0	0
	Plant Costs and Operating Supplies	1,075,381	5,315,301	6,786,825	5,782,778	5,087,123
	Financial Aid, Scholarships, Stipends	89,181	179,180	254,180	299,180	338,006
	Equipment	415,991	1,207,374	1,878,941	2,328,429	1,828,684
	Professional Service and Travel	137,390	571,434	795,861	941,455	821,909
	List:	0	0	0	0	0
<b>Total Expenses</b>		<b>2,690,074</b>	<b>12,365,090</b>	<b>16,753,488</b>	<b>17,574,523</b>	<b>16,308,009</b>
<b>Operating Net Revenues Over Expenses</b>		<b>-396,187</b>	<b>-1,492,961</b>	<b>-1,539,828</b>	<b>437,357</b>	<b>650,899</b>

NOTE: Add Year columns as necessary to cover the period of time needed for full implementation.

Start up period deficits will be covered by F&amp;A from sponsored research funds





**Office of Academic and Student Affairs**  
325 West Gaines Street, Suite 1614  
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## Torrey Pines @ FIU

### Summary and Responses

On December 5, 2019, Florida International University's (FIU) Board of Trustees voted to acquire and establish Torrey Pines as a Special Purpose Center. Pursuant to Board of Governors Regulation 8.009, FIU must present their request to the Board of Governors for approval. If approved, Torrey Pines @ FIU will open March 1, 2020. The proposal to establish a special purpose center is included in your meeting documents and was jointly reviewed by Academic and Student Affairs, Budget and Facilities staff.

A special purpose center is a unit of a university, apart from the main campus, that provides certain special, clearly defined programs or services, such as research or public service, and reflects a relatively permanent commitment by a university for the foreseeable future. The facility must be university owned, leased, or jointly used with another public institution. Special Purpose Centers typically do not offer instructional programs or courses leading to a college degree.

Torrey Pines @ FIU will be located in the Florida Center for Innovation and Tradition at 11350 SW Village Parkway in Port St. Lucie, Florida. The center will provide FIU faculty with a state-of-the-art research facility that includes fully functional wet laboratories, a Nuclear Magnetic Resonance laboratory, vivarium, and auditorium. This facility will enhance FIU's research base in the STEM fields of chemistry and chemical biology and accelerate FIU's translational medicinal chemistry and chemical biology research, drug discovery and basic research efforts leading to the cure of diseases in areas of cancer and neurodegenerative diseases. FIU will not offer instructional programs or courses leading to a college degree at this location.

The following are questions that Board of Governors' staff posed to FIU with their noted responses. Many of the questions/comments were based on Board staff's review of archived documents from FIU's Board of Trustees Finance and Facilities Committee meeting held on December 2, 2019. The responses were submitted via e-mail by Dr. Kenneth A. Jessell, Senior Vice President and Chief Financial Officer (December 23, 2019) and Mr. David H. Snider, Adjunct, FIU College of Business and Assistant Vice President, Division of Finance (December 18, 2019).

### Collaboration

1. Considering the proximity of Torrey Pines to FAU, has President Rosenberg conferred with President Kelly (FAU) regarding this Center? Is there a letter of support from FAU that you can provide to the Board office?

*FIU has had multiple touchpoints with FAU on the Proposed Center through the years since we began conversations with TPIMS in 2016. President Rosenberg will be reaching out to FAU President Kelly to request a letter of support. We will forward that to you as soon as it is received.*

### Funding

2. In the "Summary of Acquisition Agreement and Plan of Merger" dated December 5, 2019, page 333, 2(G) states an obligation of FIU to make capital improvements to the building estimated to be in excess of \$4.5 million. Please identify the needed improvements, funding source, and schedule. What are the consequences if FIU does not make the noted improvements?

*See attached Project Detail and Timeline Report identifying all needed improvements, which was included in the Assessment Report contained in the BOT agenda materials (p. 593 of BOT materials). As shown in the Report, the major improvements are replacement of lab exhaust fans, curbs and hoods (\$1.73 million), exterior lighting repairs (\$300,000), cooling tower refurbishment (\$205,000), boiler replacement/refurbishment (\$205,000), building envelope repairs (\$425,000), and chiller, steam and water system repairs (\$270,000). Funding for the needed improvements will come from F&A returns. These are projections based on the assessment report and we will work with area vendors and FIU Facilities on a more exact timeline in relation to occupancy given the specific type of research being conducted in the Facility. These costs were included in the Summary Financial Projections to Full Implementation (Appendix A) of the Proposal to Establish a New Special Purpose Center submitted to the BOG. FIU, as the tenant under the Ground Lease with the City of Port St. Lucie, will be responsible for all repairs and maintenance of the building. These capital improvements relate to deferred maintenance at the building and are necessary to ensure continuing and efficient operations of the*

*building.*

Please see the noted attachment at the end of this document.

3. From Pro Forma footnotes 2 and 8, please clarify how E & G funds will be used to support activities at the Center.

*E&G will be used similarly as it is with other faculty members. A portion of each faculty member's salary is projected to be funded for non-sponsored research effort. Faculty, based on expertise and alignment, will supervise graduate assistants in the lab/research projects. Faculty start-ups will also be supported by E&G funds. Both the salary support and start-ups were part of the research infrastructure component of the \$15 million recurring LBR funding provided to FIU in FY 2019-20. We would be making these investments in faculty and support staff regardless of the acquisition of Torrey Pines.*

4. What plans are in place to support the efforts of the Center should the rental income be less than projected?

*One of the tenants has already expressed interest in additional space should it become available. FIU can recruit additional research faculty to fill any available space that may become available and leases have sufficient notification requirements to minimize substantial gaps in occupancy. Since the labs are already established for biological/chemical research, they are in turn-key condition if vacated.*

5. Your budget shows that Torrey Pines will operate at a deficit in the first three years. Please explain how you will "make up the difference" as relayed on page one of your proposal.

*The deficit is caused primarily by the initial/one time capital improvements that are needed in the first 3 years. Funding for these improvements will come from F&A reserves along with the initial start-up that is reflected in year 1. We can adjust the Summary of Financial Projections to Full Implementation sheet to reflect the F&A reserves funding (adjust Grant and Overhead Fund revenues), but FIU wanted to properly reflect the operating results to our board and BOG.*

	March - June FY 2019-20	FY 2020-21	FY 2021-22
Net Cash Flow	(\$396,187)	(\$1,492,962)	(\$1,539,828)
Capital Improvements Funded by F&A	\$95,846	\$1,809,050	\$1,941,500
Initial Startup	\$300,341		
<b>Adjusted Net Cash Flow w/F&amp;A Reserves</b>	<b>\$0</b>	<b>\$316,088</b>	<b>\$401,672</b>

6. What is the source of the rental income that is referenced and why is it expected to increase over time?

*There are 3 outside entities currently renting space in the Facility. The rent is expected to increase based on inflation factors already built into the leases or for normal inflation in future years. The first year, 2020, is a partial year.*

## Research

7. All of the Sponsored Research Agreements that are listed in (Exhibit E – Draft, pg 367) have a project end date no later than June 30, 2020. Page 335 states that the terms of the sponsored research agreements shall be negotiated as part of the transfer process. Are there recurring or renewable grants? What plans are in place to seek any replacement or additional funding should the agreements not be renewed?

*The end dates listed in Exhibit E are the correct project end dates whether recurring/renewable or not. The applicable faculty have proposals pending and one recently received notice of a new award that will begin in January. FTEs for the scientific faculty may be adjusted at closing based on the current/projected external funding at time of closing, but we expect it to be near the figures reported in the board materials. The faculty included in Exhibit E that we are transferring have a track record of funding and research support. The proforma included some non-sponsored research time for some of those researchers in line with realistic expectations.*

8. Please explain the use of “if any” regarding trade secrets {page 337, section 7(C)}.

*TPIMS owns a chemical compound and positional scanning library. There are certain processes/know how associated with using those chemical compounds to identify compounds that are suitable for the development of pharmaceutical products in the treatment/cure of human diseases. Our Technology and Commercialization Office is working through those specifics to ensure any needed IP for FIU to continue that work is transferred.*

## Personnel

9. Will the existing staff and faculty at Torrey Pines remain as FIU employees? Are the faculty and staff that you propose to hire in addition to the personnel already at Torrey Pines?

*Some of the existing staff at TPIMS will become FIU employees. Some have already submitted their resignations and will not be employed at the time of closing (anticipated March 1, 2020) or will not be hired as FIU centrally provides the functions and can be assumed by existing FIU personnel. FIU and TPIMS completed a needs assessment to determine what positions would be needed moving forward. There are some positions that FIU may*

*hire due to the resignation/vacancy of current TPIMS employees or based on research growth over the 5 year period. All these costs were included in the financial summary.*

10. All the added faculty be solely research faculty assigned to Torrey Pines, with no teaching obligations?

*As all FIU research faculty, the faculty at Torrey Pines will focus on research. They will be involved in graduate education through the supervision/mentoring of graduate students and post docs as it relates to research projects and may be involved in education in terms of supervised research, independent studies and graduate seminars.*

11. Will the faculty have any obligations on the FIU main campus?

*Faculty will primarily be located at Torrey Pines through their involvement in the aforementioned activities. They may be involved in symposiums, graduate seminars and other research related activities at FIU. Doctoral students conducting research at Torrey Pines may have the ability to participate in graduate courses through distance learning mechanisms in courses at the FIU Modesto Maidique Campus.*

#### Point of Clarification

12. Item V. D. was left blank on the form. Please complete this section.

*This is the result of a hard return editing error in the prior section that resulted in mislabeling of the items in that section. Section V Item D question and response are contained in Section V Item E in the submission. All items were provided albeit mislabeled.*





**Calvin, Giordano & Associates, Inc.**  
EXCEPTIONAL SOLUTIONS™

Original November 27, 2018  
Revision 2\_02.08.2019

## O&M Cost Estimate 5 year and 6-10 year Allocation

Building Code Services  
Civil Engineering / Roadway  
& Highway Design  
Coastal Engineering  
Code Enforcement  
Construction Engineering &  
Inspection (CEI)  
Construction Services  
Data Technologies &  
Development  
Electrical Engineering  
Engineering  
Environmental Services  
Facilities Management  
Geographic Information  
Systems (GIS)  
Governmental Services  
Indoor Air Quality  
Landscape Architecture  
Planning  
Project Management  
Redevelopment  
& Urban Design  
Surveying & Mapping  
Traffic Engineering  
Transportation Planning  
Water / Utilities Engineering  
Website Development

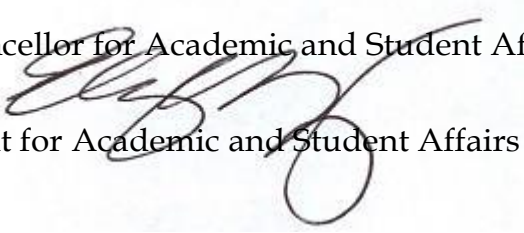
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	2019-20	2020-21	2021-22	2022-23	2023-24	Estimated (Yr 5-10)					6-10 Yr Total
						2025-26	2026-27	2027-28	2028-29	2029-30	
<b>Torrey Pines Institute for Molecular Studies</b>											
<b>Capital Improvements</b>											
Exhaust Fans, Curbs & Hoods east labs	\$1,211,000						\$47,500	\$47,500			\$95,000
Exhaust Fans, Curbs & Hoods west labs		\$519,000					\$25,000	\$25,000			\$50,000
Exterior Lighting Repairs - Bldg. perimeter North Lot	\$150,000					\$10,000					\$10,000
Exterior Lighting Repairs - South Parking Lot		\$150,000				\$100,000					\$200,000
BAC Cooling Tower refurbishment 1&2		\$220,000									\$0
BAC chilled water line refurbishment		\$80,000									\$0
Boiler Replacement / Auxiliary Boiler refurbishment		\$125,000	\$80,000			\$30,000					\$60,000
Building exterior envelope repairs		\$225,000	\$200,000					\$100,000			\$100,000
Site elements (gates, curbing trip hazard corrections)		\$25,000	\$25,000								\$0
Bldg. Svcs. MEP repairs Chiller Plant / Steam / Ro water		\$120,000						\$65,000	\$65,000		\$130,000
Exterior Landscaping Irrigation		\$25,000									\$0
Eyewash Safety Shower drainage design and const		\$35,000									\$0
HazMat storage relocation exterior to container storage		\$37,000					\$37,500			\$37,500	\$75,000
Mechanical room access correction of Haz Mat area		\$3,500									\$0
HazMat storage suppression system / addl storage unit		\$37,500			\$37,500			\$2,500			\$2,500
NFPA 704 Generator certification	\$500										\$0
SPCC plan creation / implementation	\$2,500										\$0
NFPA 704 Radioactive storage and initial leak testing	\$3,750										\$0
Fume Hood sash repairs and recalibration	\$15,000						\$20,000				\$20,000
Radioactive Biosafety program management											\$0
NMR space modifications design const	\$12,000	\$65,000									\$0
Autoclave exhaust design and const	\$15,000	\$100,000									\$0
Nitrogen storage O2 alarm and monitoring	\$3,500	\$7,500									\$0
Room 121 O2 monitoring system repairs	\$3,800						\$3,800.00				\$3,800
Mezzanine repairs / removal design const	\$10,000	\$40,000									\$0
Lab partition room design review and modifications	\$22,000	\$75,000									\$0
Supra Maxx elevator box F&I	\$500										\$0
Auditorium Handrail Installation design and const	\$15,000	\$55,000									\$0
Sprinkler system repairs / modifications	\$10,000	\$10,000	\$10,000								\$0
Access Gate Repairs	\$15,000				\$1,500						\$0
Roof repairs			\$15,000			\$25,000.00		\$25,000			\$50,000
Acid Code Corrections from Report	\$50,000	\$35,000									\$0
<b>Total Capital Improvements</b>	\$1,809,050	\$1,941,500	\$315,000	\$72,500	\$39,000	\$168,800	\$270,000	\$265,000	\$65,000	\$37,500	\$806,300
<b>PO&amp;M</b>											
Service Contracts	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$1,400,000
3 Person Staff	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$1,400,000
Other O&M	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$1,334,737	\$6,673,685
<b>Total PO&amp;M</b>	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$1,894,737	\$9,473,685
<b>Total Capital and PO&amp;M Costs</b>	\$3,703,787	\$3,836,237	\$2,209,737	\$1,967,237	\$1,933,737	\$2,063,537	\$2,164,737	\$2,159,737	\$1,959,737	\$1,932,237	\$10,279,985

**MEMORANDUM**

To: Dr. Traki Taylor  
Assistant Vice Chancellor for Academic and Student Affairs

From: Dr. Elizabeth Bejar   
Senior Vice President for Academic and Student Affairs

Date: September 4, 2020

SUBJECT: Application of Section 1004.08, Florida Statutes to proposed new degrees

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Florida International University conducted an analysis of [Section 1004.08, Florida Statutes](#) and determined it does not apply to the proposed MS/PhD in Cognitive Neuroscience for the following reasons:

- 1) Section 1004.08, Florida Statutes refers to patient safety curriculum for "medicine, nursing or allied health" degrees. Those degrees are housed in CIP codes of the "51" category that the Florida Board of Governors classifies as "Health" for strategic emphasis processes. The CIP code for these Cognitive Neuroscience degrees is STEM (42.2705 Physiological Psychology/Psychobiology).
- 2) The Cog Neuro MS/PhD are research degrees, and not "practice" degrees leading to a professional license. Furthermore, a STEM degree would not be classified as medicine, nursing or allied health. Allied Health has very specific connotations in the literature (Dietetics, Physical Therapy, Occupational Therapy, Speech Language, Clinical Social Work, Med Lab Sciences, etc.). All of these disciplines, including nursing and medicine, require passing state licensure requirements and having to complete two hours of "medical errors" continuing education (CE) every two years to maintain the license. Those CE programs cover the content included in this statute.

Thank you for the opportunity to respond to this question of Statute applicability. If you have any questions please do not hesitate to contact me or Susan Himburg.

c: Susan Himburg, Associate Vice President, Academic Planning and Accountability  
Jeremy Hudak, Assistant Director, Academic Affairs  
Brittanian Gamble, Assistant Director, Academic Affairs

September 8, 2020

Christy England  
Vice Chancellor and Chief Academic Officer  
Academic and Student Affairs  
State University System of Florida  
Board of Governors  
325 West Gaines Street  
Tallahassee, Florida 32399-0400

Dear Dr. England:

Attached please find the requested responses, the new degree proposal in Word with track changed revisions, a final PDF version of the revised proposal, and a revised Appendix A regarding the M.S./Ph.D in Cognitive Neuroscience.

Thank you for the opportunity to provide further clarification to this proposed degree. Please do not hesitate to contact me if you have any further questions.

Sincerely,



Kenneth G. Furton  
Provost and Executive Vice President

c: Dr. Traki Taylor

## **FIU Response to the Initial Review of the MS/PhD in Cognitive Neuroscience**

### **Substantive Issues:**

***Please clarify if any components of this program will be offered at any other FIU educational site pursuant to Section I.F. of the proposal.***

Please see Section I.F. for clarification that classes will only be offered at FIU's main campus.

***Please provide a more detailed narrative regarding the planning process for the proposed program pursuant to Section VI. of the proposal.***

Please see Section VI for a more detailed narrative of the planning process.

***Please describe the mode of delivery for the proposed program pursuant to Section VIII.I. of the proposal.***

Please see Section VIII. I. for clarification that traditional delivery methods will be utilized.

***Please describe the specific sources for the Contracts and Grants funding listed in Table 2-Appendix A.***

Please see the budget narrative III.A. which has been expanded to provide further details of grant funding for assistantships.

### **Technical Issues:**

***Please provide a list of electives and corresponding course descriptions that are available to students in the program pursuant to Section VIII.E. of the proposal. Additionally, please indicate if the electives are restricted or unrestricted.***

The curriculum section has been revised to clarify that students may select electives from the 2. *Cognitive Neuroscience (CN) Content Courses* list. As they already select five courses from the list there would be eight other courses from which to select for M.S. or Ph.D. students. In addition, typically students enroll over several semesters in the PSY 5938 Current Topics in Neuroscience Series which can be taken for one credit (this is limited to six credits for electives in the M.S. and PhD. as noted in the curriculum). Furthermore, given student's research interest, other electives can be added outside of the list provided. As specified, all electives must be approved by the director.

***The anticipated implementation date for the proposed program is listed as fall 2021. However, Table 4-Appendix A shows the majority of the faculty beginning in fall 2020. Please provide clarification regarding this difference.***

Please see revised Appendix A, Table 4. All of the dates have been moved forward by one year to be consistent with the fall 2021 implementation date.