MINUTES
STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
ACADEMIC AND RESEARCH EXCELLENCE COMMITTEE
UNIVERSITY OF CENTRAL FLORIDA
September 13, 2022

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1. Call to Order and Opening Remarks

Vice Chair Lydecker convened the meeting on September 13, 2022, at 1:47 p.m., with the following members present: Governors Lydecker, Edge, Levine, Scott, and Stermon. A quorum was established.

2. Minutes of Academic Research and Excellence Committee Meeting: Minutes, March 29, 2022

Vice Chair Lydecker asked for a motion to approve the March 29, 2022, committee meeting minutes. Governor Levine moved to approve, Governor Edge seconded the motion, and the motion passed unanimously.

3. Faculty Productivity in Higher Ranked States

Vice Chair Lydecker said the next item on the agenda was an overview of the data comparing systems research capacity to higher-ranked states. In March 2022, Board staff presented the Research and Innovation Dashboard to the committee. The committee discussed the System's research capacity and productivity compared to that of other states and requested additional information.

Vice Chair Lydecker recognized Ms. Emily Sikes, Assistant Vice Chancellor for Strategic Initiatives and Economic Development, to present the comparison data to the committee.

Ms. Sikes presented that the State University System (SUS) of Florida is ranked fifth in research expenditures, behind California, Texas, Michigan, and Pennsylvania. The System is close in terms of research expenditures to systems in Michigan and Pennsylvania but has more institutions ranked in the top 100 than do the other systems. Ms. Sikes also elaborated on the previous discussion regarding faculty numbers and pointed out that Florida has fewer faculty and institutions when compared to states such as California and Texas.

Ms. Sikes reported that the System’s funding per faculty member is higher than Pennsylvania and Michigan, demonstrating success in securing federal research funding and in acquiring and retaining high-level faculty. Ms. Sikes concluded the presentation by crediting investments from the legislature and the Governor into the

initiatives to expand research, such as the World Class Faculty & Scholars Program and the Professional & Graduate Degree Scholars Program.

Vice Chair Lydecker asked about the awarding of grants compared to other university systems. Ms. Sikes replied that faculty in the System have demonstrated success in securing larger sums of grant money from federal sources. She also reported that there had been more collaboration across the System for research grants.

4. HiPerGator Implementation Update

Vice Chair Lydecker moved to the next item on the agenda, an update on the HiPerGator implementation. He recognized Dr. David Norton, Vice President for Research at the University of Florida (UF), to present the update.

Dr. Norton reported that HiPerGator went online in early 2021 as the 22nd fastest supercomputer on the planet, the equivalent of an individual's ability to analyze 2,800 movies in one second. He stated that due to this efficiency, HiPerGator has allowed massive data analysis projects to work much faster. He explained that large projects, like an inventory and data analysis of the health of all the orange groves in Florida, benefit from HiPerGator's speed of processing to allow farmers to receive timely updates about when and how to improve the health and productivity of their groves. Dr. Norton focused on a project for which UF received federal funding that uses HiPerGator's processing abilities to predict the prevailing COVID-19 variants that may come to be in 2023.

Dr. Norton emphasized that in these examples, HiPerGator has been leveraged across all SUS institutions and some out-of-state partners. HiPerGator registered over 120 non-UF users.

Dr. Norton introduced Dr. Jim Clark, Provost and Executive Vice President of Florida State University (FSU), to discuss AI research opportunities at his institution.

Dr. Clark described that FSU recently added four new data science degrees to expand its potential to understand AI and machine learning based on cutting-edge curricula in mathematics, statistics, and computer sciences. Dr. Clark expanded on the use of AI in course materials at FSU. Students in some computer science courses have been granted access to the HiPerGator system and have been able to successfully use the system to participate in national competitions. Dr. Clark noted they have learned about managing and using large datasets, and this has given them unique skill sets to help them in the workforce. Dr. Clark also explained that in FSU's emerging technologies course, faculty have found their students' access easy to acquire and manage. They have used various common coding languages, such as Python and C++, to generate algorithms for HiPerGator.

Vice Chair Lydecker recognized Dr. Andres Gil, Senior Vice President for Research and Economic Development and Dean of the University Graduate School at Florida International University (FIU).

Dr. Gil explained that FIU chose to use three pilot projects to test the process of inter-institution collaboration and that the results have been promising. Dr. Gil focused on one project from FIU's Institute of Environmental Studies. Dr. Gil also noted that FIU is comfortable using HiPerGator as a critical point in faculty recruitment, a testament to the collaborative bond between the two universities. He stated that HiPerGator makes FIU and the other institutions partnering with HiPerGator more competitive against other highly ranked university systems while saving costs for all parties involved.

Dr. Gil focused on a collaborative research project regarding climate change and sea level rises within the Institute of Environmental Studies. Dr. Gil elaborated that sea level rise has cascading effects for South Florida and the entire state and that understanding sea level rise is critical for emergency management, environmental science, energy management, and others. He added that the project uses data mining and AI to create a machine learning model that can consider multiple factors to create a more accurate sea level model.

Vice Chair Lydecker asked Dr. Gil and Dr. Clark bout HiPerGator's accessibility at their institutions.

Dr. Gil responded that a framework is in place to request access from UF, describing it as nearly identical to the process of using an internal computing machine at FIU. Dr. Clark echoed the sentiments of Dr. Gil, praising the financial support provided for the interconnections and the accessibility of Dr. Norton to alleviate any concerns.

Governor Levine remarked that the orange industry has dramatically declined in Florida, explaining that major fruit companies like Tropicana have been relying on foreign sources of fruit at a greater rate each year. He praised HiPerGator's potential to protect and recover a significant aspect of Florida's traditional identity.

5. Concluding Remarks and Adjournment

Having no further business, Chair Lydecker adjourned the meeting at 2:08 p.m.

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Charles Lydecker, Chair

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Diego Fermin, Academic and Student Affairs Intern