

***REPORT TO THE UNIVERSITY SENATE***

TO: University Senate

FROM: Fotis Sotiropoulos, Interim Provost

DATE: Monday, December 7, 2020

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***Four Stony Brook Faculty Members Appointed to the Rank of SUNY Distinguished Professor***

The Distinguished Professorship is conferred upon individuals who have achieved national or international prominence and a distinguished reputation within their chosen field. This distinction is attained through extraordinary contributions to, and impact on, the candidate's field of study, often evidenced by significant research and/or creative activity. The following four faculty members were appointed to the rank of SUNY Distinguished Professor:

- Axel Drees, Department of Physics and Astronomy
- Claude LeBrun, Department of Mathematics
- Peter Stephens, Department of Physics and Astronomy
- Stella Tsirka, Department of Pharmacology

***Carlos Simmerling Receives Gordon Bell Special Prize for High Performance Computing-Based COVID-19 Research***

A national award for COVID-19 research in the field of high-performance computing has been bestowed on Carlos Simmerling, Marsha Laufer Endowed Professor of Physical and Quantitative Biology, Professor of Chemistry, and Associate Director of the Laufer Center, along with a team of scientists. The Gordon Bell Special Prize for High Performance Computing-Based Covid-19 Research recognizes “outstanding research achievement towards the understanding of the COVID-19 pandemic through the use of high-performance computing.” Teams nominated are “based on the performance and innovation in their computational methods, in addition to their contributions towards understanding the nature, spread and/or treatment of the disease.” This is the first year the Gordon Bell prize was also dedicated to COVID-19 related research.

### ***Reductions in Admissions for Stony Brook's PhD Programs***

Across all graduate programs, Stony Brook expects about 42 percent of current students to need at least one or two additional semesters to complete their degrees. These delays, along with increased deferments taking us into Spring/Fall 2021, compel the University to act to ensure it can adequately support our current students before committing to new ones. With this in mind, the University will reduce recruitment targets in PhD, DMA, and MFA programs for the 2021-22 academic year by 50 percent.

To ensure that all students have adequate support, and that the University has enough students to assist in teaching at the undergraduate level, programs have been asked to shift open TA lines to support current students. The mechanism will be similar to the one we currently use to set admissions goals for programs. Each program's recruitment targets will be downwardly adjusted by 50 percent each program receives their annual allocations. If a program over-recruits their agreed upon adjusted target, and they make less than the maximum amount of revised authorized offers, the Graduate School would continue to loan programs the TA lines according to its usual "backstopping" program. Programs would pay back the lines in subsequent recruitment years.

While these efforts will provide meaningful support for our students, additional student support may be necessary in programs where TA support for individual students has been exhausted and research funding is uncertain. In these cases, the President's Office has agreed to establish a Presidential Completion Fellowship Program. This fellowship will support finishing doctoral candidates for one semester, with the goal of mitigating financial concerns and giving students time to focus on research and creative activities. The process for making these awards will be communicated in the coming weeks.

### ***Submit Fall 2020 Final Grades by Tuesday, December 22***

Fall 2020 grade rosters will be generated on Monday, December 7, and final exams end on Thursday, December 17. The final deadline for submission of all fall grades is Tuesday, December 22. Timely submission of final grades is particularly important for graduation clearance, and for students to understand their academic progress at the University.

### ***Call for Nominations for the SUNY Chancellor's Award for Excellence in Classified Service***

The Chancellor's Award for Excellence in Classified Service was established by SUNY to give system-wide recognition for superior performance and extraordinary achievement by employees in the Classified Service. Nominations may be submitted by a supervisor, co-worker, or other member of the campus community. The nominee for this award must meet all of the eligibility requirements; the nominator must complete the nomination form and write a narrative statement (less than 500 words) in support of the nominee. Both the nomination form and the narrative statement must be emailed as attachments in Word or PDF format to Maureen Wozniak in the Provost's Office at [maureen.wozniak@stonybrook.edu](mailto:maureen.wozniak@stonybrook.edu) no later than Thursday, January 7, 2021. Students who submit a nomination form must coordinate with the nominee's department to prepare the nomination file.

For guidelines and the nomination form, please visit  
[https://www.stonybrook.edu/commcms/provost/resources/nomination\\_forms.php](https://www.stonybrook.edu/commcms/provost/resources/nomination_forms.php)

### *Fall Provost's Lecture Series*

#### **From PINNs to DeepOnets: Approximating functions, functionals, and operators using deep neural networks for diverse applications**

The Provost's Lecture Series hosted George Em Karniadakis on November 18. Dr. Karniadakis is a Professor of Applied Mathematics at Brown University and Visiting Professor and Senior Lecturer of Ocean/Mechanical Engineering at MIT. He presented a new approach to develop a data-driven, learning-based framework for predicting outcomes of physical and biological systems, governed by PDEs, and for discovering hidden physics from noisy data. He introduced a deep learning approach based on neural networks (NNs) and generative adversarial networks (GANs). He also introduced new NNs that learn functionals and nonlinear operators from functions and corresponding responses for system identification. He demonstrated the power of PINNs for several inverse problems in fluid mechanics, solid mechanics and biomedicine including wake flows, shock tube problems, material characterization, brain aneurysms, etc., where traditional methods fail due to lack of boundary and initial conditions or material properties. He also presented a new NN, DeepM&Mnet, which uses DeepOnets as building blocks for multiphysics problems, and he will demonstrate its unique capability in a 7-field hypersonics application.

This event was co-sponsored by the Department of Applied Mathematics and Statistics and the Institute for Advanced Computational Science.

#### **How Far Is Far Enough and Can Masks Curb the Spread of COVID-19? Insights on Effective Social Distance and Face Covering Gained by Numerical Simulation**

Interim Provost Fotis Sotiropoulos hosted a Provost's Lecture on December 2. To expand the scientific underpinnings of such guidelines, Stony Brook University researchers have developed high-fidelity computational fluid dynamics models to elucidate the underlying physics of saliva particulate transport during human breathing and coughing with and without facial masks. Dr. Sotiropoulos shared insights on effective social distance and face covering gained by numerical simulation on massively parallel supercomputers.

This event was co-sponsored by the Senior Vice President for Health Sciences and Dean of the Renaissance School of Medicine.

#### **COVID Vaccines in Development: Which Ones May Give Us Our Best Shot at Returning to Normalcy?**

The Provost's Lecture Series hosted Stony Brook Medicine's Kenneth Kaushansky, Senior Vice President for Health Sciences and the Dean of the School of Medicine, Bettina Fries, Professor and Chief of the Division of Infectious Diseases, and Sharon Nachman, Professor and Chief of

Division of Pediatric Infectious Diseases, on December 3. This mini-symposium discussed the basic biology of the immune response to foreign invaders, which forms the basis of the development of a vaccine for SARS-CoV2. The second talk focused on current clinical trials of six of the vaccine candidates. The final talk discussed some of the current efforts to develop passive immunity.

This event was co-sponsored by the Senior Vice President for Health Sciences and Dean of the Renaissance School of Medicine.

### ***Planning for Winter, Spring 2021 Terms***

Below is important information about Winter Term and Spring Semester.

### **Blackboard Maintenance and Winter Term**

Blackboard will be offline for necessary maintenance between Dec. 27 and Jan. 4.

Given this planned system downtime, faculty should be particularly attentive to the final grade submission deadline for the fall semester. The deadline to submit grades is Tuesday, Dec. 22.

In addition, faculty who will be teaching during the intersession should upload their syllabi and set up their courses in Blackboard before Dec. 27. This will help to ensure a smooth start to winter term courses and reduce stress on faculty and students.

### **Winter Term Credit Limit**

Students have normally been limited to taking four credits in winter session, but this term they may request approval to increase their credit load to eight credits. For particularly motivated students, this may offer an opportunity to get ahead on requirements or make up credits.

Students must submit a request form, which will be reviewed based on considerations related to student success. More information will be available [here](#).

### **Changes to the Spring Calendar**

To reduce the risks of returning to campus during the height of flu season, the Spring 2021 semester will begin on Feb. 1, a week later than usual. The University has also cancelled spring break in accordance with SUNY guidelines to further reduce the risks associated with travel. Both of these decisions have been made in an effort to reduce the risk of infection for all of our students, faculty, and staff, and are in line with many other universities across the country.

The elimination of spring break means that there will not be the much-anticipated respite in the middle of the semester, and that this may increase the stress and pressure on students and faculty alike. Faculty and instructional staff are invited to consider reducing tests, exams, quizzes, or other assignments in their individual courses around the midpoint of the spring semester. Of course, such a break may not be feasible in all programs or in all curricula, and we

recognize and respect the demands of those programs. If faculty choose to consider such changes in their course(s), they may want to consider the holiday calendar in their planning.

Faculty should also prepare for the possibility of starting the semester remotely. Based on infection rates and advice from state and local health and government officials, Stony Brook may move the first two weeks of classes to remote instruction, regardless of their planned status of in-person or hybrid instructional modes. Faculty should be encouraged to build sufficient flexibility into their schedules to accommodate either eventuality. Courses that will be offered fully remotely, of course, will not be impacted by this possibility.

Any decision about altering the mode of instruction for the beginning of the Spring 2021 semester will be made and shared with campus in January.