

REPORT TO THE UNIVERSITY SENATE

TO: University Senate

FROM: Minghua Zhang, Interim Provost and Senior Vice-President for Academic Affairs
Distinguished Professor in School of Marine and Atmospheric Sciences

DATE: Monday, November 4, 2019

Environmental Research and Education Workshop

All faculty and staff are invited to participate in an upcoming workshop to address our environment's "Grand Challenge" problems. The workshop will take place on Friday, December 6, 2019 at an on-campus location to be announced shortly. The overarching goal of the workshop is to shape our vision for a new campus-wide, interdisciplinary, and environment-focused research and education initiative. The aim is to position Stony Brook as a regional and national leader on key environmental challenges and their solutions, as well as empower our students and researchers to identify and act on future environmental challenges and opportunities.

Interested participants may also propose a 10-minute "Pitch" to be delivered, promoted, and defended at the workshop. To submit a "Pitch," please email a half-page proposal to Ann McElroy, Associate Dean for Research at SoMAS, at anne.mcelroy@stonybrook.edu. Visit <https://www.somas.stonybrook.edu/erec/> for more information about the workshop, including details about "Pitch" requirements. All registrations and proposals must be submitted by Friday, November 22, 2019.

Faculty Invitation to Participate in the December Commencement Ceremony

Faculty participation during Commencement creates a meaningful atmosphere for our graduates and their families. All faculty are invited to participate in the mid-year academic ceremony on Friday, December 20. Any faculty interested in walking in the academic procession or serving as a marshal must wear academic attire. The Office of the Provost will pay for the rental of academic attire for all faculty in departments that report to the provostial area. Orders may be placed at <http://www.herffjones.com/faculty>. Faculty from reporting departments should use the following information when placing their orders:

Customer Number: 31100676111
Order Number: 4327816

All online orders must be placed by **Thursday, November 7**. Any orders placed after this date are subject to shipping charges and an expedited handling fee. Requests for faculty orders after November 7 will be fulfilled using generic black caps and gowns and a generic hood that may not match the color of your Alma Mater. All late requests must be made in person at Shop Red West (Melville Library).

For more information about Commencement, please visit stonybrook.edu/commencement.

November Provost's Lecture Series

Dirac and the Quantum Mechanics Nobel Prizes in 1933

Mats Larsson is Professor of Physics at Stockholm University and director of the AlbaNova University Center in Stockholm, which is a joint scientific center between the Royal Institute of Technology (KTH) and Stockholm University. He serves on the Nobel Committee for physics during 2016-2021. His research interests are laboratory astrophysics and its importance to astrochemistry, free electron laser research targeting small molecules, and, more recently, molecular chirality and chiral interaction. He chairs a Nobel Symposium on Chiral Matter.

Abstract: There has never been a longer peace-time gap in the award of the Nobel Prize in Physics than between 1930 and 1933. The gap did not depend on a lack of candidates, but the significant problems the Nobel Committee had to reconcile the new quantum mechanics with the requirement of the will of Alfred Nobel, who states that the prize should be awarded for a “discovery” or “invention.” Whereas the committee agreed that Werner Heisenberg and Erwin Schrödinger were the obvious candidates, the situation for Paul Dirac was totally different. The 1932 year’s prize had been postponed, and 1933 turned out to be a dramatic year. The discovery of the positive electron (positron), announced in March 1933, was a game changer, and finally raised Dirac to where he belonged: an equal to Heisenberg and Schrödinger. Based on the original documents from the Nobel archive, the lecture will describe Dirac’s dramatic road to a Nobel Prize in Physics.

This event takes place on Friday, November 22 at 5:45 PM at the Simons Center for Geometry and Physics Della Pietra Family Auditorium . It is co-sponsored by the Department of Physics and Astronomy and the Simons Center for Geometry and Physics.

Stony Brook Faculty Receive NSF Funding to Research Quantum Information Science

Stony Brook has been awarded a Conceptualization Grant (CG) from the National Science Foundation (NSF) Quantum Leap Challenge Institutes (QLCI) program. The 12-month award provides \$149,625 in funding to support the development of a Challenge Institute (CI) proposal to be submitted in the next round of funding, which is aimed at establishing US leadership in Quantum Information Science (QIS). Dr. Eden Figueroa, Associate Professor in the Department of Physics and Astronomy with a joint appointment at Brookhaven National Laboratory (BNL), led the development of Stony Brook’s CG proposal. The CG proposal focused on the expansion of the SBU/BNL research related to quantum communications and networking, with specific emphasis on the development of three research thrusts: quantum algorithms and programming, quantum communication and long distance networking, and quantum materials and devices for quantum computing.

CELT Celebration of Teaching Faculty Awards

The Center for Excellence in Teaching and Learning hosted the Celebration of Teaching Faculty Awards on Thursday, October 24. The event serves as an annual recognition of exceptional teaching at Stony Brook University. This year's recipients were:

Marvin O'Neal, Rebecca Garcia, and Deborah Spikes, Excellence in Teaching with Technology in a Face-to-Face Course

Sarah Jourdain and Madeline Turan, Excellence in Teaching with Technology in a Hybrid/Blended Course

Deborah Zelizer, Outstanding Assessment Award

SUNY Empire Innovation Program (EIP) Proposals

Four EIP proposals have been submitted to SUNY. They are in the following areas:

- New Treatments for Addiction using Precision Pharmacology
- Resilient Communities and Critical Infrastructure: Protecting Groundwater Resources
- Neuroimaging of Movement Disorders
- Excellence in Cancer Nanotechnology and Nanomedicine (joint with University of Buffalo)