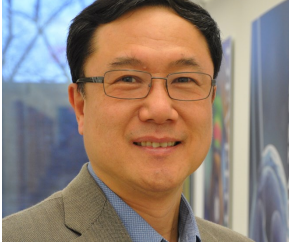




## SPRING 2023 NEWSLETTER

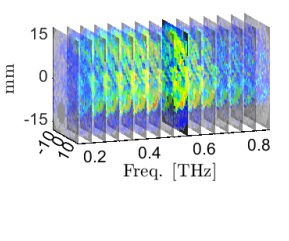
### CHAIR'S MESSAGE



**YI-XIAN QIN**  
Professor and Chair

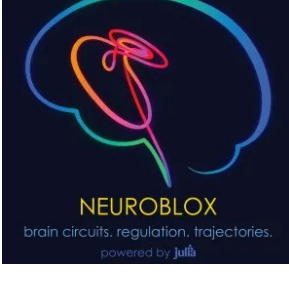
Greetings from [Stony Brook University BME](#)! The Spring Semester at Stony Brook University (SBU) was filled with exciting fulfillments and delightful celebrations. Stony Brook University's naming as a SUNY Flagship University was followed by significant milestones, such as the [Simons Foundation's historic \\$500 million endowment gift](#) to the university and SBU's selection as the anchor institution to lead the [\\$700 million Climate Exchange](#) research center on New York City's Governor's Island. In the BME Department, Dr. Lilianne Mujica-Parodi received \$6.2 million in research funds and serves as the inaugural Baszucki Family Foundation Endowed Chair. New areas of development are unfolding daily, from nano-based tissue engineering to making exploration of outer space safe for mankind. Our faculty and students received various awards and recognitions, e.g., Yiming Wan received the President's Distinguished Doctoral Student Award, two faculty members were elected into AIMBE, and much more (award details are listed in the Newsletter). We are immensely proud of continued developments at SBU Biomedical Engineering and translation of their impacts in the clinic and beyond.

### RESEARCH NEWS



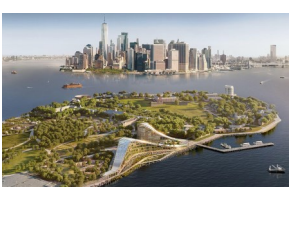
#### New non-invasive method to assess burns shows high accuracy

**HASSAN ARBAB's** group, in collaboration with Steven Sandoval (Burn Center) and Adam Singer (Emergency Medicine), created a new method that couples terahertz time-domain spectroscopy and machine learning to non-invasively assess burn injuries. The method, published in *Biomedical Optics Express*, may help non-specialists quickly and clearly assess the treatment plan for burn patients. [More>](#)



#### Neuroblox featured in Stony Brook University Magazine

Neuroblox, a software platform developed by **LILIANE MUJICA-PARODI's** team to model neural circuits in the brain and their regulation, was featured in Stony Brook University Magazine. Inspired by the popular immersive Roblox platform, Neuroblox was funded by former's founders, David and Jan Ellison Baszucki. Neuroblox team members include HELMUT STREY and collaborators from MIT and Dartmouth College. [More>](#)



#### Stony Brook University to anchor New York Climate Exchange

New York City and the Trust for Governors Island selected Stony Brook University to build and lead the New York Climate Exchange, bringing together other universities, researchers, non-profits, community leaders, entrepreneurs and businesses to develop equitable climate solutions for New York City and the world. Stony Brook BME plays a potential role in bringing biotechnology solutions to climate change challenges. [More>](#)

### FACULTY NEWS



#### Peña appointed as Associate Professor of Practice and Director of Life Sciences Innovation and Entrepreneurship

**LOUIS A. PEÑA** was named as Director of the Center for Biotechnology's new Program in Life Sciences Innovation and Entrepreneurship. Peña was also appointed as Associate Professor of Practice in Biomedical Engineering and Business, where he will leverage his extensive career and leadership roles in the biotechnology industry and academia to steward Stony Brook University's Advanced Graduate Certificate in Life Science Innovation and Entrepreneurship. [More>](#)



#### Bluestein appointed as SUNY Distinguished Professor

**DANNY BLUESTEIN** was appointed to the rank of Distinguished Professor by the State University of New York (SUNY) Board of Trustees for 2022-2023. The position recognizes achieving national or international prominence and a distinguished reputation within the field through significant contributions to research and scholarship. Bluestein is recognized for his contributions to cellular biomechanics, mechanical circulatory support, and multiscale models of clot formation. [More>](#)



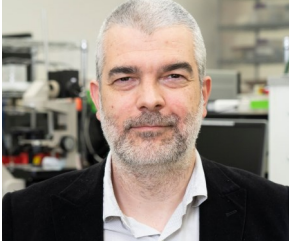
#### Mujica-Parodi named inaugural Baszucki Endowed Chair for Metabolic Neuroscience

**LILIANNE MUJICA-PARODI** was named as the inaugural Baszucki Endowed Chair for Metabolic Neuroscience in recognition of her outstanding track record of advancing cutting-edge research in this field. This position was established by Stony Brook University in partnership with the Baszucki Family Foundation, which supports research and treatment for metabolic and mental health disorders.



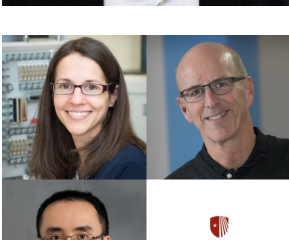
#### Pan and Du receive NIH CEBRA award for developing AI-guided microscopy tool to study brain dysfunction

**YINGTIAN PAN** and **CONGWU DU**, with collaborator Haibin Ling (Computer Science), received an NIH Cutting-Edge Basic Research Award (CEBRA), entitled "Imaging neural, astrocytic and vascular synchronization to assess cocaine's effects on mPFC." The 2-year, \$416,248 NIDA R21 award will be used to develop novel AI-guided integrated fluorescence/doppler microscopy for simultaneous imaging of neuronal, astrocytic, and microvascular activity to study brain dysfunction, such as drug addiction.



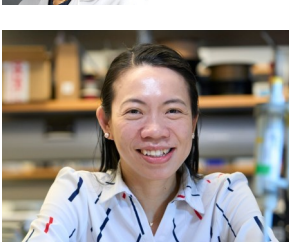
#### Brouzes establishes collaboration with the Tokyo Institute of Technology

**ERIC BROUZES** established a collaboration with Masahiro Takinoue at Tokyo Institute of Technology's School of Computing as part of the International Research Frontiers Initiative. During his stay in Tokyo for the Spring 2023 semester, Brouzes is working with Takinoue on the control of DNA droplets based on microfluidics. [More>](#)



#### Three faculty awarded Stony Brook University Seed Grants

**CHRISTINE DELORENZO**, **CLINTON RUBIN**, and **JUN WANG** received Spring 2023 Seed Grant awards from the Stony Brook University Office of the Vice President for Research. DeLorenzo's award studies the gut microbiome's role in major depressive disorder. Rubin studies how low intensity vibration mitigates complications of Duchenne Muscular Dystrophy. Wang researches kidney disease using advanced single-cell proteomics. [More>](#)



#### Chan honored for outstanding service by Town of Brookhaven

**MEI LIN (ETE) CHAN** received a "Special Commendation for Outstanding Service" at the Town of Brookhaven's 37th Annual Women's Recognition Awards Ceremony. Chan received her award in recognition of her efforts to encourage middle and high school students to pursue STEM careers. DIY Prosthetics is an outreach program Chan recently developed to introduce K-12 students on Long Island to engineering design. [More>](#)

### STUDENT/ALUMNI NEWS



#### Biomedical engineering students provide holiday cheer

Students from the BEAR Vertically Integrated Project team, and Stony Brook's BMES, IEEE, and AEMB chapters joined forces to adapt toys for children with disabilities. The toys were delivered to Stony Brook Children's Hospital, United Cerebral Palsy, Angela's House, and AHRC Suffolk in time for the holiday season. Their efforts were coordinated by Mei Lin (Ete) Chan. [More>](#)



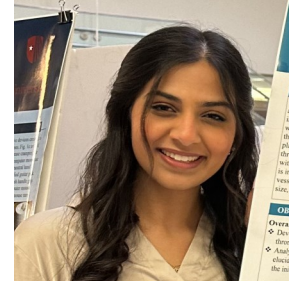
#### Wang wins 2nd place paper award at 2022 IEEE Medical Imaging Conference

**ZIPAI WANG**, a Ph.D. student supervised by Amir Goldan, received the 2nd place Christopher J. Thompson Best Student Paper Award at the 2022 IEEE Medical Imaging Conference in Milan, Italy. He presented a prototype cost-effective Prism-PET brain scanner that is TOF-DOI capable and enables high-resolution quantitative imaging of small but important brain structures. [More>](#)



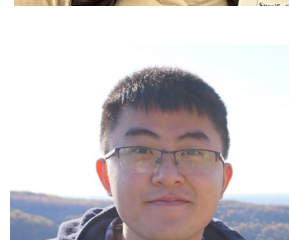
#### Sreenivamurthy receives 2023 CMBE Graduate Student Travel Award

**SAI SREENIVAMURTHY**, a Ph.D. student supervised by Donghui Zhu, received a Graduate Student Travel Award for her presentation at the 2023 Cellular and Molecular Bioengineering (CMBE) Conference held in Indian Wells, CA. She presented a poster and lightning talk on woven bone organoids as a therapy model for in vivo bone regeneration. [More>](#)



#### Bansal wins Research Poster Presentation award at NEBEC 2023

**ISHANI BANSAL**, an undergraduate student mentored by Danny Bluestein and Jawaad Sheriff, won the Research Poster Presentation award at the 49th Northeast Bioengineering Conference (NEBEC 2023) in Philadelphia, PA. Ishani's research describes platelet kinematics during the early stages of adhesion and is used to validate multiscale models of clot formation.



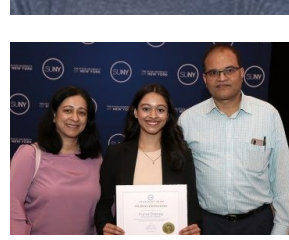
#### Wan receives President's Award to Distinguished Doctoral Students

**YIMING WAN**, a Ph.D. student mentored by Gabor Balaszi, received the 2023 President's Award to Distinguished Doctoral Students, which acknowledges Yiming's important contribution to academic excellence at Stony Brook University. Yiming's research uses robust quantitative synthetic biological approaches to unravel the landscape of a viral transcriptional factor, BACH1, in the context of triple negative breast cancer.



#### Jamison selected for Provost's Award for Academic Excellence

**NATHANIEL JAMISON**, a graduating BME senior, was selected to receive the 2023 Provost's Award for Academic Excellence. This award is given to graduating seniors who have shown true academic excellence in the classroom and through research and creative activities, building a stronger academic community.



#### Sheno wins SUNY Chancellor's Award for Student Excellence

**PURVA SHENO**, a graduating senior University Scholar majoring in BME, received the Chancellor's Award for Student Excellence—the highest honor bestowed on State University of New York (SUNY) students who have best demonstrated academic excellence and leadership. [More>](#)



#### Alum Hassan's shoe brand featured in Forbes

**RAZA HASSAN PH.D.** (BME '20) was featured with IAMBIC co-founder Maeve Wang in *Forbes*. The National Science Foundation-backed IAMBIC makes AI-driven precision fit sneakers to provide comfortable footwear for the 1 in 4 customers left out by the standard sizing. Hassan co-founded IAMBIC in 2020 and currently serves as its Chief Technology Officer. [More>](#)

### About Stony Brook BME

The Department of Biomedical Engineering was founded in December 2000, jointly established by the College of Engineering and Applied Sciences (CEAS) and the Renaissance School of Medicine (RSOM) at Stony Brook University. The BME department currently has 22 core and approximately 50 program faculty members. The mission of the Department is to fully integrate the cutting edge of engineering and physical sciences with the state-of-the-art biology to advance human health. The ABET-accredited undergraduate program serves approximately 500 BME majors. The Graduate Program in BME has approximately 100 MS and doctoral students. The BME Department enjoys close collaboration with the facilities and faculty at the newly established Institute for Engineering-Driven Medicine (IEDM), Center for Biotechnology, Brookhaven National Laboratory (BNL), and Cold Spring Harbor Labs (CSHL).

#### More about Stony Brook BME:

- [BME core faculty](#)
- [Program faculty](#)
- [Research areas](#)
- [Undergraduate program](#)
- [Ph.D. & M.S. program](#)
- [Affiliated labs and Facilities](#)

#### Contact:

Biomedical Engineering Department  
Stony Brook University  
Bioengineering Bldg.  
Stony Brook, NY 11794-5281  
**Phone:** 631-632-8371  
**Fax:** 631-632-8577

