



# BIOMEDICAL ENGINEERING

COLLEGE OF ENGINEERING AND APPLIED SCIENCES AND RENAISSANCE SCHOOL OF MEDICINE



## Fall/Winter 2024 Newsletter

### CHAIR'S MESSAGE



**YI-XIAN QIN**  
Professor and Chair

Dear BME Colleagues, Alumni, and Friends,

The [Biomedical Engineering \(BME\) Department at Stony Brook University](#) extends its warmest greetings! We reflect on 2024, truly a year of exceptional growth and accomplishment for our department and university. The historic \$700 million endowment plus match from the Simons Foundation is a transformative milestone, highlighting SBU's leadership in higher education as a Flagship University in the State University of New York system. The BME department is thrilled to welcome two new faculty members, Dr. Eric Josephs (Associate Professor) and Dr. Sufeng Zhang (Assistant Professor), who bring expertise in nanotechnology, genetic engineering, nanomedicine, tissue engineering, biomaterials and regeneration to our growing team. This year marks 25 years since we established the first Biomedical Engineering Department within the State University of New York system, along with its undergraduate and graduate programs. Our research activities are kept strong, particularly in the areas of bioimaging and computational analyses closely connected to human disease diagnoses and regeneration, such as the brain, eye, and cardiovascular systems, biomaterials and nanotechnology, bone and musculoskeletal connective tissue repair and regeneration, and computational biology and generic and immune-engineering. Our faculty research expenditures average an impressive \$500K per full-time equivalent (FTE). Our BME faculty's achievements nationally recognized, including awards from the Biomedical Engineering Society, fellowships from AIMBE and ASME, and Stony Brook University and its colleges and schools. Our students continue to excel, publishing first-author papers and earning accolades, such as Marina Fandaros receiving the President's Distinguished Doctoral Student Award. Alumni success stories further highlight our impact, including Dr. Raza Hassan's recognition as one of TIME magazine's Best Inventors. Meanwhile, our dedicated staff and faculty foster a collaborative and

inclusive environment, ensuring students receive hands-on mentorship in classrooms, laboratories, and design settings. The department is poised for even greater growth and innovation, with additional faculty joining our team, including an anticipated new member in 2025. As we expand, we remain steadfast in our commitment to fostering diversity, equity, and inclusion within our department. We take great pride in maintaining a 50:50 female-to-male ratio among our undergraduate students, a testament to our dedication to creating equitable opportunities for all.

The BME Department at SBU continues to drive forward its mission of excellence, making meaningful impacts from the laboratory to the clinic and beyond. We are enthusiastic about the bright future ahead for our community and look forward to building upon the strong foundation we have established.

Best wishes for a successful and inspiring 2025!

## SBU BME by the Numbers

<b>\$ 76M</b> New <b>Engineering-Driven</b> <b>Medicine Building</b> in construction	<b>18.9:1</b> Student:Faculty Ratio	<b>51%</b> <b>Students</b> are <b>Women</b>	<b>1/3</b> Faculty Members are Women
---	---	---	--

### NEW FACULTY



#### **Eric Josephs, Ph.D., SUNY Empire Innovation Associate Professor**

**ERIC JOSEPHS** joined SBU BME in Fall 2024 as a SUNY Empire Innovation Associate Professor. His research focuses include engineering molecular biotechnologies to make gene therapies safer, more effective, and more equitably available. He is also interested in understanding molecular mechanisms of genetic mutation and DNA repair, as well as synthetic biology. Josephs was previously a faculty member in the Department of Nanoscience at University of North Carolina - Greensboro. [More>](#)



#### **Sufeng Zhang, Ph.D., Assistant Professor**

**SUFENG ZHANG** joined SBU BME in Fall 2024 as an Assistant Professor. Her research focuses on engineering biomaterials to develop new therapies that target inflammation and promote healing gastrointestinal diseases, particularly inflammatory bowel disease. Zhang was previously an Instructor at Brigham and Women's Hospital and Harvard Medical School, following her postdoctoral research at MIT. [More>](#)

## FACULTY NEWS



### Qin receives 2025 BMES CMBE Christopher Jacobs Award

**YI-XIAN QIN** was selected to receive the 2025 Biomedical Engineering Society (BMES) Cellular and Molecular Bioengineering (CMBE) Christopher Jacobs Award for Excellence in Leadership. Qin delivered a lecture and received the honor at the 2025 BMES CMBE Conference in Carlsbad, CA in January 2025. The annual award honors the memory and contributions of CMBE co-founder Christopher R. Jacobs and recognizes individuals who demonstrate exceptional leadership excellence within the Cell and Molecular Bioengineering community. Qin is among pioneers who discovered bone's ability to rapidly adapt to its functional environment, bone fluid flow, and regeneration to dynamic signals. He has published more than 180 peer-reviewed articles, and related books and chapters, as well as several U.S. patents. [More>](#)



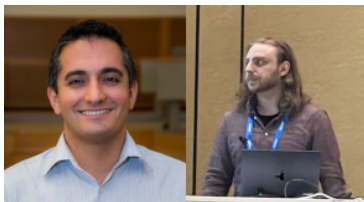
### Rubenstein awarded GAANN fellowship program renewal

**DAVID RUBENSTEIN** received a renewal of his award from the U.S. Department of Education's Graduate Assistance in Areas of National Need (GAANN) Program. The 3-year, \$850k program provides the BME Department with the opportunity to provide graduate research and teaching fellowships to talented, financially-disadvantaged Americans and Permanent Residents. The initial award supported 15 unique students from all disciplines within the BME graduate program.



### Brouzes receives Prevent Cancer Foundation grant for POC cervical cancer test

**ERIC BROUZES** was awarded a 2-year, \$100k award from the Prevent Cancer Foundation to develop an innovative point-of-care test to screen for cervical cancer. The proposed test uses a single, non-invasive digital microfluidic device to identify precancerous and cancerous lesions by quantifying human papillomavirus (HPV) E6/E7 mRNA. The test is specifically intended for low-resource settings and provides a definitive result without needing additional assays or triage. [More>](#)



### Patent awarded to Arbab and Harris

**HASSAN ARBAB** and Ph.D. student **ZACHERY HARRIS** were awarded a patent for "[Terahertz Three-Dimensional Spectral Scanner Apparatus and Method of Using Same.](#)"

## STUDENT/ALUMNI NEWS



### BME graduate student talents on display at 30th Annual Research Day

BME held its 30th annual Graduate Student Research Symposium to showcase the research highlights of students in the Master's and Doctoral programs. Approximately 75 people attended the event held



in the Medical and Research Translation (MART) building. Oral presentation winners included Sai Aishwarya Sreenivasamurthy (Faculty Choice) and Chris Ashdown (Student Choice). Poster presentation winners included Zeming Kuang (Faculty Choice) and Xiangyi Wu (Student Choice). [More>](#)



### **BME students brighten the holidays for children with disabilities**

Student groups 3D PATH (Printing and Assistive Technology for Health) and VIP BEAR (Vertically Integrated Projects in Bioengineering Education, Application, and Research) teamed with local nonprofits to adapt donated toys to make them more accessible for children with disabilities. The event, co-organized by **MEI LIN CHAN**, included partners from Makers Making Change, The Viscardi Center, Sartorius, Johnson & Johnson MedTech, and Regeneron Pharmaceuticals. [More>](#)



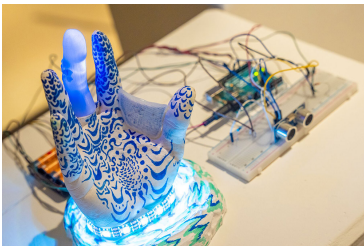
### **Allam's mural artwork recognized by School of Marine and Atmospheric Sciences**

**NORAH ALLAM** (BE '26), a double major in BME and applied mathematics and statistics (AMS), was honored by School of Marine and Atmospheric Sciences (SoMAS) Dean Paul Shepson for her lifelike [octopus mural](#) she painted at SBU's Endeavor Hall. The project, which took 400 hours to complete, was unveiled in partnership with the Campus Beautification Committee in Spring 2024 after a suggestion from Allam's faculty mentor, **MEI LIN CHAN**, who promotes collaborative projects in Science, Technology, Engineering, Arts, and Mathematics (STEAM). [More>](#)



### **Chan co-hosts "Color of Your Parachute" career-development event**

**MEI LIN CHAN**, as a Faculty Fellow, co-hosted a career launch event for undergraduate students with Student Engagement & Activities (SEA). "Color of Your Parachute" featured presentations from several education, career, and research departments on campus, as well as fun and interactive activities to promote participants' awareness of career alternatives, skills, and development resources. [More>](#)



### **Chan co-organizes collaborative STEAM exhibit**

**MEI LIN CHAN** and Nobuho Nagasawa (Department of Art) hosted their third collaborative "STEM+Art = STEAM" exhibition at the Staller Center at SBU. The event highlighted the intersection of art and science, following the theme "Archi.texture: Becoming Bionic." Seven teams of students, including BME majors, showed off projects featuring the human body and provided a glimpse into their interdisciplinary process. [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 26 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. Programs](#)

[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



Stony Brook University

Want to change how you receive these emails?  
You can [update your preferences](#) or [unsubscribe](#)

