

## DEPARTMENT OF BIOENGINEERING

#### Spring 2024 Newsletter



## **Upcoming Event:** 2024 Bioengineering Research Day

This year, the Bioengineering Research Day event, planned by members of the BioE Graduate Student Association, focuses on the theme of Academia, Industry, and the Clinic, aiming to inform on the intricate dynamics of the healthcare ecosystem where academic research, industry, and clinical practice intersect.



Thursday March 21st 9AM-5PM HST

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Where Engineering Innovation Impacts Health

# Faculty Making an Impact

### Welcoming our New Faculty Member: Dr. Taneka Jones

Dr. Jones is a steminist with a multifaceted background spanning science and engineering education, tissue engineering research and research consulting. Jones' interests include utilizing disruptive technologies for translational research, tissue engineering, regenerative medicine, medical devices, developmental biology and drug discovery applications. The BioE department is excited to partner with Dr. Jones in developing strategic relationships between academic, government, and industry stakeholders.



#### LEARN MORE ABOUT JONES HERE

# **Faculty Highlights**

- Tomas Gonzalez Fernandez received the Career Development Award from the American Society for Cell and Gene Therapy (ASGCT).
- Lesley Chow received the Mid-Career Award from the Society for Biomaterials.
- Niels Holten-Andersen joined members of the Rossin College at the DaVinci Science Center of Allentown, PA, to support its "Women in Science & Engineering" days. Holten-Andersen provided a creative presentation, "Printing like a Mussel".



- Dhruv Seshadri received funding from Lehigh's Global Partnerships and Strategic Initiatives Office to explore collaborative opportunities in India for research on wearable devices and digital health technologies. Dhruv also received the Research Career Development Award from the Dysphagia Research Society.
- Svetlana Tatic-Lucic was recently named Chair of Lehigh University's department of Electrical and Computer Engineering. We are thrilled to note that Tatic-Lucic is the first female chair in the department's 135 year history!

# Stronger Together

## LU e-NABLE Partners with Spanish NGO

Students in Lehigh's Enabling the Future organization (LU e-NABLE) are collaborating with Ayúdame3D, a Spanish NGO which designs, manufactures and provides low cost, body-powered prosthetic arms to those in need around the globe, free of charge. LU e-NABLE members, advised by Profs. Susan Perry and Tomas Gonzalez-Fernandez, are working to expand options for Ayúdame3D and its 3D printing network, by developing an externally-powered, upper limb prosthesis which they hope will provide improved functionality at a much lower cost than is currently possible.

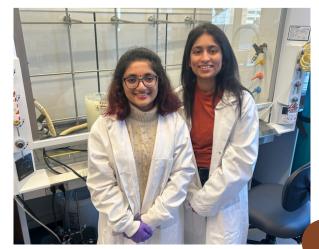




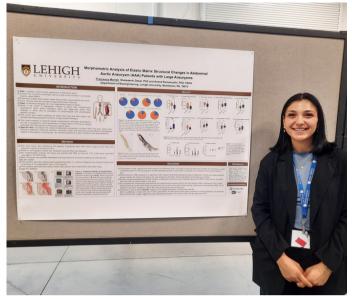
### SRM Research Exchange Students Have "Transformative" Experience

The partnership between Lehigh BioE and SRM Institute of Science and Technology got off to a great start this fall as the first cohort of undergraduate student researchers from the Chennai, India based institution arrived in Bethlehem. Mitali Mahajan, Ritika Mishra, and Sivani Ramachandran performed independent research in various labs in fulfillment of the undergraduate research project requirement of their home institution. And as part of the LU BioE/SRM Integrated BS/MS program agreement, we are excited to welcome these students back to campus in the future as Lehigh Bioengineering MS students!

"As an international exchange student at Lehigh University, working in Dr. Jagota's lab was transformative. The friendly atmosphere and support from the team enhanced my learning, while the kindness of the Lehigh community and access to abundant resources made my experience unforgettable. I'm eager to return for my Master's program because of the incredible environment and the invaluable experiences gained here." -Sivani Ramachandran



## **BioE and ChBE Engage** In Local Volunteering



In the lead-up to Thanksgiving, the Bioengineering and Chemical Engineering departments successfully gathered over \$500 in food donations for the Central Moravian Food Pantry, making a significant contribution to providing assistance to those facing food insecurity.

"I consistently engage in collecting food donations throughout the semester, aiming to make bi-weekly contributions to the cause. The food pantry is actively striving to enhance the nutritional quality of the provisions they offer, focusing on reducing sodium and sugar content. This emphasis on healthier options holds long-term benefits for individuals in need." **-Francesca Morrell** 

#### Student BMES Club Promotes STEM in Bethlehem

Members of Lehigh's Student BMES club organized a science/engineering outreach event for about 20 elementary school students at the Boys & Girls Club of Bethlehem, recently. "It is a really nice way to engage the students in a hands-on activity, while being able to give back to the Bethlehem community. It gives the students a chance to ask us questions about being in college and allows us to share our love for science in a way that excites them and keeps them wanting to learn more. This has been one of favorite activities of the BMES group because it allows us to design a fun craft and/or demonstration for the kids - for us seeing them excited is what makes us happy." -Kamryn Li, '24, BMES co-president



# Undergraduate News

### **BioE & BioC Students Visit the US** Naval Academy

**Isabella Federico** (Bioengineering) and **Norman Zvenyika** (BioComputational Engineering) were among the Lehigh students selected to attend the 2023 Naval Academy Science & Engineering Conference in Annapolis, Maryland. During the conference, focused on *Genetics: Understanding and Addressing Today's Challenges,* Zvenyika presented his undergraduate research, performed under the mentorship of Prof. Xuanhong Cheng.



READ MORE

# Graduate News

## **Degrees Granted**

This semester 5 doctoral degrees and 4 masters degrees were conferred to Bioengineering graduate students.

Congratulations to **Dr. Seonghan Kim, Dr. Suraj Bastola, Dr. Simran Dayal, Dr. Xiaochen Qin,** and **Dr. Anthony Wu** for successfully passing their doctoral dissertations! Suraj is now working as a research scientist with QPS Holdings and Xiaochen is working as a Field Application Scientist/Engineer with Curioux Biosystems.

Congratulations also go out to **Kevin Callahan**, **Avani Pisapati**, **Alicia Stein**, and **Muhammad Qureshi** for receiving a master in Bioengineering! We are excited for our graduates in their next adventure.







# **Expanding Training with Industry Experience**

Doctoral student **Esraa Ismail** has taken a co-op position in the Human Systems group at Regeneron Pharmaceuticals for the 2024 Spring and Summer semesters.

# **Keeping up with Trends in Adhesion Science**

Doctoral student **Matthew Ziarnik** presented a poster at the 2024 Adhesion Society Conference in Savannah, GA.

# Alumni Updates

### Alumni Provide Valuable Career Development Advice

Over fourteen BioE alumni gathered for an Alumni Career Panel event organized by the Student BMES club. During the event, the alumni, representing a variety of fields including research & development, prosthetic device design, engineering management and manufacturing, shared insight from their own post-grad experience and offered advice to current BioE students on building technical skills, networking and career exploration. Students greatly appreciated the opportunity to learn from the wealth of experience of the panelists and are already looking forward to planning the next event - More Alumni Volunteers Are Welcome!





# **Alumni Connections**

- Keep your eyes out for BioE alumni while travelingyou never know who you might run into in the airport! James Feindt '14, a Senior Consultant at Oliver Wyman, was recently spotted at PHL.
- Nick Hirdt '17, a Product Design Engineer at Proprio in Seattle, WA graciously provided a facility tour for BioE faculty & students in town for the annual BMES conference.
- Bonaire Berry '18 successfully defended her doctoral dissertation from George Washington University in Engineering Management, while working full-time as a Senior R&D Engineer at Medtronic in Boulder, Co.
- Noelle Jacobsen '18 successfully defended her doctoral dissertation in Biomedical Engineering from the University of Florida and is now a postdoctoral fellow at Imperial College London.
- Lindsey Kyser '17, an Operations Manager at Merck, successfully completed her MBA at Fox School of Business at Temple University.





- **Caroline Ferguson '23G** is a Postdoctoral Research Fellow at the University of Connecticut, Institute of Materials Science.
- Ana Vargas '20, a doctoral student at Northeastern University, was awarded a Predoctoral Fellowship from the American Heart Association.
- Scott Grant '17, '18G (HSE) started a new position as Associate Director of Business Development at Merck.
- Liam Dow '18 started a new position as Biomaterials Engineer at Reel Foods.
- Matthew Feyro '21 accepted new position as Senior Analyst at Health Advances.
- Caroline Conrad '17 started a new position at Brightside Health as Senior Product Manager.

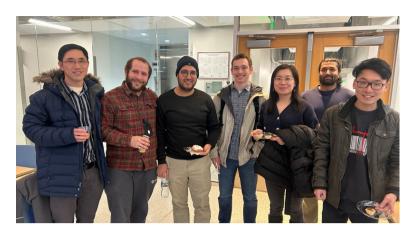
### Philadelphia Area Alumni & Industry Mixer Strengthens Connections



March started out strong as Philly-area BioE alumni, industry partners; and current Lehigh students, faculty and staff converged in King of Prussia for an Alumni & Industry mixer. It was great to reestablish ties and to create new connections! Thank you to all those who attended, and keep your eye out for future events in other locations!



# Fun Times!



#### **Graduate Students Heat up the Ice**

The holiday celebrations didn't end with the department party, but continued through the following week with a graduate ice skating event at the Bethlehem Steel Stacks.

SEE MORE PICTURES HERE

#### Department Spreads Holiday Cheer

The BioE department gathered to celebrate the holiday season and the end of another successful semester. The turnout and participation in this activity was wonderful (as proof seen in the limited leftovers).

SEE MORE PICTURES HERE



#### Support Lehigh BioE:

Gifts from our generous friends enrich learning opportunities for students and strengthen the teaching & research capabilities of our department.

GIVE NOW

#### BioE Alumni: Want to be in the Next Newsletter?

Share your updated contact info, professional info (company and position), and any other exciting news/pictures with us.

> <u>SHARE YOUR</u> <u>NEWS HERE</u>

#### **Contact Us:**

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#### **Connect With Us On Social Media:**

