

SLU BIOMEDICAL ENGINEERING NEWSLETTER



SAINT LOUIS UNIVERSITY

DEPARTMENT OF BIOMEDICAL
ENGINEERING

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BME GRADUATE STUDENT WINS SSE EXCELLENCE IN SERVICE AWARD

Rebekah Boos, a Ph.D. student in Biomedical Engineering, has been awarded the School of Science and Engineering's Graduate Student of Excellence in Service Award. In addition to her research in **Dr. Silviya Zustiak's [Soft Tissue Engineering Lab](#)**, Rebekah actively represents the Biomedical Engineering Department in the Graduate Student Association (GSA) and serves on its finance committee. Her leadership in organizing events for BME graduate students, and her enthusiastic participation in outreach programs that introduce high schoolers



to biomedical engineering, reflect her strong commitment to service and her dedication to the SLU scientific community.

NATIONAL ACADEMY OF INVENTORS CONFERENCE



Drs. **Silviya Zustiak** and **Koyal Garg** had an incredible time attending the National Academy of Inventors conference, where they were inducted as Senior Members of the Academy along with 165 other inventors from industry and academia across the nation. The theme of the conference was "Forward Together: Innovating with Purpose" and was held in Atlanta, GA, on June 24-26. The NAI includes U.S. and international universities, governmental agencies, and non-profit research institutes with over 4,600 individual members.

SLU BME AT SLU SUMMER SHOWCASE

On Friday, July 11th, BME Professor and Department Chair, **Dr. Gary Bledsoe**, represented the BME department during the SLU Summer Showcase. Over 200 families registered for the free event. Prospective students enjoyed a full day on campus, student panels, and the chance to explore every undergraduate major.



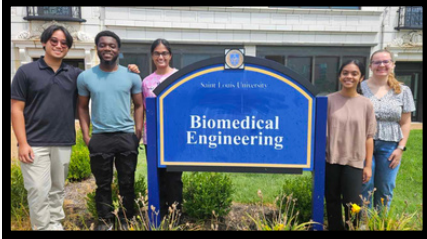
As department chair, Dr. Bledsoe was well equipped to answer questions and engage with potential BME undergraduates!

BME SUMMER SEMINAR



SLU undergraduate students (and a visiting Harris Stowe University UG student) working in BME labs this summer had the opportunity to present on the research they contributed to during the BME Summer Seminar. Check out the impressive topics below!

Characterization of Super-Lubricious Copolymer Coated Hydrogel Microspheres for the Treatment of Knee Osteoarthritis - **Hannah Johnson** and **Tatarini Karnati**, Zustiak Lab



Development of a Tissue-Engineered Periosteum - **Maxwell Adinkra** (Grad Student), Ephraim Agyei (HSUS), and **Paul Sanchez**, Case Lab



Evaluation of a Confinement Bioreactor to Improve the Development of Collagen-Enriched In Vitro Tissue Models - Gauri Menon (SLU Health Sciences), Case Lab

Sensitivity to Tactile Locations of the Upper Limbs Revealed by Electroencephalography - **Arjun Swaroop**, Gai Lab

ENGINEERING UNLEASHED WORKSHOP

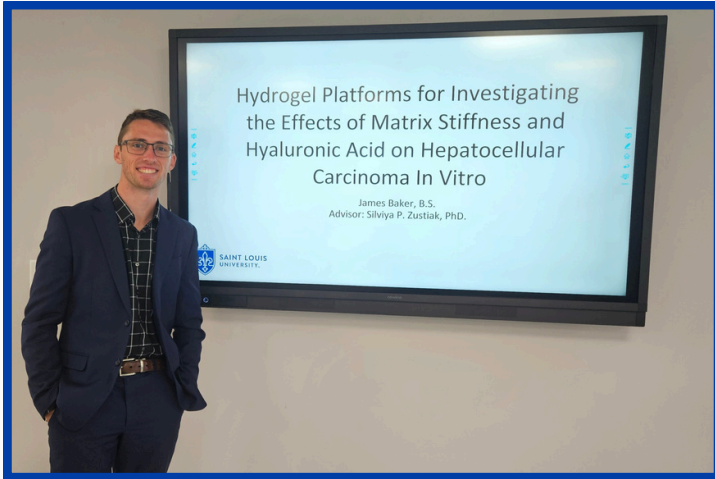
BME Associate Professor, **Dr. Natasha Case**, attended the Engineering Unleashed Faculty Development National Workshop from June 16-19 in Leesburg, VA. This workshop brought together faculty members from universities that participate in the network to stimulate faculty thinking and intentionality regarding new venues for disciplinary research. The workshop examined how well-designed research experiences and activities can increase learning opportunities for undergraduate students and add value to faculty research endeavors. During the workshop, participants completed a role-



playing activity about curiosity. The different hats that are being worn by workshop members (magician, pirate, detective, wizard) represent different types of curiosity.

MASTER'S THESIS DEFENSE

Congratulations to **James Baker, M.S.** from **Dr. Zustiak's lab**, who successfully passed his master's thesis defense on July 8th! His thesis was titled, "Hydrogel Platforms for Investigating the Effects of Matrix Stiffness and Hyaluronic Acid on Hepatocellular Carcinoma in Vitro." James is starting his PhD in Chemical Engineering at the University of Colorado, Boulder in the fall. Good luck, James!



COLLABORATION BETWEEN SLU BME & SLU CAM BENEFITS LOCAL HIGH SCHOOL STUDENTS

Students from Lafayette High School showcased their cutting-edge medical innovation, *InstaCast*, at the Missouri HOSA–Future Health Professionals state competition and placed 1st in the Medical Innovation category. SLU BME partnered with SLU's Center for Additive Manufacturing (SLU CAM) to help design and manufacture the InstaCast mold. In addition, WashU worked to help refine the resin formulation. InstaCast is a portable, rapid-deployment orthopedic casting system engineered for emergency scenarios. It features a self-curing resin matrix activated on-site to provide immediate stabilization of musculoskeletal injuries. The device integrates Near Field Communication (NFC) technology, all encased in a lightweight, waterproof, and ergonomically designed shell optimized for field use and rapid application.



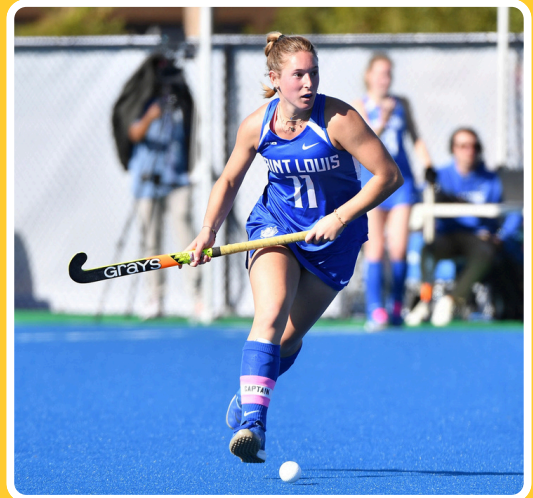
Lafayette High School Students



InstaCast

BME STUDENT-ATHLETES RECIEVE HONORS

Julia Rooijackers, BME alum ('25) and field hockey player, was recently named to the 2025 Academic All-District Women's At-Large team by College Sports Communicators. This honor recognizes student athletes who are at least a sophomore, are either a starter or important reserve, and who maintain a cumulative GPA above 3.5. Julia has been an integral player on SLU's field hockey team since 2022. To read more about the impressive academic achievements of the field hockey team, click [here](#).

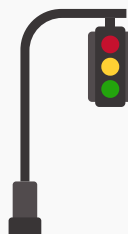


Biomedical Engineering rising senior and catcher for the women's softball team, **Abigail (Abby) Mallo**, has been deemed one of the nation's top NCAA Division I mid-major players. Mallo is ranked No. 35 out of 100 on D1Softball.com's 2025 D100 Mid-Major Player Rankings. To read more about Abby's softball accomplishments, click [here](#).

INAUGURAL EAST OF GRAND FIELD DAY



BME students and faculty enjoyed demonstrating their athletic prowess at the inaugural East of Grand Field Day on July 15th, which brought together faculty, students, and staff from the School of Engineering, School of Social Work, and School of Education.



BME Professor and Associate Dean of Undergraduate Education, **Dr. Scott Sell**, and **Paul Sanchez**, a rising BME junior who has been working in **Dr. Natasha Case's** lab this summer, each won their heat in the "Green Light/Red Light" competition.

SLU Department of Biomedical Engineering
BME Research and Experiential Learning
Opportunities for Undergraduates

Are you interested in experiential learning opportunities in BME?

- Work closely with professors and graduate students on impactful research
- Acquire exposure to hands-on applications in improving healthcare
- Apply class knowledge to real-life situations
- Develop lab skills
- Gain resume experience

Research Areas

+Biomaterials
+Biomechanics
+Mechanobiology
+Neuroengineering and Brain Computer Interface
+Regenerative Engineering
+Scaffold Production
+Tissue Engineering



Scan me for faculty profiles!

CALLING ALL UNDERGRADUATES!

Are you eager to collaborate with professors and graduate students on impactful research? Want to gain hands-on experience that's advancing healthcare? Looking to develop lab skills and boost your resume? Apply for the BME Research and Experiential Learning Opportunities for Undergraduates! This program offers a unique chance to immerse yourself in meaningful research and practical applications. Don't miss out! Click [here](#) to fill out the application and then submit your resume to biomed@slu.edu.

THE MENTOR COLLECTIVE FOR UNDERGRADUATES AND ALUMNI!

We're calling on valued members of our community to serve in Saint Louis University's School of Science and Engineering Mentor Collective Alumni Network! This program matches undergraduate sophomores, juniors, and seniors with mentors like you who have been in their shoes and know first-hand what it's like to learn at SLU. Click [here](#) to sign up to be a mentor.



ATTENTION BME ALUMNI

Are you a SLU BME Alumni? If so, we'd like to invite you to fill out the form below to give us your updated contact information (email) and tell us where you have landed after graduation. With your permission, we would love to highlight your career achievements and stay connected with you in the future!

[BME ALUMNI FORM](#)

BME NEWSLETTER ACCESS



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