



## MESSAGE FROM THE CHAIR

SANJEEV G. SHROFF, PHD



On behalf of our faculty, staff and students, I am happy to present you with the Department of Bioengineering's Fall 2017 E-Newsletter. The current academic year has been eventful so far, and I am excited to share some of this information with you.

Our undergraduate and graduate programs continue to be strong and vibrant. As of September 1, 2017, the enrollments in our undergraduate and graduate programs are 265 (sophomore + junior + senior) and 187 (143 PhD + 44 MS in Medical Product Engineering), respectively. We graduated 79 undergraduate and 48 graduate (19 PhD

+ 29 MS) students in AY17. Our students have continued to perform at a high level, e.g. (AY17 data): 5 NSF-GRFP winners (4 undergraduate + 1 graduate) and 3 honorable mentions (1 undergraduate + 1 graduate); 94 peer-reviewed journal publications (8 undergraduate + 86 graduate); 302 abstracts/meeting presentations/conference proceedings (79 undergraduate + 223 graduate); 45 national and university-wide awards and honors. One of the departmental goals is to have >25% of our PhD students receive independent external fellowships. Currently, 22.4% of our PhD students have external fellowship.

It has been a fruitful year for research funding in Bioengineering. With \$27.04M in new grants awarded in FY17, I am proud of the accomplishments made by both our new and seasoned faculty. Our Cardiovascular Bioengineering Training Program (CBTP) was renewed (Years 11-15) by the National Institutes of Health (NIH), with over \$1.9 million in funding over the next five years. I am thrilled with the continued NIH support of this program along with our other two NIH training grants (Biomechanics in Regenerative Medicine and Cellular Approaches to Tissue Engineering and Regeneration).

Our Department is happy to welcome four new faculty members. Dr. Mark Gartner has joined us as a Professor of Practice. He will contribute to the bioengineering and school-wide educational efforts in the innovation and design arena at the undergraduate and graduate levels and will also be involved with independent biomedical translational research and development activities. Dr. Mahender Mandala, who joined us as an Assistant Professor, is interested in mechanical engineering (especially, assistive technology), product design, education, and cognitive science. Dr. Bistra Iordanova joined us as a Research Assistant Professor and her research resides at the interface of neuroimaging, biology, and engineering. Dr. Warren Ruder, who joined us as an Assistant Professor, utilizes state-of-the-art tools of biomechanics, cell matrix engineering,

systems biology, and bioMEMS to create biomimetic systems. With their continued contributions and dedication to the Department, I am also pleased to announce four faculty promotions. Dr. Lance Davidson, Dr. Richard Debski, and Dr. Neeraj Gandhi were promoted to the rank of full professor and Dr. Kurt Beschorner was promoted to the rank of Research Associate Professor.

While we gained and promoted several outstanding faculty, it is with mixed feelings that I inform you of Dr. Savio Woo's retirement as of May 1, 2017. Dr. Woo was with the Department for 27 years and has contributed significantly to our success through the Musculoskeletal Research Center and his dedication to mentoring. As a Distinguished University Professor Emeritus of Bioengineering, Dr. Woo will continue to be engaged with our department, directing the Biomechanics in Regenerative Medicine training program. Thank you Savio for your tremendous contributions to our profession in general and the Department of Bioengineering at the University of Pittsburgh in particular.

In the current newsletter, we highlight some of the recent research achievements of our faculty. Dr. Tracy Cui and her team have developed brain sensor technology to understand why young people are more vulnerable than adults to addictive substances. Dr. Lance Davidson has been receiving a lot of press, including an interview with Pittsburgh's NPR station, for his research with tissue mechanics in developing embryos. The BodyExplorer medical simulator has continued to impress and was featured at the first annual ACCelerate: ACC Smithsonian Creativity and Innovation Festival. ALung Technologies, Inc., founded by Dr. William Federspiel, received IDE approval to conduct VENT-AVOID Trial of the Hemolung RAS for the US market. Through its most recent funding cycle, the University of Pittsburgh Coulter Translational Research Partners II Program awarded grants totaling \$650,000 to six translational research teams. In October 2016, we were excited to participate in the White House Frontiers Conference, where President Barack Obama fist-bumped a brain-controlled robotic hand. Research on the sensory component of this technology is headed by our secondary faculty member, Dr. Robert Gaunt.

We have a strong department, with outstanding faculty, students, and staff and I am looking forward to our continued growth and success in the new year. On behalf of the Department of Bioengineering, I thank you for your continued interest and support. Wishing you all good health and much happiness.

Sincerely,  
Sanjeev G. Shroff, PhD  
Distinguished Professor of and McGinnis Chair in Bioengineering