For Immediate Release

Micro and Nanotechnology Laboratory hosts NSF-funded Biosensing-Bioactuation Summer Institute 2010

The Micro and Nanotechnology Laboratory (MNTL) at the University of Illinois is hosting the Biosensing-Bioactuation Summer Institute 2010. Funded by the U.S. National Science Foundation and National Science Council of Taiwan, the institute will run through July 23.

"Biosensing-Bioactuation (BSBA) is a new research frontier that will profoundly impact engineering and biological sciences, including sensing/actuation science and technologies, and it has the potential for paradigm shift in engineering and biological research by creating new, truly cross-disciplinary research methodologies," said Jimmy Hsia, Summer Institute 2010 chair, professor of mechanical science and engineering, and an associate dean of the Graduate College at the University of Illinois.

The institute brings a range of expertise and disciplines from around the world to the Illinois campus.

"I commend the BSBA Summer Institute 2010 organizing committee for its leadership in leveraging College of Engineering and campus strengths, and national and international partnerships involving academia and industry, by identifying emergent research areas for training students and faculty, aiming to develop novel bio-derived and bio-inspired sensing/actuation technologies based on the fundamental understanding of biological systems," said Ilesanmi Adesida, dean of the College of Engineering and Willett Professor of Engineering.

The summer institute 2010 is part of a series of six annual summer institutes to be held alternately in the United States and Taiwan as part of the NSF and NSC partnership. The MNTL is well positioned to host the institute, according to Rashid Bashir, organizing committee member, and director of the Micro and Nanotechnology Laboratory and Abel Bliss Professor of Electrical and Computer Engineering and Bioengineering.

"We have, over the last several years, been transforming MNTL from not only being the foremost academic research laboratory in the country with a rich tradition of conducting innovative research, but also leveraging its unparalleled excellence to make it a platform for providing cutting-edge hands-on training to the next generation workforce," Bashir said.

"The holding of the current NSF-funded BSBA Summer Institute, and last year's Global Enterprise for Micro-Mechanics and Molecular Medicine (GEM^4) summer school, and earlier hands-on workshops are tangible steps we have recently undertaken in collaboration with the University of Illinois Center for Nanoscale Science and Technology (CNST) to meet these newer objectives," he added.

On the eve of his departure from Taipei to lead a delegation of 24 participants to the summer institute, Shuo Hung Chang said, "It is an excellent plan and is very encouraging for our students to visit the University of Illinois for such advanced training." Chang is the Taiwanese principle investigator of this project and professor and chairperson of the Department of Mechanical Engineering at the National Taiwan University. He is also a member of the organizing committee.

Registered participants include graduate students, postdoctoral associates and junior faculty from the United States, Taiwan, Colombia, India, Pakistan and other countries. They represent a range of disciplines, including engineering, biology, chemistry, information and pharmaceutical sciences, according to Irfan Ahmad, Summer Institute co-chair and associate director of CNST and affiliated faculty member of agricultural and biological engineering department.

"The hands-on laboratory modules have been carefully developed to maximize student learning across disciplines, which include: cell biology, enabling technologies, micro and nanofabrication, and biosensing in agriculture," Ahmad said.

Besides MNTL, several other departments, laboratories and research units are contributing to training sessions, including the departments of Agricultural and Biological Engineering, Bioengineering, Electrical and Computer Engineering, and Mechanical Science and Engineering, and the Beckman Institute for Advanced Science and Technology.

The Summer Institute is co-sponsored by the Micro and Nanotechnology Laboratory (MNTL), Department of Mechanical Science and Engineering (MechSE), Department of Bioengineering (BioE), Center for Cellular Mechanics (CCM), the Center for Nanoscale Science and Technology, all at Illinois; NSF Center on Emergent Behaviors of Integrated Cellular Systems (EBICS), a collaboration of the University of Illinois, Massachusetts Institute of Technology (MIT) and Georgia Institute of Technology; NCI Siteman Center for Cancer Nanotechnology Excellence (SCCNE) at Washington University in Saint Louis and the University of Illinois; and Global Enterprise for Micro-Mechanics and Molecular Medicine (GEM^4).

For more information, visit the Biosensing-Bioactuation Summer Institute website at: http://bsbasi-2010.mechse.illinois.edu/