The UH department of Electrical and Computer Engineering hosted the Capstone Design and Graduate Research Conference last week at the UH Hilton. The day-long event included technical sessions in which graduate and undergraduate student research and projects were presented.

Giving engineering students an opportunity to apply presentation and networking skills is the primary goal of the conference, now in its ninth year. ECE department chair Badri Roysam emphasized that learning how to effectively communicate one's research is an essential component of every successful student's career.

Technical sessions included research in neural sensing and bioengineering; energy and power solutions; noninvasive biosensing; imaging for biomedical applications; electromagnetics for nanoparticles, materials, and devices; and imaging for bio- and nano-structures.

In addition to an exchange of ideas, the conference also illuminates evolving, cross-disciplinary opportunities in research and development for electrical and computer engineering scholars.

Rathindra Bose, UH VC/VP for Research and Technology Transfer, in his address to conference attendees, remarked that students today are at the forefront of new directions in research. ?You are part of an innovative enterprise that goes beyond the conventional paradigm of electrical engineering,? Bose said. ?Go back 30 years. How many electrical engineers would inquire about transmitting neural signals at that time? Your world is so open and so rewarding.?
Milton M. Morris, Ph.D., Senior Vice President of Research and Development at Cyberonics, Inc., delivered an invigorating plenary discussion titled Life, Liberty and the Pursuit of Happiness: Advice on Maximizing Your Impact, in which he described methods for identifying one’s unique gifts, and how to apply those gifts to pressing societal needs. “Our individual greatness is best expressed at the confluence between our gifts, our happiness and our service to society,” Morris said.

Students who gave outstanding presentations during the conference were honored at the closing awards ceremony. The winner of the Urvish Medh Memorial Award for best overall presentation was Jingting Li for Laser-Based Active-Illumination Hyperspectral Microscopy with Multi-Modal Imaging Analytics.

Xiyao Xin won Outstanding Oral Presentation of Wireless Energy Transmission for Geophysical Applications.

Szu-Te Lin received the outstanding poster presentation award for Localized Surface Plasmon Resonance in Gold Nanoisland and Nanoporous Gold Substrates.

Capstone design poster presentation awards went to undergraduate teams two and three: Transparent Microstrip Antennas for CubeSat Applications, given by Joseph Casana, Richie Dettloff, Mauricio Garcia, and Nicole Neveu; and Cube Satellite: Embedded Design, with team members Safa Alghafi, Keith Chambles, Cesar Figueroa and TheLam Nguyen.

Nicholas Hawkins, Thang La, David Tran and Henry Truong won the oral presentation award for Dry, Noninvasive, Wireless EEG System.

Stephen Pitman won first place in the elevator talk competition, and Nicole Neveu took second place.

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