Distinguished Alumni Inducted into Francis Crowe Society

Victor Jipson (BSEE ’75) was selected as the Francis Crowe Distinguished Inductee for 2006.

Dr. Jipson (right) is currently semi-retired and provides part time consulting services to the Storage Industry and the Venture Capital community. Until June of 2006 he was Vice President and General Manager of the Systems/Solutions Group at Adaptec. From 2002 to 2004 he was Vice President of Engineering and a member of the Executive Staff at Snap Appliance, a Network Attached Storage company that the management team sold to Adaptec in 2004. Prior to Snap Appliance he was with Maxtor for six years where he held a variety of positions including; General Manager of the Desktop Products Group, a multi-billion dollar per year business, and Executive Vice President of Engineering where he managed the integration of a 2000+ person engineering, quality, and advanced technology team after Maxtor’s merger with Quantum’s HDD group. He also served as President of Maxtor’s Network Storage Group, an internal start-up within Maxtor. Before joining Maxtor, Dr. Jipson spent more than 16 years at IBM where he held positions including Research Staff Member at IBM’s Research Lab in Yorktown Heights, Director of the Optical Storage Laboratory (a 200+ person joint R&D activity between IBM’s Almaden Research Lab and the product development labs) and General Manager of the Optical Storage business unit where revenues were grown from zero to $150M/year over a 4-year period.

Dr. Jipson received his BSEE from the University of Maine in 1975, and his MS and PhD EE from Stanford University in 1976 and 1979 respectively. Pictured with Dr. Jipson is Dana Humphrey (left), Interim Dean of the College of Engineering and Mohamad Musavi (center), Chair of the Electrical and Computer Engineering Department.

ECE Professor Receives Dean's Excellence Award

Rosemary Smith, Professor of Electrical and Computer Engineering (ECE) and a member of the Laboratory for Surface Science and Technology (LASST), has been awarded the 2006 College of Engineering Dean's Excellence Award.

Over the course of her 24-year career, Dr. Smith has established herself as a leading researcher and transformed the lives of hundreds of undergraduate and graduate students through her teaching and mentoring. Prior to joining the University of Maine in the fall of 2003, Dr. Smith was a faculty member at the University of California-Davis.

Dr. Smith has an international reputation and is a world leader in the areas of microsystems engineering, biosensors, and biomedical microdevices. She has been recognized as a Senior Member of the world's largest professional society, the Institute of Electrical and Electronics Engineers (IEEE). The magnitude of her accomplishments in research funding, publications, student advising and scholarship is outstanding. Examples of her recent accomplishments include the design, fabrication, assembly and testing of a microfabricated instrument which employs dielectrophoretic capture of functionalized nanoparticles for biochemical analysis and the realization of an array of independently addressable micromachined silicon needles for transdermal bioelectric field measurements.

Dr. Smith's current research covers a wide range of multidisciplinary topics ranging from the development of a microfabricated instrument for high throughput gene sequencing to basic materials science and technology. In the last two years, Dr. Smith has been among the top five researchers in the College of Engineering attracting an average of $750,000/year in extramural funding to the campus.

Dr. Smith helped design the new state-of-the-art Microelectronics Fabrication clean room for the Engineering and Science Research Building (ESRB) and is currently serving as the director of this facility. In addition, she has also developed the Micro/Nano Technology Laboratory for training and education of both undergraduate and graduate students. She has orchestrated the donation of major pieces of laboratory equipment for the above facilities from numerous companies, including Baker, AMD, Abbott Laboratories, BAE systems, National Semiconductor and Fairchild Semiconductor. She has developed research collaborations with Maine industry and institutions including the Jackson Laboratory, Ascendent Energy, Mainely Sensors and Stillwater Scientific Instruments. Her efforts will have a major impact on building biotechnology and microelectronics research and development capabilities within the State of Maine.

In addition to her teaching and scholarship, Dr. Smith has made significant contributions to the missions and goals of the University, College of Engineering, and ECE Department. She has

acted as the Co-Director and Director of the UMaine Institute of Molecular Biophysics, the ECE graduate program coordinator, a member of the UMaine Graduate Board, the Chair of ECE Graduate Policy Advisory Committee, a member of the curriculum committee for the new Graduate School for Biomedical Sciences and a member of the College of Engineering Academic Advisory Board. Dr. Smith's record of accomplishment in the growth of the graduate education in the ECE Department is impressive. In the last two years, the number of ECE graduate students has increased from 26 to 35, of which the number of PhD candidates has grown from 1 to 14. The number of PhD candidates in ECE is currently the highest among UMaine's engineering departments. Her hard work has been also very effective in more than doubling the number of Graduate School scholarship awards made to ECE students.

ECE Welcomes New Faculty Member

The ECE Department welcomes Nuri Emanetoglu as a new addition to the faculty. Prof. Emanetoglu received his Ph.D. in Electrical and Computer Engineering from Rutgers University, New Jersey, where he worked on developing the novel multifunctional wide bandgap semiconductor zinc oxide, ZnO, for piezoelectric and optoelectronic devices and sensors. Prior to coming to Maine, Dr. Emanetoglu was a post-doctoral research fellow at the US Army Research Laboratory, Adelphi, Maryland, where he worked on device design, fabrication and testing of InGaAs based MSM optoelectronic mixers for LADAR applications, involving both the optoelectronics and RF circuits fields. Dr. Emanetoglu's research interests include novel semiconductor and piezoelectric materials and their nanostructures; and sensors and devices based on multi-phenomena interactions in these novel materials.

Dr. Emanetoglu has published 22 journal articles, and 15 conference proceedings, and is a co-inventor of seven US patents. He is a Member of IEEE. He received the second Best Student Award in the ACCG/east-97 Conference of the American Association for Crystal Growth, and Best Student Paper Award in Surface Acoustic Waves, IEEE 2001 International Ultrasonics Symposium, Atlanta, Georgia, October 2001.

National Semiconductor Managers Visit the Department

Steve Swan (EE '82), Fab Engineering Mgr., Scott Eastwood, Fab Maintenance Mgr., and Andy McCullough, Facility Manager visited the department facility on December 6, 2006. The National Semiconductor team spoke with Professors Rosemary Smith, David Kotecki, and Mohamad Musavi on areas of mutual interests.

University of Maine Receives Friend of IEEE Award

The University of Maine, Orono has been selected as a recipient of the **2006 Supporting Friend of IEEE Regional Activities Award**. This award was established to specifically recognize support provided to the IEEE and its members in support of its goals by firms, divisions of firms or individuals. It is awarded to those companies, or divisions of a company that encourage volunteerism through its practices. The University of Maine, Orono was chosen for its support hosting the 2006 IEEE Region 1 Student Conference. The award consists of an engraved plaque which carries the following citation:

University of Maine, Orono

"For generous donation of the University's resources that promote and encourage Region 1 Student Activities."

Equipment Needs

Over the last two years, about 45% of the Electrical and Computer Engineering (ECE) Department operational budget has come from contributions from our alumni. Your support has helped us develop two new laboratories, upgrade one of the most important facilities in the ECE Department, and give the gift of education to about 40 students each year through scholarships. The Alumni Support 2005 PDF file and the ECE December 2006 Newsletter provide a complete list of alumni contributions and its impact on our department in the last couple of years.

One of our pressing needs is to maintain and replace equipment that the students use in our undergraduate or graduate laboratories. You can help by donating your company's surplus equipment or contributing to the cost of maintaining existing equipment. A list of department equipment needs can be found at: http://www.eece.maine.edu/alumni/support/equip.php.

Grants Received

B. Segee, "NSF EPSCoR FBRI Outreach Award," $10,000, December 13.

A. Abedi (PI), M. da Cunha (Co-PI), NASA EPSCoR Planning Proposal, "Application of Wireless Sensors in Space Exploration (WiSe-SpEx)," MSGC Collaboration with NASA Johnson Space Center in Houston, TX, $180,000, January 4.

Gifts/Donations

Y. Zhu received $850 for development board from Freescale Semiconductor, November 27.

Publications

Peer Reviewed Conference

S. Manandhar, S.E. Turner and D.E. Kotecki, “A 20 GHz and 46-GHz, 32x6-bit ROM for DDS Application in InP DHBT Technology,” Proc. 13th International Conference on Electronics, Circuits and Systems, Nice, France, December 2006, pp. 1003-1007.

Z. Zhu, R. Tumati, S. Collins, R. Smith and D.E. Kotecki, “A Low-noise, Low-offset Operational Amplifier in 0.35um Technology,” Proc. 13th IEEE International Conference on Electronics, Circuits and Systems, Nice, France, December 2006, pp. 624-627.

Other

Since December the faculty have submitted seven proposals for a total of about $2,430,000.

Electrical & Computer Engineering Department
101 Barrows Hall
Orono, Maine 04469
Tel: 207-581-2223
Fax: 207-581-4531