



UNIVERSITY OF
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Electrical & Computer Engineering

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G A T O R
Engineering®

Message from Dr. Law

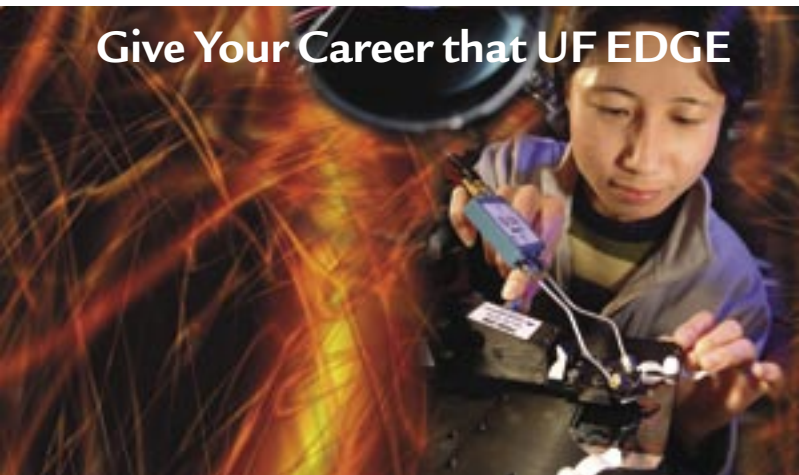


We have completed an academic year and have moved into the slower summer season. In this newsletter, we celebrate the last year and the accomplishments of our alumni, faculty and students. We presented our first department career achievement alumni award to Dr. Dick Jaeger of Auburn University. We hope to do this every year (as well as a young alumni award) - please help us to identify great candidates. Two ECE graduates, Dr. Sachio Semmoto and Dr. Hyung K. Lim, were named University of Florida Distinguished Alumni. Professor Jerry Fossum won the distinguished J.J. Ebers award from IEEE Electron Device Society. Professor Toshi Nishida was named the HKN teacher-of-the-year.

Private giving is critical to our mission and many of our alums have been generous supporters of the program. Unrestricted gifts to the department support faculty recruiting, student organizations, faculty retention, student and faculty awards and student projects. We have used gifts from the Sias Foundation to fund awards for an essay contest. Bob "Gator" Handley's gift will be used to fund awards for a best senior design contest. With your help, we can challenge and inspire our students to great things. The University is developing a program to raise money for endowed chairs to help us retain our best faculty. I hope we can count on you to help us become one of the best programs in the country. We want to make you as proud as possible of our accomplishments in research, teaching and service.

We have just graduated an excellent group of students. They have excelled in scholarship and have contributed to the department in many ways. We'll miss them and their leadership. Please note their accomplishments - we had a record breaking 18 EE award winners in the last year.

Gainesville is a quiet place in the summer - a calm before the storm of new students in the fall. As always, we look forward to the new faces that will help rejuvenate the department, college and University. I hope this newsletter finds you in good health and spirits, and like us, looking forward to being reenergized by the coming academic year!



Give Your Career that UF EDGE

Through UF EDGE (Electronic Delivery of Graduate Engineering), you, the practicing engineer, can obtain a master's degree right where you work or live. EDGE programs are the same courses taught by University of Florida faculty on campus but are delivered either via streaming video or DVD directly to you. ECE offers a master of engineering and master of science degree in Electrical and Computer Engineering. It is a 30 semester-hour, non-thesis program. Campus residency is not required.

Admission Requirements, Costs and Advising

Admission to graduate programs is based on academic record and GRE scores.

Admission processing is done through the UF Graduate School. Current information about the Graduate School is available at: www.gradschool.rgp.ufl.edu.

The responsibility for academic advisement, course instruction and other academic issues resides with the ECE faculty.

The cost of the program is \$300 per semester credit hour for Florida residents. Out-of-state rates apply for non-Florida residents. However, reduced tuition rates for qualified out-of-state candidates are available.

Master's Degrees Do Pay Off

The investment of time and tuition dollars toward a master's can bring a terrific return in total income. Starting salaries for engineers with a master's degree can be \$8,000 - \$10,000 higher than for those with only a bachelor's degree. Over a lifetime, the income advantage of a master's degree averages more than \$400,000.

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Awards

Jerry Fossum Received Prestigious J. J. Ebers Award

Dr. Jerry Fossum was awarded the IEEE Electron Devices Society J.J. Ebers Award for "Outstanding Contributions to the Advancement of SOI CMOS Devices and Circuits through Modeling" at the December 2004 International Electron Devices Meeting in San Francisco.

The award was established in 1971 to foster progress in electron devices and commemorate the life activities of Jewell James Ebers, whose distinguished contributions, particularly in the transistor art, shaped the understanding and technology of electron devices. It is presented annually to honor an individual(s) who has made either a single or a series of contributions of recognized scientific, economic or social significance in the broad field of electron devices.

Best Dissertation Award

Congratulations to Dr. Liuqing Yang for winning the University of Minnesota Graduate School's Best Dissertation Award in the Physical Sciences and Engineering in 2005 for her thesis, "Ultra-Wideband Wireless Communications: From Concept to Reality," which she defended in June 2004. This is a considerable honor for Dr. Yang, her dissertation adviser, Professor Georgios Giannakis, and for the graduate program in electrical engineering.

Following her graduation, Yang joined us as an assistant professor. Congratulations, Dr. Yang!

Other Faculty Awards

Dr. Toshi Nishida was voted HKN Teacher of the Year 2004-05 by the ECE student body.

The IEEE Board of Directors elected Dr. Fred Taylor and Dr. Jian Li as Fellows. Dr. Li was also elected as a Fellow of the Institute of Electrical Engineers.

Dr. Mark Law and Dr. Kevin Jones (MSE) received the First Faculty Recognition Award for Student Recruiting. The Faculty Recognition Award for Student Recruiting recognizes Semiconductor Research Corporation-funded Principle Investigators that successfully recruit a high percentage of students with citizenship or naturalization status in the country where the research is being performed.

A paper by Stanley Su, co-authored with G. Lee and X. Zhang, entitled "Learning Object Models, Languages, Authoring Tools and Registry Service for Achieving Dynamic and Collaborative E-learning", won best paper award at the International Association of Science & Technology for Development conference from August 16-18, 2004.

A paper co-authored by new faculty member, Dr. Oscar Boykin, entitled, "Percolation Search in Power Law Networks Making Unstructured Peer-To-Peer Networks Scalable", won Best Paper Award from the Fourth IEEE International Conference on Peer-to-Peer Computing on August 25, 2004.

Student Awards

Electric E Award Winners for fall 2004: Temitope Animashaun, Paul Berman, Tyson Brown, Jason Pukala

Electric E Award Winners for spring 2005: Jae Sammy, Paul Gregory Baumstarck, Shuguang Feng, Michael David Fischer, Jeffery Ryan Gray, James Louis Greco III, Adam Michael Jacobs, David Lawrence Kallenborn, Matthew John Koenin, Mitchell L Kopec, Jeffrey William Loshuertos, Ziwei Lu, Casey Morrison, Matthew B Ordonez

Erin Taylor is awarded prestigious NSF Graduate Fellowship. She has been accepted to the ACIS graduate program.

Jeff Gray received the William L. Everitt Award for 2004-05 from the International Engineering Consortium. An engraved Cross pen set was presented to Jeff at the 2005 HKN Spring Banquet.



(above) Dr. Toshi Nishida
(below) Jeff Gray



Hyung Khu Lim Honored as College Distinguished Alumni

Dr. Hyung Khu Lim has traveled the world for Samsung Electronics furthering its efforts to become a global leader in the semiconductor, telecommunication and digital convergence industry. His work has not only benefited Samsung, but has also reaped rewards for the College of Engineering, which counts Samsung as a major research supporter.

For his commitment to new technology at the University of Florida and his public and private accomplishments, Lim was honored as a University of Florida Distinguished Alumnus April 29, 2005, during the College of Engineering's commencement ceremony at the O'Connell Center.

Lim received his Ph.D. in Electrical Engineering from UF in 1984 under the advisement of Dr. Jerry Fossum. He then returned to Samsung, for which he had been employed since 1976 as a staff engineer, and worked on various memory semiconductor products.

He spearheaded the development of EEPROM, Flash Memory, SRAM and DRAM products. As managing executive director and executive vice president of the memory division from 1996-1999, Samsung became the leading manufacturer of DRAM chips, the major memory components of PC's and laptop computers. He is particularly recognized for his work in the creation of the NAND Flash business at Samsung.

In 2000, Lim was named president of the system LSI business for Samsung, and worked to make Samsung the worldwide leader in home and mobile system LSI solution. In 2005, he was named president and CEO of the Samsung Advanced Institute of Technology (SAIT), the corporate research and development arm of the Samsung Corporation. Prior to being promoted to the Institute in 2005, Dr. Lim served as the chief technology officer (president) of Samsung Electronics Co., Ltd.

Lim holds 17 U.S. Patents and has published more than 25 papers on conferences and journals. He is president of the Semiconductor Society of Electronic Engineers of Korea and the Korea Embedded Software Industry Council. He is also a member of the National Academy of Engineering of Korea. In

Sachio Semmoto Honored as a UF Distinguished Alumnus

Dr. Sachio Semmoto was honored as a UF Distinguished Alumnus on December 17, 2004, during the College of Engineering commencement ceremony at the Stephen O'Connell Center. The award, the highest given to an alumnus by the university, was presented to Semmoto by Mark Law, chair of Electrical & Computer Engineering.

After earning his doctorate in electrical engineering from UF in 1971, Dr. Semmoto began his career with Nippon Telegraph & Telephone (NTT), where he was responsible for leading the development of Japan's first optical fiber system. After 17 years at NTT, he left to help launch DDI Corp., Japan's first fully private telephone company that revolutionized the Japanese telecommunications industry. Dr. Semmoto is credited with sharply reducing long-distance call costs, promoting free competition in long-distance service, and introducing new services, such as customer service centers, detailed bill reporting and least-cost routing among long-distance carriers. Linking telecommunications to home computers, Dr. Semmoto founded eAccess Ltd. in 1999 to help bring Japan into the Internet Age with an inexpensive, fast Internet connection using ADSL (asymmetric digital subscriber line) technology. He serves as chairman of the board and chief executive officer for eAccess, which is Japan's first entrepreneurial and global IP/telecom start-up company.

With a propensity to create new systems for future generations, Dr. Semmoto is a founder of Eco-Power Co. Ltd., Japan's first wind-power generating company, and has helped lead the movement for eco-friendly technology in Japan. Dr. Semmoto's entrepreneurial spirit inspired him to co-found the Japan Academic Society of Ventures and Entrepreneurs so he could help others commercialize their inventions. From 1996 to 2000, he joined the Graduate School of Business Administration at Keio University in Tokyo as a professor in entrepreneurial management and information technology.

Dr. Semmoto also has served as a visiting professor at Carnegie Mellon University and the University of California at Berkeley. He has lectured at Harvard, Stanford, and Northwestern universities in the United States and Cambridge University in

Richard C. Jaeger Received Department's First Distinguished Career Achievement Award

The department's first Distinguished Career Achievement Award was awarded to Dr. Richard Jaeger at the HKN Spring 2005 Banquet.

After receiving his B.S.E.E., M.E. (1966) and Ph.D. (1969) degrees from UF, Jaeger went to work for the IBM Corporation in Boca Raton, Fla., working on technology for precision data acquisition systems and small computer architecture. In 1974, he became a Research Staff Member at the IBM Thomas J. Watson Research Center in Yorktown Heights, N.Y. His interests included analog integrated circuits, I²L, low temperature MOS device behavior and microprocessor design. In 1976 he returned to IBM, where he continued work on understanding the behavior of MOS devices at low temperatures and studying architectural alternatives for small computer systems. He holds three patents and received two Invention Achievement Awards from the IBM Corporation.

In 1979 he joined Auburn University, where he is now Distinguished University Professor in the Electrical Engineering Department. In the late 1980s, Jaeger created an outstanding teaching environment, where undergraduate students at Auburn University could design and fabricate their own silicon chips by participating in every step of the fabrication process, a unique opportunity often only accorded to graduate students. With his program, he attracted students to microelectronics professions and prepared them for effective careers in high-tech industry.

From 1980 to 1982 he was founding editor-in-chief of IEEE MICRO, and subsequently received an Outstanding Contribution Award from the IEEE Computer Society for development of that magazine. He later became a member of the Governing Board of the IEEE Computer Society, and was selected a member of the IEEE Computer Society Golden Core in 1996.

From 1984 to 2001, he served as the first director of the Alabama Microelectronics Science and Technology Center. Closely aligned with this effort was his publication of the popular textbook, Introduction to Microelectronic Fabrication, which is widely accepted as the main source for teaching students fundamentals of chip fabrication and forms the basis for courses at a number of universities.

Dr. Jaeger was elected Fellow of the IEEE in 1986 and was appointed to the Distinguished University Professorship by Auburn University in 1990. He received the Birdsong Merit Teaching Award from the College



of Engineering in 1991. In 1993 he was chosen as the Outstanding EE Faculty Member by the undergraduate students. In 1995 he was selected as the Distinguished Graduate Faculty Lecturer. In his spare time, he is an avid amateur radio operator (K4IQJ), enjoying dx and contest operation. He holds three patents and received two Invention Achievement Awards from IBM. In addition to his textbooks, Jaeger also co-authored Computerized Circuit Design Using SPICE Programs, and has published more than 200 technical papers. He is a member of Sigma Xi, Phi Kappa Phi, Tau Beta Pi, Sigma Tau, a licensed professional engineer and was first listed in Who's Who in America in 1990.

Recently, he created the nation's first undergraduate program in wireless technology at Auburn University. Jaeger will begin serving a two-year term as vice president of the SCS in Jan. 2004.

The ECE Distinguished Career Achievement Award and the ECE Young Alumni Achievement Award recognize alumni who have made outstanding professional contributions to their field since graduating from the UF ECE department.

Nominations are solicited from the ECE Alumni, ECE faculty and from the readers of the ECE News, our alumni newsletter. Winners will be featured in an issue of ECE News.

These awards will be presented at the annual HKN Spring Banquet. The winners will receive a plaque and will be given the opportunity to make a brief expression of appreciation at the banquet.

For more information on the alumni awards, please visit www.ece.ufl.edu/alumni/alumnimain.html

External Advisory Board Meeting

The Department External Advisory Board met on April 21 and 22 and showcased 10 faculty speakers who presented cutting edge research, a departmental overview and two graduate student poster sessions. Featured faculty speakers were Rizwan Bashirullah, Oscar Boykin, Alan George, Jing Guo, Jian Li, Toshi Nishida, Jose Principe, Martin Uman, Tan Wong and Liuqing Yang. Most of their presentations can be viewed online at (insert link here).

Industry attendees were Dan Flynn, Honeywell; Robert Handley; Jack Kavalieros, Intel Corp.; Michael Lewis, Progress Energy Florida, Inc.; Larry Light, EnerLook; Jorge Perdomo, Motorola; Daniel Radack, Microsystems; Ron Rasmussen; James Spoto, Applied Wave Research; Jeffrey Volz, Harris; Scott Winters, IBM; and Peter Zeitzoff, Sematech. The board was pleased with the meeting and particularly liked the student poster sessions, which will be expanded next year.

The board expressed some concern with underrepresented minority recruiting in the graduate school, and the department will focus on this more in the future. Graduate student recruiting in general is a challenge for the department as applications nationwide to engineering colleges were down 36% in 2003/04. This trend seems to be continuing and we will need to be more active in our recruiting.

The four winning posters were:

Yao Xie, Bin Guo, Luzhou Xu for "Adaptive Microwave Imaging for Breast Cancer Detection"
Faculty Advisor: Dr. Jian Li

Selvi Kadirvel, Fei Liu, Robert Taylor, Stephen Horowitz for "Self-Powered, Wireless Impedance Tuning of an Active Acoustic Liner"
Faculty Advisors: Dr. Toshi Nishida, Dr. Mark Sheplak, Dr. Lou Cattafesta



Casey Jeffrey for "Fault Tolerance in Nanoscale Memory Architectures"
Faculty Advisor: Dr. Renato Figueiredo

Yu Su and Jau-Jr Lin for "A 20GHz RF Down-converter with an On-Chip Antennae"
Faculty Advisor: Dr. Ken O



Each winner poster will receive \$500 to be split evenly among the students involved. Thanks to all the graduate students that participated and represented their work so well. Over 60 posters were presented in the two sessions.

The board was generally a success and will be held again April 27-28, 2006.

Hyung Khu Lim Honored as College Distinguished Alumni

2003, he delivered the keynote address at the prestigious Institute of Electrical & Electronics Engineers International System on Chip Conference.

He has received numerous awards, including the Gold Tower in 2000, the highest of the Pagoda Industrial Medals awarded by the Korean government to those who distinguish themselves with outstanding meritorious service in the development of industry. He also received the Honorable Alumnus Award of the Year from the Korea Advanced Institute of Science and Technology along with the Jeong Jinki Award from the National Academy of Engineering of Korea & Mail Business Newspaper.

Sachio Semmoto Honored as a UF Distinguished Alumnus

the United Kingdom. He is a Fellow at the Institute of Electrical and Electronics Engineers. In 2002, Dr. Semmoto presented a presidential lecture at UF and has agreed to serve as a visiting professor in the College of Engineering. The University of Florida and the College of Engineering are exceptionally proud and grateful for the personal and professional accomplishments of its alumni. As the college grows in stature and its graduates focus their knowledge on emerging fields, the University of Florida will continue to take notice of the successes of its graduates in hopes of inspiring future graduates in their endeavors.