Legendary Teacher Returns to ECE

During the 1960s a new Dean of Engineering was hired and he mandated that all professors have a Ph.D. So Fitch took a leave of absence and went to Ohio State to work on his Ph.D. When he finished his Ph.D. in 1970 Fitch returned to Clemson where he remained until his retirement. "They put me in front of a class and I found out who I was," Fitch says simply. His love of teaching and his gift for teaching are legendary in the department - indeed a departmental teaching award is named after him. The Lewis T. Fitch Award for Excellence in Teaching was established in 1983 by the Clemson University IEEE Branch to recognize instructors who exhibit outstanding teaching abilities. This award was named in honor of Fitch for his 26 years of dedicated service to the students and ECE Department.

Fitch's quote on the plaque recognizing the Fitch awardees exemplifies his philosophy on teaching:

"The transmission of information is exciting. The acquiring of information is exciting. Learning how to reason more effectively is exciting. The teacher's main task is to show and encourage this excitement."

The ECE Department is fortunate to count Law Fitch as one of our own and are thankful that our students had the opportunity to experience this "vividness" again.

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Goldwater Grand Slam

Clemson University has hit a "grand slam" - and we're not talking baseball. Four Clemson students (two of whom are Electrical and Computer Engineering students) have received the prestigious Barry M. Goldwater Scholarship for Excellence in Science, Mathematics and Engineering. In addition to exceeding the Clemson record of three scholarship recipients last year, four is the maximum a school can have in one year.

"Having four winners of such a select group puts Clemson in some pretty elite company," College of Engineering and Science Dean, Tom Hensman observes. "This proves that Clemson continues to attract strong students."

And the students are coming from South Carolina. In fact, all four of this year's Goldwater recipients are from the Palmetto State. Twelve Clemson students have won Goldwater Scholarships since 1992 - 10 of those have been South Carolinians.

Vijay Ullal, an Electrical Engineering student, has been working with Vinod Shriver, a visual display expert at Palmetto State's Department of Electrical and Computer Engineering. Vijay has developed a program that allows a subject to speak into a system and use visual cues to correct their pronunciation. The subject's pronunciation is graphed using parameters that show the target area representing the correct pronunciation. By changing the way they pronounce the phonemes, the subject can move a marker on the screen into the targeted area. Thus, a subject can use this visual tool to achieve correct pronunciation.

The hard part to accomplish, which Ullal has been programming in MATLAB, is trying to get the program working in real time with automatic feedback. But there are many other cross-disciplinary challenges and opportunities Ullal has had to address. In order to create the graph for the marker, he had to simplify signal processing techniques. And Ullal has consulted with Prof. Daniel Lepski in the Languages Department here at Clemson to learn which vowels are most difficult for English speakers to pronounce correctly.

Ullal's long-term plans are to first conduct industrial research and then become a professor. He hopes to have some impact on his students and do for them what his professors here at Clemson have done for him. Ullal, who is a McAllister Scholar, Palmetto Fellow, Sanford Mart Scholar and Coca Cola Scholar, will begin that path this summer when he will work in the department's SURE program.

During his Clemson experience Ullal has been the Vice President of the Tennis Club, the Vice President of the Eta Kappa Nu, and a Dean Fellow. In his spare time Ullal also enjoys playing the guitar. In graduate school, Ullal hopes to pursue a degree in electrical engineering, probably in communications, signal processing or speech recognition.

Jeff Young is a Computer Engineering student whose research work is on reconfigurable computing. His research project addresses FPGA's (reconfigurable cards and circuit boards). Young explains that normally you use a specific card to do a certain task, such as run a vending machine. His project uses cards that can be reconfigured to do numerous tasks.

Young has been working with a group on runtime reconfiguration in the Parallel Architecture Lab on a JAVA Virtual Machine. Young notes if technology changes, these reconfigurable systems (where you can do some different operations with one card) would be very cost-effective.

Young's long-term goals include earning his Ph.D. in either reconfigurable computing or computer architecture and working in an industrial research and development position. He may return to a University to teach one day, but he definitely wants to work in industry first. This summer Young is working as an intern designing, creating and testing circuit boards and writing device drivers for Linux and Windows.

Young, who graduated last year from the South Carolina Governor's School for Science and Mathematics in 2001, is a National Scholar, a Palmetto Scholar and a Dean Fellow. He has been President and Vice President of Eta Kappa Nu, is a member of the Men's Glee Club, and a member of the Carlton Club. Young notes that he and Ullal share their love of music and, since the 2nd semester of their sophomore year, have hardly missed a radio show on Clemson University's radio station, WNSR.

Ullal and Young agree they engaged in a "friendly competition" regarding the Goldwater competition. They discussed their projects, encouraged each other and celebrated together when they found out they had both won.

Ullal and Young help Clemson join a prestigious group of institutions with four Goldwater recipients. This year, the University of Virginia, Princeton, Harvard and Stanford each had four recipients. Duke, Cal Tech, Northwestern and Georgia all had only three recipients this year.

The Barry M. Goldwater Scholarship and Excellence in Education Program was established by Congress in 1986 to honor Senator Barry M. Goldwater, who served his country for 56 years as a soldier and statesman, including 30 years of service in the U.S. Senate. The purpose of the foundation is to provide a continuing source of highly qualified scientists, mathematicians and engineers by awarding scholarships to college students who intend to pursue careers in these fields.

http://www.ece.clemson.edu
CUEPRRA Hosts 3rd Annual Power Conference

After two very successful years, the Power Systems Conference (PSC) reconvened this year to expand from the impact of Distributed Generation to discuss, present, and exchange ideas on Distributed Generation and Advanced Metering. From March 10 – 12, PSC 2004 brought together industry leaders to discuss the latest deployments of distributed generation, implementation issues, and new technologies relating to the impact on the power system. This conference included professionals presently deploying, or interested in deploying distributed generation, industry, utility, vend, and university representatives. Attendees of the conference included utility engineers and managers, facility managers and engineers, vendors, and other personnel responsible for ensuring power system performance, control, protection and economics related to distributed generation and advanced metering. In the new energy market, the ability to efficiently and economically meter generation units will be of utmost importance. The metering of the system will be important for anyone who is a producer, utility, or a consumer. By accurately measuring energy use, all a firm will be able to formulate the most economical use of all energy assets available to them.

Professor Adly Giga welcomes participants to the 3rd Annual Power Conference.

McQuaid Awarded McQuaid Quattlebaum Faculty Award

Congratulations to Dr. Wilson Pearson who was recently awarded the McQuaid Quattlebaum Faculty Achievement Award by the College of Engineering and Science. The award was established by Alex M. Quattlebaum, a university trustee in the 1960s and 1970s, in honor of his father, McQuade Quattlebaum, a member of Clemson’s class of 1909. Recognition is based on faculty accomplishments in the preceding year and distinctions and awards in the past three years.

Hubbard Wins Murray Stokely Award

Congratulations to Dr. Stephen Hubbard who was awarded the College of Engineering & Science’s 2004 Murray Stokely Award for Excellence in Teaching, one of the highest honors for an engineering faculty member. This honor is given for demonstrated excellence in teaching engineering at the undergraduate and/or graduate level with an emphasis on the most recent three years. Teaching includes not only classroom and laboratory instruction, but also development of new methods, courses, or materials (e.g., books or software). The award includes $1,000 and a plaque, plus recognition on a permanent plaque in Riggs Hall. This year marks the ninth annual Murray Stokely Award. Dr. Hubbard is the fourth ECE faculty to receive this honor. (Dr. Randy Collins in 2000, Dr. Ian Walker in 2001, and Dr. Darren Dawson in 2003).

ECE Welcomes Lou Capp

The ECE Department welcomes Ms. Louis “Lou” Capp who recently joined the department as assistant to department chair, Dr. John Gowdy. She previously worked in the Dean’s Office of the College of Architecture, Arts and Humanities. Ms. Capp’s hobbies include bowling and motorcycling. She replaces Wendy Howard, who has now taken on new duties as accountant for our Department. Next time you’re in Riggs Hall, stop by room 105 and welcome Ms. Capp yourself!