Congratulations to L. Wilson Pearson, who recently was named the Sam and Patricia Eshelman Professor of Electrical and Computer Engineering, a position previously held by David Durrett before his retirement.

The Professorship was endowed in honor of Sam and Patricia “Esh” Eshelman, a pair of the Clemson Class of 1947, Rhodes, who also held a similar professorship named after him, was the first editor of "The Tiger" student newspaper, a professor of Electrical Engineering, and Electrical Engineering Department Head from the mid-1940s to the mid-1950s. Legendarily, it is said that Rhodes was a mentor to many engineers who went on to become leaders in their field, including future Associate Dean of the ECEE, Dr. John L. Pearson.

Published twice a year, by the Milton W. Holcombe Department of Electrical and Computer Engineering, for alumni and friends. Subscriptions are free upon request. Please let us know of story ideas and special events in your own and personal life.

Editor: Wendy Howard
Contributors: Janet Bean, Elizabeth Bradley, Ady Gings, John Hicks

Wilson Pearson Named Rhodes Professor

Current Mischel, chair of the Agricultural Engineering Department at the University of Illinois, in the process of developing a Center for Research in Wireless Communications with the goal of becoming a National Science Foundation Engineering Research Center (ERC). The NSE-sponsored ERCs are a group of interdisciplinary centers located at universities across the United States, each in close partnership with industry. Each ERC provides an environment in which academic and industry collaborate to pursue strategic advances in complex engineering systems and systems-level technologies that have the potential to improve the performance of current technologies, or service delivery methods of current industries. The centers provide this intellectual foundation for industry to collaborate with faculty and students in meeting emerging challenges, producing the knowledge base needed for steady advances in technology and their speed transition to the marketplace. Research research is conducted in three areas, including wireless systems, signal processing, and statistical methods.

The chair holder’s research activities will be focused on vehicular electronics systems integration, such as automotive electronics, signal and information processing, microprocessors, microelectronic and mechanical systems (MEMS), electronics and electromagnetic fields, and microsensor technology, and on emerging applications, such as adaptive cruise control, safety systems, integrated pressure systems, infrared sensing, etc. The chair holder is also expected to be competent in vehicular communications such as CAN/LIN buses and wireless communications to extra-vehicular systems including communications satellites and cellular telephone systems.

The chair holder will work closely with faculty in the Clemson University Center for Research in Wireless Communications, the Department of Electrical and Computer Engineering, the Department of Mechanical Engineering, and other cwil (acronym for chair with data) in the ICAR Graduate Engineering center to facilitate research and education opportunities in vehicular electronics systems integration. In addition to obtaining advanced research in vehicular electronics, the chair will be expected to help develop and implement the Advanced Engineering program for ICAR.

ICAR Seminars

This semester Larry Druffel, Chairman of the College of Engineering and Science Advisory Board, organized a seminar series on campus to pique interdisciplinary faculty interest in the new International Center for Automotive Research (ICAR). Druffel explained that just as engineers and managers of businesses today do not solve problems and create solutions in isolation, ICAR will work using industry and faculty to work together across disciplines. His hope was to help the faculty better understand the research opportunities using the vehicle as a platform and encourage such faculty connections with this seminar series.

The last seminar speaker, George O’Brien, the North American Electronics Research Director for Michelin, agreed with Druffel’s assessment, noting that multidisciplinary collaboration is imperative in today’s industrial environment. "ICAR is not an island," O’Brien noted, "and research faculty from across campus need to be involved to make this new center successful. It is important for Clemson to create an atmosphere for collaboration." O’Brien concluded, and for faculty across the disciplines to see the need to research opportunities available as a new area for research collaboration and to have a "vision of what we can do with vehicles." Other speakers for the series this semester have been Dr. Berne Vonder of BMW and Dr. Dier Rothbach of the Fraunhofer Institute for Experimental Software Engineering.

Brooks Joins ECE Faculty

The ECE Department is pleased to welcome Dr. Richard Brooks as a new Associate Professor in the Computer Engineering area.

Born in the 5th BS in Mathematical Sciences from John Hopkins University and then moved to Europe where he later went on to earn his degree in computer science from the University of Michigan. His work with the World Bank led to frequent travel to Africa, Eastern Europe and the former USSR.

While in Europe Brooks pursued his graduate studies on a part-time basis; however, after deciding he wanted to pursue his education full time, he returned to the U.S. to attend Louisiana State University where he earned his PhD in Computer Science with a minor in Electrical Engineering. His research was in sensor fusion and distributed sensing. Brooks’ dissertation won a certificate for exemplary achievement for research in science, engineering and technology.

After earning his PhD Brooks taught at California State University, Monterey Bay, for 11 years before moving to the Penn State Applied Research Laboratory, where he worked for another 2 years. As part of the NSF, the leadership of the Systems Department and performed full-time research, working on a number of DARPA and NSF-sponsored projects. One project was put together to form the Penn State MURI in which the coordinated participants from Penn State, UCLA, Cornell, Duke, Wisconsin and LSU and included researchers from other engineering disciplines as well as biology and linguistics.

Brooks’ current research interests are in sensor networks – small, usually battery-powered nodes, normally with wireless connections, and some kind of device that collect information from the “real world.” Sensor networks differ from the way typical networks have been built in a few important ways: for example, if someone calls you on a cell phone, they are looking for data about you. Sensor networks are different because they are interested in the environment in which they can access. The problem is to link the networks and with the necessary information. Typically networks have layers, but network functions can be used to reduce these layers in order to increase efficiency. Brooks has also worked on computer network security issues. For instance, in a catastrophic event, it is important for networks to be able to reconcile themselves so they may continue to operate.

Brooks has written two books in the past two years which hasn’t left much time for hobbies; however, he enjoys interacting with his Labrador Retriever and traveling. Regarding his move to Upstate, Brooks said with a smile “I like the weather here better!”

http://www.ece.clemson.edu
We are now wrapping up a very active Fall semester. We are very pleased with our new faculty and staff, our new Institute Director, Dr. K. C. Wong, both of whom ‘hit the ground running’ with great enthusiasm. We predict that both will make many valuable contributions to our research and educational programs. Dr. R. Christopher Baughman has completed his move to the College of the Environment, which is surely good news for environmental researchers. Dr. Blakeslee has joined our faculty. 2003-2004 is shaping up to be an exciting year for the Electrical and Computer Engineering Department with the addition of new faculty and the recruitment of new students. We welcome you to join us in this new academic year.

Wang Joins Faculty Ranks

Wang came to the University of Maryland as a graduate student to study at the University of Wisconsin-Madison five years ago, but that was not the first time he had lived and studied in the United States. Ten years ago, from kindergarten through 2nd grade, Wang attended school in Los Angeles. He now considers himself a person with 'two cultural backgrounds'. He knows no English when he arrived, Wang quickly blended in to the culture and soon started taking new international students at his high school. Since then, he has enjoyed playing baseball, which he learned back home in Taipei, his neighborhood and that of his father’s retirement home. Wang also enjoys meeting new people from around the world, including his brother and younger sister who reside in Taipei all enjoy traveling. Wang has traveled extensively in China and two times to the United States, Singapore, Canada, and the U.S. He enjoys swimming, basketball, badminton, reading, and cooking. He also enjoys making new friends.

Wang cites his very diverse background working with theoretical analysis, protocol design, and software/hardware implementation. His areas of expertise include wireless networking, mobile computing, embedded programming, and signal processing. His experience working on multidisciplinary research grants has given him a different perspective on how the world operates. He emphasizes the importance of a project grant that he worked on while at graduate school, under the aegis of Prof. Michael Plass. One of the key takeaways from this experience is that working together with others leads to a stronger bond, which is a useful lesson to take with him to his new position at UMD.

Royster Receives NSF Fellowship

Royster is researching a method of modulation for wireless communications that can provide high data rates and give some protection against interference, such as time slots which are caused by other transmissions in the area. Since the interference feedback changes from time to time, Royster’s future research includes the development of a technique to adjust the modulation accordingly in response to variations in the interference. This requires adaptive protection that can be used to adapt the transmitted power and respond with appropriate changes in the modulation. There are a myriad of possible applications: mobile tactical networks, military tactical networks, and multi-hopping tactical networks. Royster also looks forward to sharing a wide assortment of research experiences with the excellent faculty in ECE as well as colleagues from other departments at Clemson.

Collins Presents at Progress Energy Executive Business Forum

Progress Energy (formerly Carolina Power and Light) recently sponsored two Executive Business Forums. The first was in Florence, South Carolina, and the second in Raleigh, North Carolina. Attendees included CEOs of various Carolina businesses as well as state and local elected officials. The forums addressed weather-related energy and what Carolina businesses could do to become more energy efficient. St. Randolf Collins, CEO of Collins, was the only academic invited to present at both the Florence and Raleigh forums.

Collins’ presentations addressed power quality and reliability, business strategies and solutions for sensitive loads. Power reliability could be described as ‘whether the lights are on or off, quality of the power is another dimension’ (I love how often and how long the ‘lights’ are off). While most of us take power for granted, Collins believes that the quality of the lights is just as important. When there is a degradation in power quality that might only last for less than a tenth of a second, he notes that the very majority of old load equipment, but not computer equipment might be impacted. However, for modern computer equipment, a 30 minute process interruption for 50% of a day’s operation can cause businesses to be unprofitable and in a vacuum.

Collins’ research continues to produce tools to help measure the impact of power quality degradation.

ECE Senior Recognition Dinner

This year’s dinner has been the first opportunity for students to socialize with alumni and faculty, old and new. The event allows the ECE department to recognize outstanding students for their achievements.

Royster Receives NSF Fellowship

Royster is researching a method of modulation for wireless communications that can provide high data rates and give some protection against interference, such as time slots which are caused by other transmissions in the area. Since the interference feedback changes from time to time, Royster’s future research includes the development of a technique to adjust the modulation accordingly in response to variations in the interference. This requires adaptive protection that can be used to adapt the transmitted power and respond with appropriate changes in the modulation. There are a myriad of possible applications: mobile tactical networks, military tactical networks, and multi-hopping tactical networks. Royster also looks forward to sharing a wide assortment of research experiences with the excellent faculty in ECE as well as colleagues from other departments at Clemson.

Collins’ presentations addressed power quality and reliability, business strategies and solutions for sensitive loads. Power reliability could be described as ‘whether the lights are on or off, quality of the power is another dimension’ (I love how often and how long the ‘lights’ are off). While most of us take power for granted, Collins believes that the quality of the lights is just as important. When there is a degradation in power quality that might only last for less than a tenth of a second, he notes that the very majority of old load equipment, but not computer equipment might be impacted. However, for modern computer equipment, a 30 minute process interruption for 50% of a day’s operation can cause businesses to be unprofitable and in a vacuum.

Collins’ research continues to produce tools to help measure the impact of power quality degradation.

ECE Senior Recognition Dinner

This year’s dinner has been the first opportunity for students to socialize with alumni and faculty, old and new. The event allows the ECE department to recognize outstanding students for their achievements.

Royster Receives NSF Fellowship

Royster is researching a method of modulation for wireless communications that can provide high data rates and give some protection against interference, such as time slots which are caused by other transmissions in the area. Since the interference feedback changes from time to time, Royster’s future research includes the development of a technique to adjust the modulation accordingly in response to variations in the interference. This requires adaptive protection that can be used to adapt the transmitted power and respond with appropriate changes in the modulation. There are a myriad of possible applications: mobile tactical networks, military tactical networks, and multi-hopping tactical networks. Royster also looks forward to sharing a wide assortment of research experiences with the excellent faculty in ECE as well as colleagues from other departments at Clemson.

Collins’ presentations addressed power quality and reliability, business strategies and solutions for sensitive loads. Power reliability could be described as ‘whether the lights are on or off, quality of the power is another dimension’ (I love how often and how long the ‘lights’ are off). While most of us take power for granted, Collins believes that the quality of the lights is just as important. When there is a degradation in power quality that might only last for less than a tenth of a second, he notes that the very majority of old load equipment, but not computer equipment might be impacted. However, for modern computer equipment, a 30 minute process interruption for 50% of a day’s operation can cause businesses to be unprofitable and in a vacuum.

Collins’ research continues to produce tools to help measure the impact of power quality degradation.

4th Annual Power Systems Conference PSC05

The 4th annual Power Systems Conference PSC05 was held in Orlando, Florida, USA, from May 22-26, 2005. The conference is a major event for researchers and practitioners in the field of power systems.

Students Tour Sanopee

This semester, Sanopee sponsored the 11th annual Clemson University Student’s Tour of Sanopee. The tour was organized by Mike Budreau of Sanopee and coordinated with Dr. Orleans, the faculty advisor for the IEEE/EPE.

On August 26th, Mike Budreau set Sanopee employees on a tour of Sanopee, led by the tour guide. The tour began with breakfast at Ripple Cafe, where everyone enjoyed a delicious breakfast. The tour guide, Tony Blackwell, was an excellent host and provided a great insight into the company’s operations.

Sanopee’s tour included visits to different parts of the company, including the manufacturing plant, the sales and marketing department, and the customer service center. Sanopee’s employees learned about the company’s commitment to innovation and excellence, as well as its dedication to providing high-quality products and services.

Students were given the opportunity to meet and interact with Sanopee employees, and they were able to see the different departments that make up the company. The tour ended with a visit to the employee lounge, where everyone enjoyed refreshments and a chance to relax.

Sanopee’s employees were very welcoming and helpful, providing students with a great opportunity to learn about the company and its operations. The tour was a great way for students to gain insight into the world of engineering and to see how their education can be applied in real-world settings.

Sanopee’s Tour is an annual event that provides an opportunity for students to learn about the engineering field and to see how their education can be applied in real-world settings. The tour includes visits to different parts of the company, including the manufacturing plant, the sales and marketing department, and the customer service center. Sanopee’s employees learned about the company’s commitment to innovation and excellence, as well as its dedication to providing high-quality products and services.

Sanopee’s tour included visits to different parts of the company, including the manufacturing plant, the sales and marketing department, and the customer service center. Sanopee’s employees learned about the company’s commitment to innovation and excellence, as well as its dedication to providing high-quality products and services.

Sanopee’s employees were very welcoming and helpful, providing students with a great opportunity to learn about the company and its operations. The tour was a great way for students to gain insight into the world of engineering and to see how their education can be applied in real-world settings.