High-tech center reuniting with its founder at Auburn

Auburn University will soon be home to one of the world’s leading research centers in the area of radio frequency identification, or RFID, technology.

In June, the RFID Research Center will move from the University of Arkansas to Auburn, opening the door for research collaborations initially involving the Raymond J. Harbert College of Business, the Samuel Ginn College of Engineering and the College of Human Sciences.

Since its founding at Arkansas in 2005, the RFID Research Center has been at the epicenter of research in RFID, earning national and international recognition for its work. When it opens in June as the RFID Lab at Auburn University, it will be reunited with its founder and former director, Bill Hardgrave, who is dean of the Harbert College of Business and the college’s Wells Fargo professor.

“RFID technology is increasingly critical to the ability of business and industry to excel in a global, networked marketplace,” said Auburn President Jay Gogue. “The new lab will serve as an engine of economic growth as it develops technologies and processes that improve efficiency and customer satisfaction.”

Hardgrave said the lab will serve as a hub for thought leadership involving industry-leading companies interested in developing and exploring applications for RFID – the use of wireless systems to transmit data from microchip tags on products to receivers.

“We are thrilled to have the RFID Lab at Auburn University,” said Hardgrave, who was instrumental in securing its move to Auburn. “For almost 10 years, it has proven to be the go-to place for RFID research. The opportunity to continue the great work while expanding its scope at Auburn is exciting.”

Hardgrave began working with RFID in 2003 while at Arkansas. Walmart’s interest in having suppliers affix RFID tags at the pallet and case level to improve supply chain visibility ignited research efforts that eventually grew into the RFID Research Center. More than 60 industry-leading companies have contributed to the development of the center as a neutral, multidisciplinary research site.

See RFID Research Center, Page 4

Goldwater Scholar from Auburn to participate in Budapest program

Graham Gordon, an Honors College student in Auburn University’s College of Sciences and Mathematics, has been chosen as a 2014 Barry M. Goldwater Scholar, an honor bestowed only on approximately 300 students nationwide each year.

The scholarship is frequently cited as the most prestigious award in the United States for undergraduates in science, technology, engineering and mathematics, or STEM, disciplines.

Gordon, who is double-majoring in mathematics and physics, conducts research under the guidance of Professor Peter Nylen in mathematics and statistics. He is also an undergraduate teaching assistant with Professor Joe Perez in engineering physics and has participated in a research group studying computational Rydberg atomic physics. Gordon’s primary research involves “partial distance matrix completion with multilateration applications to wireless sensor network localization” and his publications include an article in the Journal of Physics B: Atomic, Molecular and Optical Physics.

“As Graham’s undergraduate research mentor, I told him I thought the most important thing was that he enjoy learning about his chosen topic,” Nylen said. “Graham is also blessed with analytic skills and the ability to express ideas in the written word. It has been a privilege to work with him.”

Gordon will travel to Hungary in June to participate in a summer program in mathematics at the Technical University of Budapest.

“The Goldwater Scholarship is well-deserved recognition of his academic talents and we anticipate great future success for him as he pursues his studies in physics and mathematics,” said Honors College Director Melissa Baumann.

Paul Harris, associate director for national prestigious scholarships, said, “It is especially gratifying to see someone who has worked so hard in the classroom, in the research lab and in his after-school tutoring program with Loachapoka Middle School pay off with this national recognition.”

– Charles Martin
Locate water leaks, other problems

Facilities installs new system to track, monitor utilities

The Facilities Management Utilities and Energy Department is now able to more efficiently monitor and track campus utility use, while saving substantial university funds and resources.

The majority of electric, natural gas, domestic water and non-return water (irrigation, cooling towers, septic) meters are now wirelessly connected to a centralized system which digitally tracks hourly consumption. Meter transmission units, or MTUs, send readings during the day to six digital collection units across the campus. The digital collection units transmit the data onto a server where the information is collected and analyzed by Utilities and Energy staff.

“We implemented the metering project so we can see what impact projects will have on our systems. We can measure at interval consumptions, and we can track behaviors and uses within the buildings,” said Ken Martin, director of utilities and energy.

Gas and water meters were retrofitted to communicate with the new system. In-house staff installed new electric meters at 233 campus locations. The electric meters which were replaced were still operable and were given to the Alabama Community College System.

“The majority of our 26 campuses are master metered, thus the need for sub meters on all the buildings. Without any means of measuring utility usage, we are unable to determine which facilities need the most improvement,” said Frank Barnes, acting director of facilities in the Department of Postsecondary Education. “If we can manage our facilities better, we can put our dollars to other uses, like education. We really appreciate having the meters and are very thankful to the Auburn University staff.”

The electric meters are equipped with alarms which alert staff to outages. The system also provides information about which buildings are affected, allowing faster response to situations.

The new metering system is also tied into a high-use reporting system. This enables staff to identify excessive utility use and possible explanations for changes due to campus events, holidays and seasonal temperature variations. Persons responsible for the excessive use can be contacted with corrective actions to resolve the situation.

Dee Gillespie, a utilities and energy analyst, noted that a high-use alarm had been activated in the kennel. Within two days, a leak was repaired which was causing a 16,000-gallon per day loss of water. If this leak had continued until the next meter reading using the old system, it would have resulted in a $4,000 cost to the university.

“This metering project has already paid dividends by monitoring excessive use. During the last year, actions from identified problems have resulted in savings of more than $30,000. It has been a great tool for monitoring our system, reporting electrical issues, and allowing our staff more time to correct issues rather than reading meters,” said Martin.

– Gail Riese

Meter transmission unit for water at the District Energy Plant

identified a large consumption of water at one of the College of Veterinary Medicine kennels. That same day, Facility Management staff identified a leak underneath the kennel. Within two days, a leak was repaired which was causing a 16,000-gallon per day loss of water. If this leak had continued until the next meter reading using the old system, it would have resulted in a $4,000 cost to the university.

“This metering project has already paid dividends by monitoring excessive use. During the last year, actions from identified problems have resulted in savings of more than $30,000. It has been a great tool for monitoring our system, reporting electrical issues, and allowing our staff more time to correct issues rather than reading meters,” said Martin.

– Gail Riese

ACES celebrates 100th birthday of act that led to its founding

The Alabama Cooperative Extension System will celebrate the 100th anniversary of the Smith-Lever Act, Thursday, May 8, of the legislation that established the network of cooperative extension systems across the United States.

Cited by many historians as one of the most far-reaching educational acts in history, the legislation known as the Smith-Lever Act of 1914, provided the basis for ACES as Alabama’s oldest and largest educational outreach agency, as well as similar Extension programs in every state in the nation.

In Alabama, where much of the groundwork for Cooperative Extension work was laid years in advance of the Smith-Lever Act, Extension officials are planning a series of commemorative events that will extend through 2015, which marks the year that the state formally implemented the provisions of the legislation.

Gary Lemme, Alabama Extension director, says that while some of the celebration will focus on the pivotal role earlier generations played in laying the groundwork of the Extension mission, the main emphasis will be on how Extension is changing to meet the needs of an increasingly diverse and urbanized state.

“Over the course of our history, we have held true to three values that comprise the foundation of our mission: a strong commitment to research-based knowledge; a strong emphasis on building positive relationships with those we serve; and finally, a strong commitment to providing relevant programs,” Lemme said. “We’re being challenged to devise new ways to deliver our programs, but our fidelity to those core Extension values will not change.”

One hallmark of the Smith-Lever Act was the establishment of a grassroots Extension presence in virtually every county in the nation. While funding shortfalls have forced some states to reduce this presence to fewer counties or to replace it entirely with regional offices, Alabama Extension continues its longstanding commitment to maintain educators in all 67 counties.

Within the last 20 years, following the unification of the Extension programs of Alabama’s historically white land-grant institution, Auburn University, with its historically black counterpart, Alabama A&M University, Extension has stepped up its efforts to reach more urbanized and nontraditional audiences.

A primary focus of Extension work in early 20th century Alabama was on helping farmers deal with the economic prospects of Alabama farmers, many of whom raised cotton under the persistent threat of the boll weevil, an invasive insect that seriously reduced cotton yields, the South’s principal crop at the time.

Eventually, program areas were expanded to include assistance with dairying, livestock production, agronomy, horticulture, farm marketing and plant and animal diseases. Youth outreach, typically through Boys and Girls clubs, the forerunners of 4-H clubs, was also a major focus.

Plans were also implemented to promote the rapid growth of programming targeted to women, with an emphasis on the expansion of female Extension agents. The work was targeted specifically to women and their needs rather than indirectly through farm demonstration agents and specialists pursuing the more general goal of improving agricultural and rural conditions.

– Jim Langcuster
Three Auburn students named Fulbright Scholars

Three Auburn University Honors College students have been awarded Fulbright Scholarships to continue their studies in the United Kingdom and Germany this summer and fall.

Jamesa Stokes, a senior physics major in the College of Sciences and Mathematics, will conduct research at the German Space Agency’s Institute of Structures in Design in Stuttgart, Germany; Carson Williford, a sophomore in the College of Liberal Arts with a double major in English and philosophy, will study at the United Kingdom’s Nottingham Trent University Summer Institute; and Lauren Waldroop, a senior double-majoring in environmental design and German, will study at Rhine-Westphalian Technical University in Aachen, Germany.

Auburn has had 10 Fulbright recipients in the past five years, and this year marks the first time with three winners in one year.

The Fulbright Program is the flagship international educational exchange program sponsored by the U.S. government and is designed to increase mutual understanding between the people of the United States and the people of other countries. Recipients are selected on the basis of academic or professional achievement, as well as demonstrated leadership potential.

Melissa Baumann, Auburn assistant provost and director of the Honors College, said the students have prepared well for their endeavors. “Their hard work and accomplishments at Auburn have been extraordinary. They will do well in their overseas studies.”

Stokes, of Atlanta, has completed internships with Goddard Space Flight Center in Greenbelt, Md., and the Jet Propulsion Laboratory in Pasadena, Calif. In addition, she was a Benjamin A. Gilman International Scholar to Reutlingen, Germany. Her research investigates the behavior of fiber-oriented ceramics during hyper-sonic flight in order to develop better thermal protection systems for spaceflight vehicles.

“I studied in Germany in the fall of 2012, and it was my first time traveling outside of the country, so it was truly an amazing experience,” Stokes said. “Now I can go back and experience more of Germany while doing research that interests me.”

Williford, a native of Auburn, holds a perfect 4.0 grade-point average and is co-creator and director of Student University, Auburn’s student presentation series. He is involved in several on-campus and off-campus programs including the Miller Writing Center, Auburn Connects book program and the Pine Hills Literacy Project.

“It’s an honor to be accepted into a program that has hosted so many brilliant participants and faculty and has such a strong reputation,” Williford said. “Dr. Paul Harris was an immense help throughout the application process, and I am thrilled to have the opportunity.”

Waldroop, an interdisciplinary student from Texas, is a founding member of the Environmental Design Student Organization; conducted research at the Cologne City Museum; and helped Tuskegee First United Methodist Church with its nomination for the National Register of Historical Places. She is minoring in international business and medieval, renaissance and early modern studies and will do a comparison of northern renaissance and southern renaissance architecture in theaters in Germany.

“My passion for historic preservation coupled with my love for Germany, its culture and people, allowed me to dream of one day living and working in that country,” Waldroop said. “The Fulbright Scholarship will allow me to take a step toward that dream, allowing the dream to take a step toward reality.”

Paul Harris, Honors College associate director for national prestigious scholarships and an assistant professor of political science, said new adventures await the new Fulbright Scholars. “They are about to embark on a global journey which will both challenge and inspire them. I wish them all the best as they go abroad and I look forward to hearing of their adventures. They will be wonderful ambassadors for the United States and Auburn University.”

– Lindsay Miles

Sustainability Awards presented to students, faculty, staff, alumni at Earth Day program

The Auburn University Office of Sustainability held its second annual Spirit of Sustainability Awards program on Earth Day, April 22, to recognize the accomplishments of students, faculty, staff and alumni who “exemplify the Auburn Spirit by promoting sustainability on campus and in the community.”

“Sustainability is a high priority for Auburn University, and there are a lot of people affiliated with Auburn who are doing impressive things. We want to make sure those folks are recognized and their work is celebrated,” said Mike Kensler, director of the Office of Sustainability.

Recipients were chosen by a panel of five judges and evaluated based on three criteria: motivation and commitment to sustainability; impact on behalf of sustainability; and the degree to which others are engaged and involved.

The 2014 award recipients are: Alexis Harrison, a junior studying environmental design in the College of Architecture, Design and Construction and minoring in sustainability; Sara Geonczy, a senior studying environmental science in the College of Agriculture; Sishil Bhavnani, Henry M. Burt Jr. Professor in the Department of Mechanical Engineering in the Samuel Ginn College of Engineering; Amanda Gale, an assistant professor in the Department of Consumer and Design Sciences in the College of Human Sciences; Michael Hein, William A. Hunt Professor in the McWhorter School of Building Science in the College of Architecture, Design and Construction; Christopher McNulty, a professor in the Department of Art in the College of Liberal Arts; Judd Langham, a landscape architect with 2D Studio L.L.C.; and Trey McDonald, sustainability coordinator at the University of North Carolina at Greensboro.

Group initiatives also were recognized and included the partnership of Auburn University Libraries and Facilities Management led by Robert Yerkey; Healthy Tigers, led by Tammy Hollis; and the Off Bottom Oyster Farming project led by Bill Walton of the Auburn University Shellfish Laboratory at Dauphin Island.

Consideration is given to initiatives in the areas of research, instruction, outreach and operations, and campus and community projects which have taken place within the last two years and have made a significant difference in the areas of nature, the economy, society or individual well-being.

“The program was created in part to generate awareness of sustainability initiatives and to acknowledge those who are making significant contributions,” Kensler said. “The Spirit of Sustainability Awards program is also intended to inspire further innovations, initiatives and actions toward a flourishing future.”

Farmers market opening at Ag Heritage Park

The Market at Ag Heritage Park will open for the season on Thursday, May 8, at 3 p.m. and will be open every Thursday from 3-6 p.m. through Aug. 21.

Located near the intersection of South Donahue and Lem Morrison drives, the market offers locally grown fruits and vegetables as well as other locally produced items, such as honey, goat cheese, cut flowers and baked goods. Hosted by the College of Agriculture, The Market at Ag Heritage Park often includes educational displays and the work of local artists.

On the third Thursday of each month before the market opens at 3 p.m., market-goers can explore the Medicinal Plant Collection, located off Woodfield Drive across from the Plant Science Research Center. From 2-3 p.m., garden manager Tia Gonzales will lead tours through the 35-plant collection, offering information about the medicinal properties of and tips on growing each plant. For details about the tours, contact greentia@live.com.
Provost Timothy Boosinger has announced the names of faculty who have been awarded promotion, tenure or both at Auburn University for 2014. The faculty members, by college, school and/or department, are:

**Associate Professor with Tenure**

**College of Agriculture:** Evaden Brantley and Brenda Ortiz, Crop, Soils and Environmental Sciences; Stephen A. Bullard, Eric J. Peatman and William Walton, Fisheries, Aquaculture and Aquatic Sciences; Leonardo De la Fuente, Entomology and Plant Pathology; James D. Spiers, Horticulture.

**College of Architecture, Design and Construction:** Darren Olsen and Mark Tatum, Building Science.

**Raymond J. Harbert College of Business:** LaKami Baker and Harvell Walker, Management; Justin Benefield, Finance; Jonathan Stanley, Accountancy.

**College of Education:** Megan E. Burton and Christine Guy Schnittka, Curriculum and Teaching; Gretchen D. Oliver, Kinesiology; Linda J. Searby, Educational Foundations, Leadership and Technology.

**Samuel Ginn College of Engineering:** Justin Marshall, Civil Engineering; Richard Sesek, Industrial and Systems Engineering.

**School of Forestry and Wildlife Sciences:** Christopher J. Anderson.

**College of Human Sciences:** Alecia Cleopatra Douglas, Nutrition, Dietetics and Hospitality Management.

**College of Liberal Arts:** Adam Jortner, David Luscok, Mark Sheftall and William Malczycki, History; Allison Plumb, Communication Disorders; Derek Ross and Susan Youngblood, English; Liliana Stern, Economics; Norman Youngblood, Communication and Journalism.

**Harrison School of Pharmacy:** Angela L. Calderon and Jianzhong Shen, Pharmacal Sciences.

**College of Sciences and Mathematics:** Paul Cobine, Biological Sciences; John Gorden, Chemistry and Biochemistry.

**College of Veterinary Medicine:** Peter Christopherson, Pathobiology; Jacob Johnson, Clinical Sciences.

**Librarian III with Tenure**

**Auburn University Libraries:** Toni Carter and Elizabeth Weisbrod.

**Librarian IV**

**Auburn University Libraries:** Marcia Boosinger, Claudine Jenda and Nancy Noe.

**Professor**

**College of Agriculture:** John Fulton and Yifen Wang, Biosystems Engineering; Terrill Hanson, Fisheries, Aquaculture and Aquatic Sciences; J. Scott McElroy, Crop, Soils and Environmental Sciences; W. Frank Owsley, Animal Sciences; Norbert Wilson, Agricultural Economics and Rural Sociology.

**Raymond J. Harbert College of Business:** Duane Brandon and Jennifer Mueller, Accountancy; Casey Cegielski, Dianne Hall and Allison Jones-Farmer, Aviation and Supply Chain Management; Beverly Marshall, Finance.

**College of Education:** Margaret E. Shippen, Special Education, Rehabilitation and Counseling; Wendi Weimar, Kinesiology; Maria Martinez Witte, Educational Foundations, Leadership and Technology.

**Samuel Ginn College of Engineering:** Saad Biaz, David Umphress and Levent Yilmaz, Computer Science and Software Engineering; Virginia Davis, Chemical Engineering; Kevin Gue, Industrial and Systems Engineering; Dan Mackowski, Mechanical Engineering.

**College of Liberal Arts:** Craig Bertolet, English; Morris Bian, History; Barbara Bondy, Art; Sridhar Krishnamurthy, Communication Disorders; Giovanna Summerfield, Foreign Languages and Literatures.

**College of Sciences and Mathematics:** Nedret Billor, Mathematics and Statistics; German Mills, Chemistry and Biochemistry.

**College of Veterinary Medicine:** Benson Akingbemi and Ya-Xiong Tao, Anatomy, Physiology and Pharmacology; Robert Kennis, Clinical Sciences.

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**Office of the Provost announces tenure, promotion list for 2014**

In addition, the provost has announced the names of faculty promoted to the positions of associate clinical professor, associate research professor, research professor and senior lecturer for 2014. They are:

**Associate Clinical Professor**

**Harrison School of Pharmacy:** Bradley M. Wright, Pharmacy Practice.

**College of Veterinary Medicine:** Stephanie Schleis, Clinical Sciences.

**Associate Research Professor**

**Samuel Ginn College of Engineering** James Richard Willis, Civil Engineering.

**College of Sciences and Mathematics:** Ayayi Claude Ahyi and Connor Balance, Physics.

**Research Professor**

**College of Veterinary Medicine:** Michael H. Irwin, Pathobiology, and Tatiana I. Samoylova, Scott-Ritchey Research Center.

**Senior Lecturer**

**Samuel Ginn College of Engineering:** Edward W. Davis, Polymer and Fiber Engineering, and William Josephson, Chemical Engineering.

**College of Veterinary Medicine:** Jennifer Spencer, Pathobiology.

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**RFID Research Center**

Continued from Page 1

“Moving to Auburn is a big step up for the RFID program,” RFID Lab Managing Director Justin Patton said.

He added, “With Auburn’s world-class programs in wireless engineering, apparel studies, and supply chain, among others, industry sponsors are excited for the lab to simultaneously continue to focus on RFID in retail and broaden its scope to other areas within retail and outside retail, such as food safety.”

The lab will also maintain a research relationship with the University of Arkansas’ Sam M. Walton College of Business Department of Supply Chain Management and the Center for Advanced Spatial Technology.

RFID has advanced well beyond its initial application as a supply chain tool to track inventory. Since the early 2000s, retailers like Walmart, Macy’s and American Apparel have found other applications for RFID. They rely heavily on microchip RFID tags to do such things as improve on-shelf availability, detect and prevent theft, find a product’s present location, verify its sell-by date and track quantities sold.

“Consumers can and do shop in totally new ways, and retail stores are reshaping themselves from the ground up to try to understand how to best serve the modern shopper,” Patton said. “We’ve spent years developing key relationships with innovation teams from retailers and manufacturers. Auburn will be at the forefront of this crucial shift, and perfectly positioned to support and assist retailers and manufacturers as they redefine how stores will operate for the next 20-30 years.”

The 13,000-square-foot RFID Lab, located in a converted supermarket a few miles from the heart of campus, will include factory, warehouse, distribution center and various retail, grocery and convenience store formats – including mall apparel and high-end fashion boutiques. The lab will focus on the quickly changing face of physical retail stores in the modern era of widely available “disruptive technology,” and will facilitate experimentation with future store layout and shopping experience concepts.

Patton said the lab’s research broadening interests will also include visual identification technologies and food safety/quality.

— Troy Johnson