

CSET News

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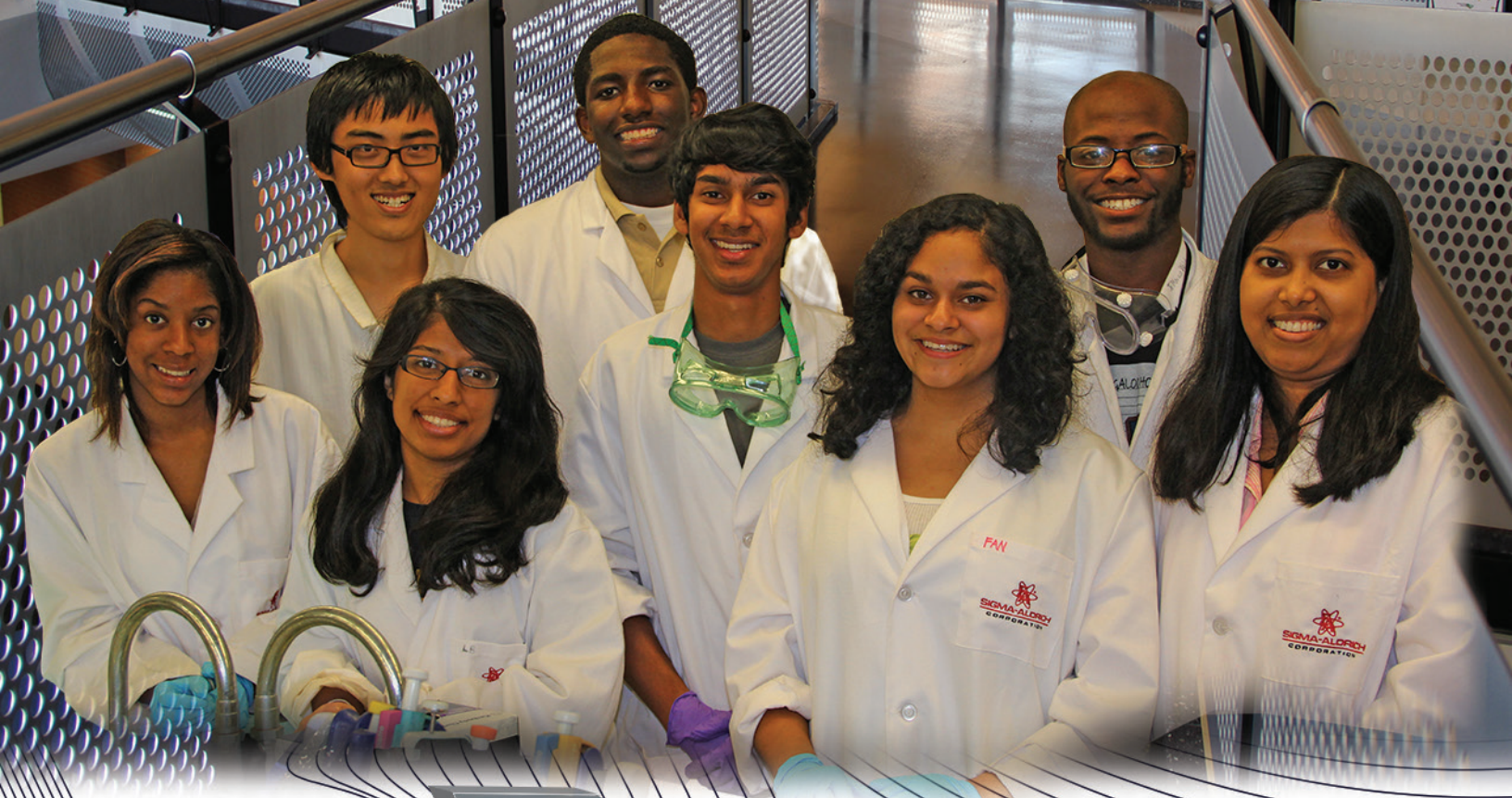
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JSU Welcomes New CSET Dean



Dr. Richard Aló, Dean
College of Science, Engineering & Technology

Dr. Richard Aló comes to JSU from the National Science Foundation where he served as a Program Director in the Directorate for Education and Human Resources and Division of Undergraduate Education. He was serving concurrently as the Executive Director of the Center for Computational Sciences and Advanced Distributed Simulation at the University of Houston-Downtown. At JSU he also holds the rank of Professor of Computer Science.

“Aló brings a deep level of teaching, research and leadership experience to Jackson State that will help our College of Science, Engineering and Technology soar to even greater heights,” Meyers said. “He is not only a scholar and innovator, but is a strategic and collaborative leader who has been highly effective at cultivating the next generation of science, engineering, technology and mathematics professionals.”

Dr. Aló joined the faculty of the University of Houston-Downtown in 1982 as a professor and chair of the Department of

Computer and Mathematical Sciences and served as department chair until 1995. From 1995 to 2010, he was executive director for Grants and Contracts for the university's College of Science and Technology. He has previous teaching experience at the Pennsylvania State University, Carnegie-Mellon University, Lamar University, the Indian Institute of Technology in Kanpur, India, and the Università degli Studi di Siena, the Università degli Studi di Parma and Scuola Normale in Italy. He earned an M.A. and Ph.D. in mathematics with a minor in computer science from the Pennsylvania State University and a B.A. in mathematics from Gannon College.

Aló's current research interests include artificial intelligence, biomedical and generalized information systems, synthetic environments and distributed simulations, computer science education, computational science, grid computing, cyber infrastructure, text processing, medical applications, and visual analytics. He has published more than

150 professional papers, co-authored a graduate text for Cambridge University Press and has delivered more than 200 research presentations. He is the recipient of the Hispanic Engineers National Awards and Achievement Conference 2002 Educator of the Year.

Dr. Aló has served on numerous advisory and executive boards including the Mathematical Association of America's Committee on Exchange of Information for Mathematics and Committee for the Undergraduate Program in Mathematical Sciences; the Association of Departments of Computer and Information Science and Engineering at Minority Institutions (ADMI- founding member); Coalition to Diversify Computing (founding member and 2000- 2002 co Chair); Chair- The Richard Tapia 2001 Symposium to Diversify Computing - Houston, Texas; Co Chair- Education Committee for Supercomputing 2002 International Conference; The Multi-Sector Crisis Management Center- Washington, DC; the American Mathematical Society Student Advisory Panel; the Center for Education in International Community (founding member); the Houston Independent School District's NSF Urban Systemic Initiative for reform of K through 12 science and mathematics education; the NSF Computer and Information Science and Engineering Policy Board for Minority Education Funding; the National Science Board's US Government Performance and Results Act Oversight Committee for the National Science Foundation; the American Indian Higher Education Consortium, Education and Outreach Committee; Director of the NSF Minority Serving Institutions Cyberinfrastructure Empowerment Coalition; Computing Alliance for Hispanic Serving Institutions (founding member); co Director of NSF BPC Advancing Females to the Professoriate in Computing; the Hispanic Association of Colleges and Universities STEM Advisory Board; Engineering for the Americas; Vice President for Finance for Latin American and Caribbean Consortium of Engineering Institutions (founding member), and President of the Houston International Dance Coalition.

NSF Grants JSU \$3 Million for Materials Research and Education

Jackson State University has been awarded one of six Partners for Research and Education in Materials (PREM) awards from the National Science Foundation as a result of the 2012 PREM competition.

The PREM award, which amounts to \$3 million over five years, will help fund JSU's research in the area of multifunctional nanomaterial.

JSU chemistry and biochemistry professor Paresh Ray "We are aiming to make nanosensors, which can be used in the purification of water and cleaning contaminants from food samples," said chemistry and biochemistry professor Paresh Ray, who is the project's principal investigator.

The funds also will help JSU researchers develop new materials including multifunctional hybrid nanomaterials made from gold and carbon nanotubes.

"This helps Jackson State continue materials research," said Ray, who leads JSU's Center for Nanoscience and Nanotechnology. "Before PREM, we really didn't have any materials research."

The Jackson State University PREM also will fund educational and outreach activities including NanoDay events at local high schools, the Mississippi Museum of Natural Science and the Memphis Zoo, and the development of a



cooperative materials science Ph.D. program in partnership with the University of California at Santa Barbara MRSEC.

The PREM award is the second received by JSU. In 2006, the university received a \$2.75 million PREM award, which Rays said helped bolster the success of the Center for Nanoscience and Nanotechnology.

Over the last five years, center researchers have published 78 papers in top-quality journals, Ray said, and high school and college students trained at the center have gone on to study at leading universities including Rice, Purdue and the University of California, Berkeley.

The other 2012 PREM award

recipients include the California State University, Howard University, Norfolk State University, Texas State University – San Marcos and the University of Texas at El Paso.

The new partnerships will impact a wide range of materials research and education, including nanomaterials and nanotechnology, biomaterials and biotechnology, electronics, spintronics, soft materials, polymers and materials for renewable energy.

The objective of the PREM program is to broaden participation of underrepresented minorities and enhance diversity in materials research and education. This is accomplished by stimulating the development of formal, long-term, multi-investigator, collaborative research and education partnerships between minority-serving colleges and universities and NSF's Division of Materials Research (DMR)-supported centers, institutes and facilities.

These awards were made possible through partnership with DMR; the EPSCoR program in NSF's Office of Integrated Activities; and the Historically Black Colleges and Universities Undergraduate Program and Research in Disabilities Education program in NSF's Education and Human Resources directorate.

Female Faculty Work to Understand Gender Bias in the Academy



Female faculty members from Jackson State University's Science, Technology, Engineering and Mathematics (STEM) and Social and Behavioral Sciences (SBS) disciplines gathered at the Mississippi e-Center @ JSU on Dec. 10 to offer insight into the perceptions and realities of gender bias toward single and married/partnered academic women in the STEM and SBS areas. Many of the partnered women were joined by their spouses/partners, who also participated in the workshop.

JSU President Carolyn W. Meyers (left) participated in the JSUAdvance workshop, "The Academic Woman: Balancing Responsibilities, Expectations and Biases." Also pictured are JSUAdvance principal investigator Loretta Moore (standing), psychology professor Debra Pate (next to Meyers), biology professor Jacqueline Stevens, Mississippi College law professor Angela Kupenda, psychology professor Kaye Sly and political science professor Lenice Davis.

"Two of the things we wanted to look at was the impact of marital status on advancement in the academy and the impact of a woman's degree or the professoriate on her marital status," said Loretta Moore, who is the interim associate dean of JSU's College of Science, Engineering and Technology and principal investigator of the JSUAdvance program, which

organized the workshop.

Funded by a \$3.5 million grant from the National Science Foundation,

JSUAdvance is a five-year project designed to advance the careers of STEM and SBS women faculty and transform the institutional climate of Jackson State University.

University of Alabama at Huntsville communication arts professor Eletra S. Gilcrist facilitated a session during the Dec. 10 JSUAdvance workshop. Gilcrist is the editor of "Experiences of Single African-American Women Professors: With this Ph.D., I Thee Wed."

Close to 40 people participated in the Dec. 10 seminar including JSU President Carolyn W. Meyers, the majority of JSU's STEM and SBS female faculty members, most of their spouses/partners and national experts on issues that face women in the academy.

"It was great that Dr. Meyers came out and supported the event," Moore said. "It means a lot to the women faculty who were there."

Although women faculty serve in leadership positions at JSU and other universities, those in the STEM and SBS disciplines are notably less visible in administration levels.

The JSUAdvance project is expected to add an understanding of the

issues that impact women faculty in the STEM and SBS disciplines and promote strategies that JSU and other Historically Black Colleges and Universities can adopt. It is also expected to foster a culture that seeks the inclusion of faculty regardless of gender, race and other target characteristics.

Spouses and partners of JSU female faculty took part in a focus group to help understand the unique challenges facing academic women in the STEM and SBS disciplines, particularly women of color. Pictured are chemistry professor John Watts (left), Reginald Buckley, Mississippi e-Center @JSU executive director William McHenry and facilitator Anthony L. DePass, assistance vice president for research development at Long Island University.

"The majority of married female faculty in STEM and SBS at Jackson State have spouses who work outside of the university," Moore said. "We had some great suggestions coming out of the event that will help support the women in their advancement. For example, the men at the workshop said they would like to continue to meet to build a community of spouses of STEM and SBS faculty."

Chemistry Chair Recognized for Advancing Diversity

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The Committee on Minority Affairs at the American Chemical Society (ACS) has selected Jackson State University Department of Chemistry and Biochemistry chair Hongtao Yu as the recipient of the Stanley C. Israel Regional Award for advancing diversity in the chemical sciences. The award was presented at the Southeast Regional Meeting of ACS in Richmond, Va. Yu's award recognizes his vision and dedication in initiating major recruiting efforts, developing relationships with high schools and colleges, developing mentorship programs for junior faculty and students, and working with students to encourage them to pursue advanced degrees.

"This ACS award is truly for the department and for JSU," Yu said. "There are many great programs at JSU's College of Science, Engineering and Technology initiated by the deans for student recruitment, development and graduation."

Yu credited his department's faculty, staff and students for tripling both undergraduate and graduate enrollment and doubling the number of faculty and student publications.

"My job is easy since I have world-class researchers and student mentors such as professors Jerzy Leszczynski and Paresh Ray," Yu said. "It is also easy to do my job to have faculty members such as professor Glake Hill, who has the same vision for recruiting and nurturing students."

Yu joined the Jackson State

University faculty in 1996 and in 2003 was appointed chair of the chemistry department, which is now called the Department of Chemistry and Biochemistry. Under Yu's leadership, the department has become one of the most published chemistry departments in the southern United States with more than six peer-reviewed articles per faculty per year.

As one of the three Ph.D. degree-granting chemistry departments among the nation's 115 Historically Black Colleges and Universities, JSU fosters a culture and environment conducive for underrepresented minorities, especially African Americans, to become leading scientists in chemical sciences and related fields. According to the 2011 rankings by *Diverse Issues in Higher Education*, JSU ranks second in the nation for awarding African Americans with master's degrees in physical sciences, third for bachelor's degrees and fourth for doctoral degrees in physical sciences. The rankings are largely due to the number of students earning chemistry degrees.

Yu earned a bachelor's degree in chemistry from the University of Science and Technology of China, a master's in chemistry from the Chinese Academy of Sciences and a Ph.D. in organic and biochemistry from Technical University of Munich, Germany. He is the recipient of numerous awards including the Mississippi State Legislature HEADWAE Outstanding Faculty Honoree Award, the National ChemLuminary Award for "Best

Activity with Underrepresented Minority Students and/or Organizations" from the American Chemical Society and the Leadership in Doctoral Education Award from Jackson State University.



**Dr. Hongtao Yu, Chair
Department of Chemistry and
Biochemistry**

Interim Assoc. Dean Appointed Assoc. Vice President for Research and Scholarly Engagement



Dr. Loretta A. Moore, who since 2011 has served as interim associate dean for the College of Science, Engineering and Technology at Jackson State University, has been appointed Associate Vice President for Research and Scholarly Engagement.

In this new role, Moore will lead JSU's new Academy for Research and Scholarly Engagement, which will work to enhance the scholarly careers of JSU faculty members. As a part of the academy, she will also lead the Jackson State's Center for University Scholars.

"The academy will be targeted toward junior faculty members who have yet to establish a strong grantmanship record and people at the associate or full professor level who are trying to reemerge with a new or different research focus," Moore said. "Having the opportunity to work campus wide

with all five colleges is very exciting. It will allow me to use some of my strengths to help our faculty identify funding for research and scholarly endeavors."

Moore's new role parallels nicely with the ongoing efforts of the National Science Foundation funded JSU Advance project, for which she serves as principal investigator. That project focuses on advancing the careers of female faculty members in the Science, Technology, Engineering, and Mathematics (STEM) and Social and Behavioral Science (SBS) disciplines.

The new academy and the Center for University Scholars will be housed in the Division of Research and Federal Relations.

"We expect this new academy to help foster even more research and innovation among our faculty," said Dr. Felix Okojie, vice president for

Research and Federal Relations. "We look forward to having Dr. Moore on our team."

Moore joined JSU's faculty 14 years ago as professor and chair of the Department of Computer Science. She has held positions at Auburn University, AT&T Bell Laboratories, Lawrence Livermore National Laboratory, Army Research Laboratory, NASA Kennedy Space Center and NASA Marshall Space Flight Center. Moore's current research is in the area of computational thinking and in the application of intelligent techniques to cyber security, visual analytics and visualization. She has received funding from agencies including the National Science Foundation, Department of Homeland Security, Department of Justice, Department of Energy – Lawrence Livermore National Laboratory, Army Research Laboratory, NASA Kennedy Space Center, NASA Marshall Space Flight Center, NASA Headquarters, and Jacobs Technology. Moore serves as a commissioner for the Computing Accreditation Commission of ABET. Dr. Moore is a member of the Board of the Association of Departments of Computing at Minority Institutions (ADMI); she also holds membership in ACM, IEEE, and AAUW organizations. She previously served as a member of the U.S. Army Science Board. She is active in the recruitment, retention, and promotion of African-American computer scientists. Moore received her B.S. degree in Computer Science from Jackson State University and her M.S. and Ph.D. degrees in Computer Science from the Illinois Institute of Technology.

WeatherVision Launches At JSU



Jackson State University has launched a partnership with WeatherVision – which provides weathercasts to more than 100 stations nationwide – that will expand JSU’s broadcasting network and help train the next generation of meteorologists. A grand opening event was held Thursday, Sept. 13, at the JSU Digital Media Center at the Mississippi e-Center @JSU.

Jackson Mayor Harvey Johnson Jr. and JSU meteorology student Jessica Foxworth, a senior from Belzoni, Miss., spoke at the event.

“This is a fabulous idea,” Foxworth said of the partnership. “Not only can students relay their messages to a national audience, but they can make their own forecasts.”

The custom weathercast company and its low-power radio station WLEZ-FM moved over the summer into the Mississippi e-Center @JSU, which houses the JSU Digital

Media Center. The center includes

WJSU 88.5 FM, JSU TV, TV 22, the JSU Tiger Sports Network and JSU Video Streaming.

“WeatherVision is a natural fit for Jackson State University because it will give our students real-world experience while expanding our broadcast capabilities,” said JSU President Carolyn W. Meyers. “Now JSU can be seen and heard around the world. That’s innovation.”

WeatherVision CEO and meteorologist Edward Saint Pé said he had long envisioned forming a broadcast meteorology program at Jackson State.

“Students will be able to take classes that are directly involved with TV broadcast of on-air meteorology as part of their coursework, like a laboratory,” he said.

The wide scope of WeatherVision — more than 100 stations in markets from Miami to Memphis to Rochester, N.Y. — will enable students to gain

practical experience by doing live broadcasts for some of those stations as well as JSU TV.

WeatherVision, planning to partner on sales and advertising projects with JSU’s mass communications and athletic departments, is further expected to increase exposure for the university by “allowing professors to be interviewed by other institutions and, perhaps, include distant learning applications,” Saint Pé said.

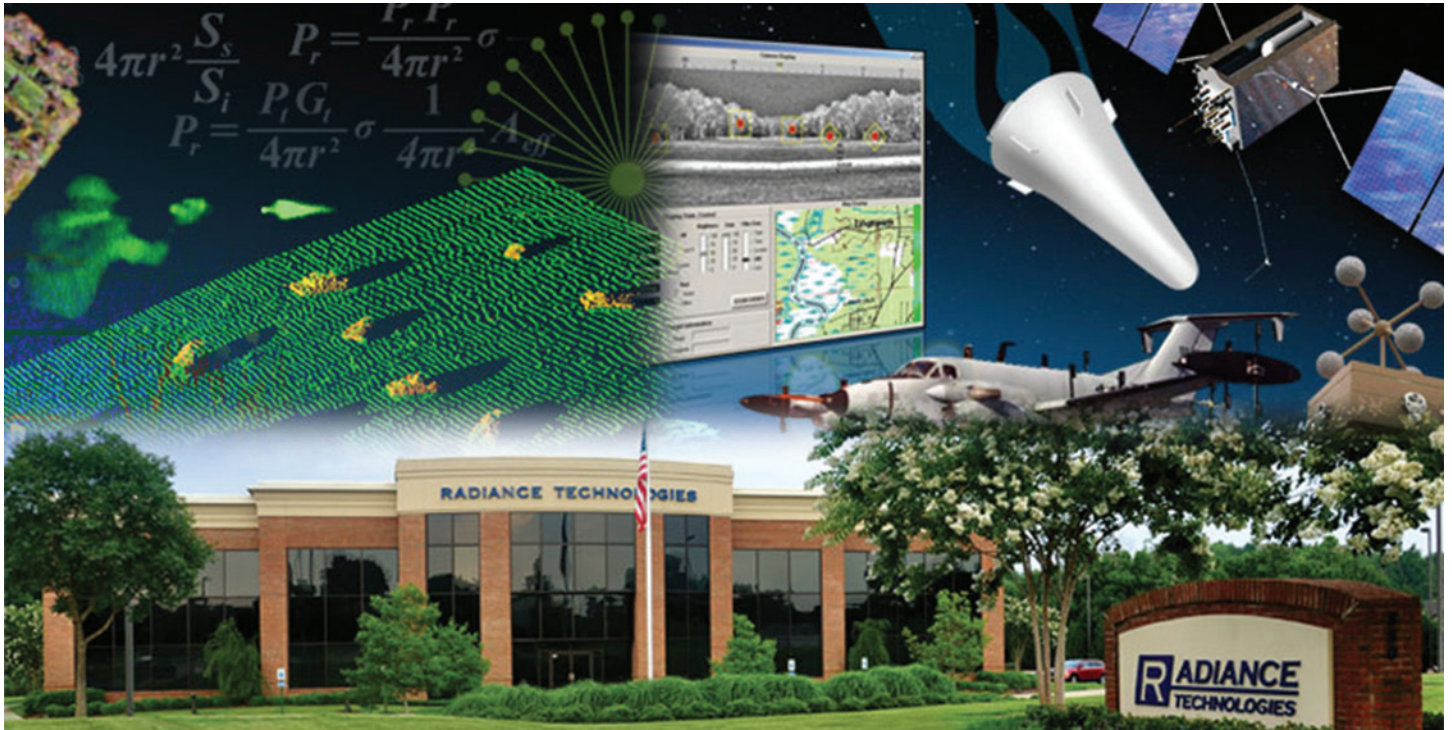
The importance of exposure is a business tenet for Saint Pé.

When changing technology made WeatherVision’s use of satellite uplink obsolete, he continued to make it available to major networks and cable outlets such as CNN and MSNBC when locals were booked for guest appearances or interviews.

It gives Jackson a valuable “link to the national media,” Saint Pé said.

In yet another avenue, WeatherVision’s trove of nearly 500 movies will help JSU TV broaden its programming. The movie segment of the company is tied to one of Saint Pé’s personal passions — acting. Saint Pé is the founder and director of the Mississippi Film Institute, which produces the Mississippi International Film Festival each fall at the Russell C. Davis Planetarium.

JSU To Serve As Academic Partner In Radiance Technologies Contract



Radiance Technologies Inc., announced that it has been awarded a \$300 million ID/IQ contract for Agile Cyber Technology through the Air Force Research Lab (AFRL). Jackson State University will be the academic partner in this important effort, which will develop cutting-edge cyber hardware and software tools, supporting the Air Force in the cyber domain.

“Jackson State University’s intellectual capital and research capabilities played an important role in the award of this ID/IQ contract,” said Felix Okojie, JSU Vice President for Research and Federal Relations. “This is a demonstration of our value-added proposition to the economic development of our state.”

Radiance and JSU have worked together for more than five years supporting NASA, the Depart-

ment of Marine Resources, the Department of Homeland Security, the U.S. Army Space and Missile Defense Command and the U.S. Army Corps of Engineers. The expert blending of university research expertise and real world industry engineering has provided the necessary capability to transition application research into operational use.

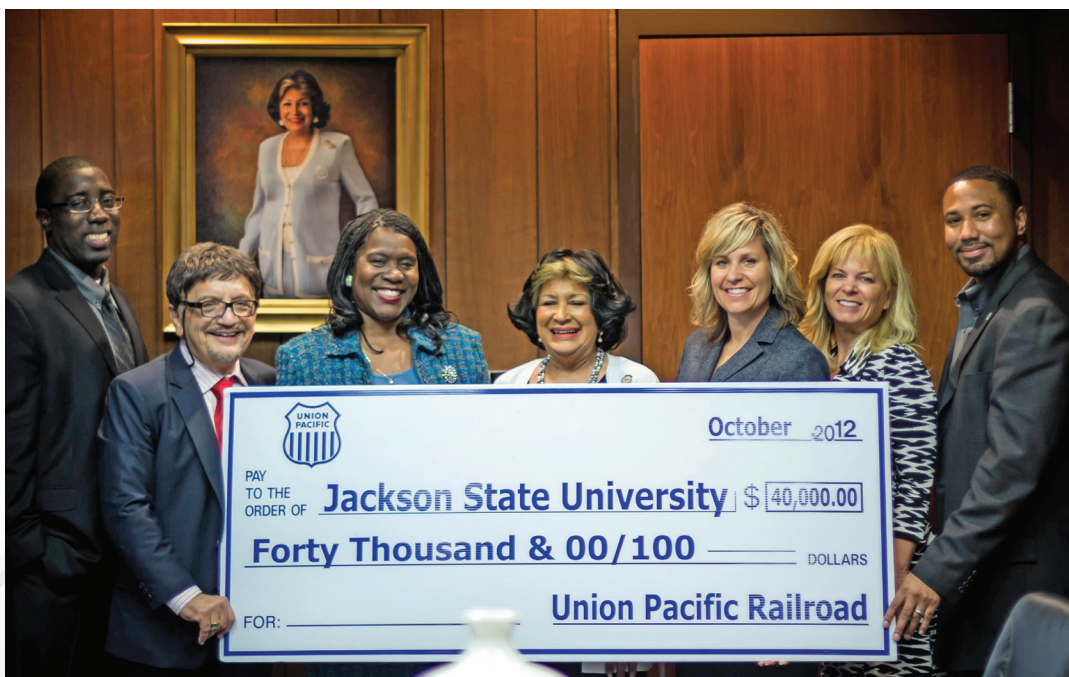
Jackson State University has outstanding faculty and staff who are on the cutting edge of robotics, cyber security, cyber forensics, high performance computing and data mining. Research divisions managed under the College of Science, Engineering and Technology will support this cyber contract.

“This is a major win for our Mississippi team and highlights our ability to provide innovative cyber solutions for our customers,” said Tom Strange, Radiance Vice Presi-

dent. “Cyberspace is the unknown battleground of the 21st century, and the ability of our war fighters to dominate this environment is dependent on cutting edge technologies being developed by industry leaders and academia.”

Headquartered in Huntsville, Ala., Radiance Technologies is a systems engineering, technology development and prototyping company that for eight years has maintained a growing office in Jackson, Miss. Core competencies of the Jackson office include software development, geospatial applications development, software engineering, numerical analysis and intelligence analysis. Radiance and Jackson State are very excited about their continued partnership on this cyber contract and the opportunities it will bring.

Union Pacific Railroad Presents JSU With \$40K Gift



Representatives from Union Pacific Railroad visited Jackson State University on Oct. 4 to present a \$40,000 contribution as part of the company's long-standing relationship with the university.

"Education is an investment in our future," said JSU President Carolyn W. Meyers. "We believe this is the right kind of partnership. When we do the business of education well, the whole society benefits."

Over the last decade, Union Pacific has contributed more than \$440,000 to JSU for scholarships and curriculum development and has recruited dozens of JSU students and graduates to work as interns and in full-time positions. Currently, 38 JSU graduates work in various capacities throughout the company.

Union Pacific college recruiter and JSU grad John McPherson Jr. (left), College of Science, Engi-

neering and Technology dean Dr. Richard Aló, College of Business dean Dr. Glenda Glover and JSU President Carolyn W. Meyers join Union Pacific recruitment team members Kate Betsworth, Kay Ward and Lovell Cox, also a JSU alum.

Jackson State 2001 graduate Lovell Cox joined Union Pacific after graduation and today works as Director of Sales-Industrial Products for the company's Marketing & Sales division. He returned to campus Oct. 4 to help deliver the contribution and meet with JSU students interested in working for the company.

"We're very proud of the pipeline of students we've recruited," he said of JSU students.

Union Pacific and Jackson State began formulating a strategy in 2001 to increase student interest in career opportunities with the railroad company. Working in

close coordination, qualified students were identified, interviewed and hired by Union Pacific. Additionally, the College of Business' Career Management and Placement Center is named after Union Pacific Railroad.

Due to the strength of the relationship between JSU and Union Pacific, the company has named the university a Tier 1 school for recruiting. The Tier 1 status provides scholarships, supports curriculum development and enables funding for recruitment at JSU.

Union Pacific offers employment opportunities to JSU graduates in a variety of disciplines including finance, information technology, marketing and sales, operations supply and distribution services.

"When JSU graduates come into our company, it really is another family they're joining," said Kate Betsworth, Union Pacific Executive Sponsor.

State Farm Presents \$50K Grant to Fund JSU Mobile Application Lab



State Farm presented a \$50,000 check to the Jackson State University Department of Computer Science.

The State Farm grant stems from JSU's long-standing partnership with the insurance company. For more than a decade, JSU's Computer Science Department has supplied State Farm with qualified recruits, and the insurance company has supported the department with numerous grants.

This year's grant will be used to set up a mobile application development lab equipped with Apple equipment.

"We will also be able to hire students as researchers in that lab," said Dr. Jacqueline Jackson, assistant professor in the Department of Computer Science. "We're tying our research to the university's iPad initiative."

Through a Mississippi e-Center Foundation program called the iPad Technology Advantage Scholarship Initiative, JSU freshmen this year received iPads to

assist in their learning. The program integrates the device into the curriculum and is tracking students' learning through an intensive two-year study.

State Farm's support of JSU is part of the company's effort to help lure more students into high-tech careers. Despite the growing demand for computer programmers and software engineers, the number of people graduating with computer science or computer engineering degrees has declined nearly 40 percent over the past decade. And while the number of students enrolling in programs is starting to pick up, the need for programmers keeps outpacing the supply. According to the U.S. Bureau of Labor Statistics, jobs for computer programmers and software engineers are projected to increase by 21 percent through 2018, which is much faster than the average for all occupations.

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(School of Science & Technology Degrees
-continued)

- B.S. Civil Engineering
 - Environmental Track
 - General Civil Engineering Track
- B.S. Computer Engineering
- B.S. Computer Science
- B.S. Electrical Engineering
 - Biomedical Engineering
 - General Electrical Engineering Track
 - Power Systems
- B.S. Telecommunications Engineering

- M.S. Computer Science
- M.S. Engineering
 - Civil Engineering
 - Computer Engineering
 - Computational Engineering
 - Electrical Engineering
 - Environmental Engineering
 - Geological Engineering
 - Telecommunications Engineering

School of Science & Technology Degrees

- B.S. Biology
 - Biomedical Science
 - Environmental Science
 - Forensic Science
 - Marine Biology
 - Pre-Chemical Engineering
 - Pre-Health Careers (Medicine, Pharmacy, Dentistry)
- B.S. Chemistry
 - Biomedical Science
 - Environmental Science
 - Forensic Science
 - Pre-Chemical Engineering

- Pre-Health Careers (Medicine, Pharmacy, Dentistry)
- Teacher Certification
- B.S. Earth Systems Science
- B.S. Industrial Technology
 - Computer Technology
 - Electronics
 - Emergency Management
 - Manufacturing & Design Technology
 - Technology Management
- B.S. Mathematics
- B.S. Meteorology
- B.S. Physics
- B.S. Science Education
- B.S. Technology Education
- B.S. Ed. Mathematics Education
- M.S. Biology
- M.S. Chemistry
- M.S. Environmental Science
- M.S. Hazardous Materials Management
- M.S. Industrial Technology
- M.S. Mathematics
- M.S. Technology Education

- M.S.T. Mathematics & Science Teaching
 - Biology
 - Chemistry
 - Mathematics
 - Science

- Ph. D. Chemistry (Analytical, Biochemistry, Inorganic, Organic and Physical Chemistry)
- Materials Science
- Ph. D. Environmental Science