**Senior Design Projects show real promise**

Before receiving their degrees May 9, graduating engineering and computer science seniors had one last chance to show their professors how prepared they are for the workplace, or for those going to graduate school, how ready they are for the challenges ahead. To the amazement of onlookers, including industry representatives, potential employers, and family members, the students presented design projects with potential for real world application.

The projects, a final requirement for graduation, included experiments ranging from how to control the shockwave on a reentry vehicle from outer space, to designing a magnetic generator that harnesses the energy produced when the magnetic fields interact, and developing a close-out cover for space Crew Launch Vehicle

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**Dr. Reddy receives prestigious Carver award**

Noting his immense contribution to improving the lives of people in Africa through sustainable agriculture, the United State Agency for International Development (USAID) has named Dr. Chandra Reddy, the recipient of the prestigious 2007 George Washington Carver Agricultural Excellence Award.

Dr. Reddy, an agronomist, soil scientist and a longtime professor at Alabama A&M University, will receive the award medallion from USAID Administrator Henrietta H. Fore during the White House Initiative on HBCU’s 2008 National HBCU Week Conference. The award includes a $5,000 honorarium. As the host university of Dr. Reddy’s international development work, Alabama A&M University will also receive a plaque.

The George Washington Carver Agricultural Excellence Award recognizes individuals whose work encompasses the science and practice of activities related to the production, processing, marketing, distribution, utilization, and trade of food, feed and fiber.

Dr. Reddy was nominated for the award by Dr. James Lowenberg DeBoer, associate dean and director of international programs in agriculture at Purdue University.

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Dr. Cathy Qian, associate professor of Mechanical Engineering, has won a U.S. Department of Energy (DOE) award that is providing scholarships to 11 undergraduate science and engineering students at AAMU.

Dr. Qian’s award, received as a result of her work on “Continuing High Performance Computing Research and Education at AAMU,” is providing $1,500 each to the students as DOE Computational Science Scholars.

The scholarship recipients are from the Departments of Chemistry, Biology, Mechanical Engineering, Electrical Engineering and Civil Engineering.

Dr. Qian, along with Dr. V. Trent Montgomery, dean of the School of Engineering and Technology, joins the 11 scholarship recipients during a ceremony in the School of Engineering and Technology in April.

Five AAMU students win Space Grant awards

Congratulations are in order for five Alabama A&M students for winning this year’s Alabama Space Grant Consortium (ASGC) scholarship and fellowship awards.

The award winners, two graduate and three undergraduate students, whose interests are in fields related to space science, were selected based on strong academic performance.

Graduate students Timothy E. Baldwin, of Charlotte, North Carolina; and Eugene L. Harris, of Columbus, Mississippi, will each receive a one-year (renewable) fellowship of $24,000.

Undergraduates Tamara D. Edwards, of Spanish Fort, Ala.; Larry D. Calhoun, of Tallahassee, Fla.; and Kamil H. Hollis, of Huntsville, will receive $1,000 each a year. Their scholarships are also renewable.

As NASA Space Grant Fellows, Baldwin, with a Plant and Soil Sciences concentration; and Harris, Physics, will do their field works at the NASA Marshall Space Flight Center, according to a letter from Dr. John C. Gregory, director of ASGC.

“Your proposal and academic preparation to date indicate all of the potential for a successful future as an aerospace professional,” Gregory told the new NASA fellows.

Baldwin and Harris maintain a 4.0 GPA.

The ASGC, a participant in the National Space Grant College and Fellowship Program, comprises Auburn University, Alabama A&M University, the University of Alabama, the University of Alabama in Huntsville, the University of Alabama in Birmingham, the University of South Alabama and Tuskegee University.

The ASGC campus director for Alabama A&M University is Dr. V. Trent Montgomery, dean of the School of Engineering and Technology.
Averting the current energy, environmental crises
AAMU planner offers ideas to beat the high transportation cost
by Jerome Saintjones

In order to substantially reduce energy consumption and to make significant strides in the reduction of pollution, everyday people will have to make some major adjustments in their modes of transportation, says an Alabama A&M University planner.

According to Dr. Jacob O. Oluwoye, an associate professor in AAMU’s Department of Community Planning and Urban Studies, the only way the United States can ease its growing dependence on foreign oil from politically unstable countries is to develop a citizenry more amenable to simply walking, as well as to invest in more advanced and strategic alternative modes of travel.

And, although the use of biofuels as a viable alternative to gasoline or diesel fuel has been popularized by several proponents, Oluwoye cautions that those same advocates fail to address several real-world problems, namely the issues of cost effectiveness, environmental impact and energy balance.

“Walking has always been the main mode of travel,” Oluwoye says. “Walking accounts for 50 percent of journeys, and half the population relies on walking as the only means of travel during a typical work day.” He adds that even families who own cars still have to complete their journeys on foot.

Oluwoye realizes that the sprawl resulting from the shift from public transportation to automobiles has meant that people live greater distances from urban centers and their places of work. Yet, the transportation expert believes adequate planning, transportation technology, government infrastructure development and behavior modification on the part of individuals can result in less energy consumption and less overall pollution over the long term.

For instance, Oluwoye insists that bicycles should be used rather than cars for distances ranging from 5-10 kilometers (3-6 miles). He notes that twice as many passenger miles would be realized by the gradual shift from cars to public transport. Similarly, a shift from travel by air for distances up to 1,000 kilometers (a little over 600 miles) to travel by high speed train would also yield sizeable energy savings, Oluwoye says.

The associate professor says his plan demands significant improvements in public transport facilities and the accommodation of cyclists into the greater transportation scheme. Moreover, pricing and incentive instruments will have to be used to lure individuals toward public transit, as well as to induce the buy-in of businesses and municipalities.

In order to help reduce citizens’ spiraling dependence on oil, Oluwoye’s plan also calls for strong and decisive action on the part of officials at all levels of government. This translates into the reduction of parking facilities for commuter traffic by the manipulation of pricing, volume and regulations; and increasing the attractiveness of public transport by boosting capacity and infrastructure, service and comfort, and speed and prices.

Moreover, the comprehensive plan emphasizes the optimum use of physical planning, public transport orientation of land uses, financial incentives for commuters, and information about cycling and mobility behavior.
SAIC Oakridge, Tenn., (Mentor) & SpecPro Environmental Services, LLC (Protégé) and Rolls-Royce Corporation (Mentor) & Manzi Metals, Inc. (Protégé) are the winners of this year’s DOD Mentor Protégé award. The mentoring assistance was provided by the Alabama A&M University Research Institute to these protégés.

As the A&M University contract arm, the Research Institute has been a winner of at least one award every year since winning their first award in 2002. The exceptions are 2004 and 2006, taking home two and three respectively.

The Nunn Perry award recognizes outstanding Mentor Protégé teams in achieving cost efficiencies, enhancing the protégé’s technical capabilities and increasing new business opportunities for DOD prime contracts and subcontracts. The award is named in honor of former Senator Sam Nunn and former Secretary of Defense William Perry, whose sponsorship and commitment were instrumental in creating and implementing the DOD Mentor-Protégé program.

AAMURI is the only academic research institution in the State of Alabama that has supported large companies receiving this prestigious award for their work with small businesses. This is a milestone for AAMURI’s national economic impact. The Mentor-Protégé program at AAMURI is supervised by Dr. Daryush ILA (256) 372-8703 and Mr. James Johnson (256) 372-8702. More information on AAMURI’s Mentor-Protégé support program can be found at http://aamuri.aamu.edu/Mentor-Protege/
Instrumentation Unit. The projects were presented at the annual Senior Design Expo on April 25 in the auditorium of the School of Engineering and Technology.

“These students are well prepared for the next step in their careers,” says Dr. Z.T. Deng, associate professor of mechanical engineering, and advisor to one of the student teams. “Some of these projects are very complicated. I am surprised how they were able to complete them with such success.”

Senior Design is a two-part, two-semester required course designed to help students prepare for the workplace. During the first semester, students work in teams to design and implement a project, and use technical writing skills to produce a project plan and design report. During the second semester, students complete their projects and deliver a final report, project poster, and oral presentation during the annual Senior Design Expo.

Whatever the outcome of a senior design project, the focus of this year’s Expo was to prepare individuals who can solve today’s problems, explained Dr. V. Trent Montgomery, dean of the School of Engineering and Technology. “Industry is looking for this generation of folks to come in to replace the baby boomers. They are looking for new ideas and new engineers who are used to and can use modern technology,” he said.

The Expo gave graduating seniors the opportunity to showcase some of the skills they acquired in their areas of study. This year’s projects also included some longstanding traditional endeavors such as the Lunar Roving Vehicle (LRV), better known as the “moon buggy,” a type of land vehicle used on the moon to allow astronauts to navigate the surface while wearing heavy equipment.

With the LRV, the AAMU Mechanical Engineering Department has been participating in the NASA Great Moon Buggy Race in Huntsville since 2004. In this year’s project, mechanical engineers Phillip Evans, Lauren Gardner, Roderick Turner and Joseph Hobson were instructed to design a vehicle that addressed a series of engineering problems similar to those faced by the original NASA moon buggy team.

“The Expo is intended to provide a forum for graduating seniors to show the results of their senior projects to the Huntsville community, agencies we partner with, other institutions, and engineering and technology firms here and around the state,” Montgomery said.

Another new effort at this year’s Expo was the NASA Rover Test-bed Implementation initiative, an interdisciplinary project with the Mechanical Engineering, Electrical Engineering, and Computer Science Departments, designed to utilize their various skills and tools to produce a semi-autonomous vehicle that meets specifications outlined by NASA.

The objective of the Rover project - by electrical engineers James Seals, Calvin Minor, and Robert Parker - was to demonstrate autonomous control of the vehicle by developing a tele-operated robot, which will be used to carry out “surface mobility tests.”

According to Dr. Andrew Scott, assistant professor of Electrical
Engineering and an advisor on the project, future development of the Rover could enable features such as independent decision making and intelligent navigation abilities. Other projects from the various departments displayed at the Expo were:

- **Computer Science:** “Student Registration Program” by Jacob Ige and James Olok; “Bulldog2Bulldog.com” by Kim Wilson, Rico Rightnow and Keitha Griffin; “Driving Records Management System” by Lwazi Maziya and Leteisha Corder; “AutoDynamics” by Apryl Byrd, Rebekka Barnes and Derek Hemsley; “Online Banking System” by Curtis Hopson, Kerilyn Pickens and BreShayla Jones; “Craddles 2 Crayons” by Tara Watkins, Shantavius Williams and Steven Strouble; “Student Registration” by Kevin Simmons, Lexington Hamilton and Darryl Sykes; “Simplex Solutions” by Sasha Clausell and Brandon Calloway; “AAMU Registration Project” – by Angela Russell; “Library Database” by Brandon Johnson, Janae Jackson and Kedra Sims; and “Airport Management System” by Eric Watkins, Ike Abengowe, and Shamario Young.


- **Mechanical Engineering:** “Plasma Field to Modify Shockwave” by Travis Witlow, Shockwave” by Travis Witlow, Chad Kelly, and Keyonna Nash; “Ground Support Cover for Pathfinder” by Jarret Barnes, Layna McDowell and Malinda Willis; “Design of Laminar and Turbulent Fluid Flow” by Justin York, Johnnie Brown and Joseph Hopson II.


**Reddy**

...continued from page 1

in West Lafayette, Ind. DeBoer called Reddy a pioneer in intercropping systems research in West Africa, where he (Reddy) developed an improved millet-cowpea intercropping technology that is now known across the Sahel, from Chad to Senegal. His 50-page handbook on “The Strategies for Rainfed Millet and Cowpea Production in Niger” was pioneering and revolutionary in nature and is still widely used. In this publication, Dr. Reddy introduced the concept of decision trees that provided flexible production practices as a function of agro-climatic and economic situations.

Reddy also contributed to building agronomic research and extension capacities in the Niger National Agricultural Research Institute (INRAN). He identified promising Nigerian agronomists for long and short term training in the U.S., mentored many of these young scientists upon their return, and was the role model for rigorous and relevant agronomic research. He also coordinated the multidisciplinary farming systems research in Niger and brought together many specialists to work on national priorities.

In recognition of his contributions to agricultural development in Africa, the Niger Ministry of Agriculture honored him with a Meritorious Service Award. Also, in 2006, Dr. Reddy received the Agronomy Fellow Award, the highest distinction given by the American Society of Agronomy, in appreciation of his international and domestic efforts in sustainable agriculture.

Dr. Reddy, who is a Fellow of the American Society of Agronomy, is the former dean of the School Graduate Studies at AAMU. In 2006, Dr. Reddy received the Agronomy Fellow Award, the highest distinction given by the American Society of Agronomy.
The use of animals in scientific research continues to provide the basis for critical innovations that have benefited our country and the global community. Through research involving animals, scientists at NASULGC institutions have advanced biomedicine, human nutrition and health, food production, food safety, biodefense, and animal health and welfare. Scientific research also has provided the basis for federal guidelines for the welfare, feeding and housing of animals.

Association members are committed to ensuring that research involving animals conforms to ethical, legal, and safety regulations and to the high standards of animal care and treatment. Fulfillment of this commitment requires effective ongoing training and education of investigators, support staff, and students, as well as rigorous regulation and oversight of animal research.

The members of NASULGC consider as fundamental to our core values of academic freedom the rights and responsibilities of faculty, researchers and students to conduct free inquiry within the boundaries of applicable laws, regulations, and institutional accountability, oversight and review. As part of these responsibilities, we will continue to provide forums for open exchange of ideas about any topic including the ethics of animal research and will protect the rights of those who wish to express particular points of view through campus policies on free expression. However, we also must ensure a safe work and learning environment for all members of our community, for all activities, including research involving the use of animals.

Unfortunately, a few individuals express their opposition to the use of animals by harassing, intimidating or using violence against researchers, their staff, and their families and/or destroying facilities and harming animals. We find such behavior unacceptable under any circumstances and condemn it.

The members of NASULGC endorse the use of animals to advance medicine and science when it is done in a legal and ethical way. We are committed, as appropriate, also to refining, reducing and replacing the use of animals in research. We shall uphold the rights of free inquiry and expression within the boundaries of high ethical standards and all applicable laws, regulations, and institutional policies. We reaffirm our commitment to protect our faculty staff members, and students from harassment, threats and physical harm. We will work within our institutions and with law enforcement authorities to safeguard animals and facilities used for such work, as well as our personnel and their families and homes.

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SUMMER PROGRAMS 2008

AAUM Child Development Center
Contact: Robin Bodrick, (256) 372-8158 or (256) 372-5436/4054, AAMU Family and Consumer Sciences, P.O. Box 639, Normal, AL 35762.
Target: 3-7 year olds (Carever Camped).
Offers an assortment of recreational and educational activities in a high quality environment.
Participants: Approximately 40.
Duration: Weekdays of AAMU’s Summer Session; 7 a.m.-5:30 p.m. (June 2-July 31)

Advanced Leadership Skills and Development
Contact: AAMU Small Business Development Center, (256) 372-5608
Target: All university employees, $25
Duration: August 7, 10 a.m.-12 noon

Agrification Center
Contact: Donna Gilbert, The Alabama Association Agrification Center, 4925 Moores Mill Road, Huntsville, AL 35811, (256) 859-5896
Target: General Public
Upcoming Activities: Dog Expo (June 7, 8 a.m.); Tennessee Valley Arabian Horse Fun Show (June 14, 8 a.m.); American Stintmental Cattleman Show (June 24); Dixieland Appaloosa Horse Club (July 29, 8 a.m.); and Madison County Cattlemen Association Rodeo (August 8-9).

Michael P. Anderson
Summer Outreach Program
Contact: Bianca McDuffie, School of Engineering and Technology, (256) 372-8284, bianca.mcduffie@aamu.edu
Sponsor: NASA
Target: A three-week summer enrichment program for high school students with strong interest in mathematics and engineering.
Duration: June 9-27

Basketball Camps (Men)
Contact: L. Vann Pettaway/Willie Hayes, AAMU Basketball, P. O. Box 1597, Normal, AL 35762, (256) 372-4024/4007.
Target: Basketball fundamentals for 8-16 years of age.
Duration: The camp runs June 26, from 8 a.m.-4 p.m.

Basketball Camps (Women)
Contact: Altheia Warnley, AAMU Basketball, P. O. Box 1597, Normal, AL 35762, (256) 372-4008, altheia.warnley@aamu.edu
Target: Basketball fundamentals for 5-16 years of age.
Duration: Total camp period lasts 3 days; Fundamental Camp, June 26-28, 8 a.m.-4 p.m. ($75); Pee Wee Camp (boys and girls), June 26-28, 8 a.m.-12 noon ($50); Team/Individual Shoot-Out for Middle and High School, June 19-21 ($35 per player).

Family and Consumer Sciences Certificate Programs
Contact: Office of Continuing Education And Non-traditional Studies (OCEANS), (256) 372-5733, oceans@aamu.edu.
Target: The Apparel, Merchandising and Design (AAMD) Certificate Program is not an academic degree program.
1) "Rendering Textile Prints and Fabrics Using Adobe Photoshop" (June 9-13, 16-20, 1-5 p.m. in 203 Carver Complex B; $495).
2) "Computer Technology: Its Applications to the Apparel Industry" (July 7-11, 14-18, 1-5 p.m., 203 Carver Complex B

Graduate Record Examination (GRE)
Contact: Office of Continuing Education And Non-traditional Studies (OCEANS), (256) 372-5733, oceans@aamu.edu.
Target: The GRE is a standardized test that graduate schools use to evaluate candidates.
Duration: 20 course hours (June 7, 14, 21, 28 and July 1); $200

Graduate Management Admissions Test (GMAT)
Contact: Office of Continuing Education And Non-traditional Studies (OCEANS), (256) 372-5733, oceans@aamu.edu.
Target: This is a general standardized test that graduate schools use to evaluate incoming candidates.
Duration: 20 course hours (June 7, 14, 21, 28 and July 1); $250

Kiddie Summer Colege
Contact: Alabama A&M University Child Development Center, (256) 372-5486/5487.
Target: This program offers children ages 3-8 opportunities to participate in fine arts, sports, enrichment, basic skills, culinary arts and character traits for building a solid foundation for a positive future.
Duration: June 2-31; $75 registration and $75/Week

Licensed Bachelors Social Worker (LBBSW)
Contact: Office of Continuing Education And Non-traditional Studies (OCEANS), (256) 372-5733, oceans@aamu.edu.
Target: Designed for those having difficulty taking exams, this course focuses on content review and specific test-taking strategies beneficial for the licensing exam.
Duration: 16 course hours (June 11-12); $150

Licensed Graduate Social Worker (LGSW)
Contact: Office of Continuing Education And Non-traditional Studies (OCEANS), (256) 372-5733, oceans@aamu.edu.
Target: Designed for those having difficulty taking exams, this course focuses on content review and specific test-taking strategies beneficial for the licensing exam.
Duration: 16 course hours (June 13-14); $150

Meeting Facilitation and Group Dynamics
Contact: AAMU Small Business Development Center, (256) 372-5608
Target: All university employees, $25
Huntsville-Madison County Chamber of Commerce, (256) 325-4961
Target: Ages 4-9, Basics/Beginners (July 21-25, 8 a.m.-12 noon, $129); Ages 10-17, Boys Skills Camp (July 7-11, 8-12 noon, $179); Girls Skills Camp (June 9-13, 8 a.m.-12 noon, $179), Advanced Strikers and Keepers, Coed Ages 10-17 (July 23-25, 5-7 p.m., $149).

Mini Moguls "Follow the Dollar" Tour:
Lessons in Money Management for Kids
Contact: Olga Mickiss, (502) 594-4819.
Target: Designed for 9-15 year olds. The “Follow the Dollar” tour is a traveling edutainment road show, focusing on the teachings of responsible money management.
Duration: Tuesday, July 29
Deadline: June 1

NCLT Nanoscale Science and Engineering Professional Development
Contact: Dr. Matthew Edwards, Dean, School of Arts and Sciences, (256) 372-5300.
Target: Teachers of grades 7-12 (Professional Development).
Duration: Two weeks (June 16-27) at Alabama A&M University. For more information, visit http://www.nclt.us/pd_activities.htm.
Absolute Deadline: Call

NFSP Workshop/Short Course on the Development and Study of Advanced Sensors and Sensor Materials for Undergraduates and Faculty
Contact: Mohan Aggarwal, (256) 372-8132.
Target/Content: Conducted through AAMU’s Department of Physics, the program is designed for undergraduates and college faculty in science and engineering.
Onetime stipend of $900 for out-of-town participants (minimum of 14).
Duration: July 15-18

NYSP (National Youth Sports Program)
Contact: Cynthia Clopton, NYSP, at (256) 372-4010, P.O. Box 1597, Normal, AL 35762.
Target: Grades 9-12.
Duration: June 9-13, 8 a.m.-12 noon

Pre-Freshman Bridge Program
Contact: Dr. Trent Montgomery, Dean, School of Engineering and Technology, (256) 372-5600, trent.montgomery@aamu.edu
Sponsor: U.S. Department of Energy (DOE)
Target: Incoming freshmen into the School of Engineering and Technology only.
A two-week program that will enhance their mathematical and physical science knowledge in preparation for the disciplines of engineering, computer science and technology.
Duration: Two weeks, July 13-25

ROTC Leader’s Training Course
Contact: Major Mike Kelly, (256) 372-4206
Target: This program is designed to help in the preparation of men and women for a career as an Army Officer and/or an executive management position with any Fortune 500 company.
Duration: This course is a 28-day paid internship (including rooms and meals) at Fort Knox, Ky.

Soccer Camps 2008
Contact: Frank Davies or Dr. Salah Youssif, (256) 372-8265, or i9 Sports of Greater Huntsville, (256) 325-4961
Target: Ages 4-9, Basics/Beginners (July 21-25, 8 a.m.-12 noon, $129); Ages 10-17, Boys Skills Camp (July 7-11, 8-12 noon, $179); Girls Skills Camp (June 9-13, 8 a.m.-12 noon, $179), Advanced Strikers and Keepers, Coed Ages 10-17 (July 23-25, 5-7 p.m., $149).

Summer Professional Development Workshops
http://www.aamu.edu
Schools of Engineering and Technology, (256) 372-4010, P.O. Box 1597, Normal, AL 35762.
(National Youth Sports Program)
Target: Grades 4-9.
Duration: Approximately five weeks: June 9 - July 12

Teambuilding
Contact: AAMU Small Business Development Center, (256) 372-5608
Target: All university employees, $25
Duration: June 5, 10 a.m.-12 noon

Upward Bound
Contact: Ms. Bettye A. Thompson, Director, Special Programs, P.O. Box 347, Normal, AL 35762, (256) 372-4709.
Target: Grades 9-10.
Assists low-income, first-generation college-bound students in completing high school and entering their college of choice. Six weeks on-campus living and $15/week stipend.

Young Scholars Summer Program
Contact: Torin Malone, Institutional Research, Planning and Sponsored Programs, call: (256) 372-5402 or (256) 372-5675, email: getsmart@aamu.edu, P.O. Box 411, Normal, AL 35762.
Target: Grades K-8.
Participants will be provided instruction in Mathematics, Information Technology, Language Arts, Science and Testing Strategies.
Duration: June 2-7, Monday-Friday 7:30a.m.-1 p.m.
Fee: $250
Absolute Deadline: Call anyway
For the latest updates and revisions to this listing, please visit...

www.aamu.edu

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ALABAMA A&M UNIVERSITY - the Essence