CSAT Receives NSF Grant For Recruitment of STEM Majors

Students in Radford University’s College of Science and Technology will reap significant benefits and opportunities for scholarships thanks to a $523,028 from the National Science Foundation. The funds represent the remaining portion, for the second through fourth years, of a January 2009 $597,427 grant for the Bridges and Pipelines to Success and Leadership in Science, Technology, Engineering and Mathematics (STEM) program.

Project directors are assistant professors of information technology Ian Barland and Premchand Uppuluri, assistant professor of math and statistics Laura Spielman, and College of Science and Technology dean and professor of biology Orion Rogers.

Scholarships, based both on financial need and merit, are awarded to students interested in science, technology and math. Recipients will enroll in leadership courses and experiential learning events as part of the program. They will work one-on-one with academic advisers to receive academic and social support as well as career counseling. The scholarships are designed to encourage students who have participated in pre-college partner programs including RU’s Summer Bridge Program, Project Discovery, Appalachian Arts and Studies in the Schools (AASIS), 4-H organizations in Southwest Virginia and New River/Mount Rogers Workforce Investment Board Youth Council.

“By providing leadership training in addition to financial assistance to students, we hope to give RU students an edge in the job market, and ultimately help increase the technical skills available in the labor pool,” said Barland.

On Saturday, Feb. 27, more than 60 prospective RU students and their families visited campus to learn more about the scholarship, meet RU alumnus Mark Hanna who works as a manager for research and product development with Johnson and Johnson and tour campus facilities. The event was made possible through the NSF STEM grant funds and was the first event of its kind specifically targeted to potential CSAT students.

To learn more about the program, visit www.radford.edu/ssstem http://www.radford.edu/ssstem.
Just About Sustainable (JAS) Energy has teamed up with Radford University to conduct a research project dedicated to furthering the use of algae as a sustainable energy source. Dr. Francis Webster and RU sophomore biology and chemistry major Gabrielle Silvers have received a $2,000 grant from JAS Energy to evaluate strains of algae for potential use in waste water treatment with the subsequent removal of oil for biodiesel production. They hope to identify the best strain of algae for this dual purpose and determine the optimal conditions for harvesting the trapped oil including a unique system that uses a combination of ultrasonic and microwave energy. Once the oil has been released, it then can be used for biodiesel fuel using well established methods.

JAS Energy was founded in May of 2008 by senior RU student John Verbeck. The mission of JAS energy is “to implement, manage, and distribute energy for the 21st century; facilitate the sequestration of aqueous and gaseous industrial waste, and to enhance surrounding economies through the formation of green-collar jobs. Algae based biofuel represents the future of energy security,” says the company. During the next five years, JAS Energy plans to construct a commercial scale algae waste to fuel facility. The facility will address regional economic needs by creating abundant, much-needed opportunities for ‘green-collar’ employment. “The renewable energy technologies we develop will help stabilize the economy and security of our region, our nation, and the world,” says JAS Energy.

JAS Energy is dedicated to funding research here at Radford University, as well as other higher education institutions. Webster’s expertise includes the development of a number of technologies to improve the use of non-food oil sources for biodiesel fuel production. He and his students have given a number of presentations at national meetings related to this research, and in 2008, he led a team of students in the People, Prosperity and Planet competition sponsored by the EPA in Washington, D.C. The team presented its research on the synthesis of a novel carbon catalyst to help improve the efficiency of biodiesel made from waste oil.

Left to right: Gabrielle Silvers, Francis Webster and John Verbeck

Environmental Club Hosts Earth Day Festival - Ross Gillette

Radford University’s Environmental Club will host an Earth Day Festival on April 22 to commemorate Earth Day. Led by president Gabrielle Silvers and vice president Joe Rudolph, the Environmental Club is dedicated to turning Radford University into the greenest university in the Commonwealth. The festival will allow people to “enjoy a variety of visionary speakers, fun activities for the whole family, local food and live music from the community’s most talented musicians,” as well as give the public an opportunity to “learn how a difference can be made in the community and the world,” says Silvers.

The Earth Day Festival will consist of four separate areas, all located on Heth Lawn. The Green Bazaar section will focus on support for local foods and businesses. Revolution Square will be dedicated to “commemorating the efforts of students and their affiliated organizations who have shown outstanding support toward ensuring a greener future,” says Silvers. Grassroots Plaza will include many speakers that “offer entertainment, and a message for change,” adds Silvers. Lastly, Organic Valley will offer educational green games, crafts, and activities for children.

RU’s Earth Day Festival will also include food, music and environmental speakers. The Environmental Club invites the Radford campus and community to join them in celebrating Earth Day. Admission is free and open to the public.
Barrow Children Learn About Sea Ice from CSAT Students

While conducting research on polar sea ice in Barrow, Alaska, CSAT students in Rhett Herman’s Arctic Geophysics class Mythianne Shelton, Susan Christopher, Laura Sweat, Jonathan Haines, Jeremy McLaughlin and Jason McLarty discussed their research at the Barrow Arctic Research Center on Saturday, March 13 at 1:30 p.m. Barrow children, parents and interested community members heard Shelton speak about their outreach to Virginia schools during their trip to Barrow. Christopher discussed her anthropological work in preparation for a field school in Barrow this summer. Haines and Sweat presented their latest results from the electrical resistivity scans of the sea ice, and McLaughlin and McLarty presented full 3-D images of the underside of the sea ice taken with ground penetrating radar.

IT Program Certified by Committee on National Security Systems

The Undergraduate Certificate in Information Security, offered by the Department of Information Technology is now certified by the National Security Agency (NSA) as meeting two national training standards for Information Security (INFOSEC) Professionals and System administrators. The Committee on National Security Systems (CNSS) sets these national-level standards for information assurance. The certifications are part of NSA’s Information Assurance Courseware Evaluation (IAACE) program. The goal of the program, according to NSA, is “to expand the use of national standards for information education and training.” With these two certifications, Radford University joins a select group of Universities throughout the U.S. that offer students cutting edge information security training.

“These certifications will allow employers to recognize the strong preparation of our students in the field of information security. Students are thus better represented on the national stage in this field,” says information technology faculty member Prem Uppuluri, RU’s point of contact with NSA during the certification process.

Radford University will receive the official certificate on June 8, 2010 during a ceremony at National Electronics Museum in Linthicum, Md. More information on these certifications and the list of universities with certified courseware can be found on NSA’s website http://www.nsa.gov/ia/academic_outreach/iaace_program/index.shtml

VTLS Vice President on Campus to Meet IT Students March 18

Vice President of Operations for VTLS in Blacksburg Cece Yourshaw will be speaking to Dan Spillman’s ITEC 490 and ITEC 485 classes on March 18 from 12:30—1:30 p.m. in Davis Hall, room 114. All interested students are encouraged to attend.

VTLS is a multinational company specializing in database services. It has developed data retrieval serves for some of the major libraries in the world. “Over the past several years, I have had close to 10 student employed with them. This is a great opportunity for our students if VTLS decides to pursue interviews with some of them,” says Spillman.

CSAT Will Host Achievement Reception April 11

The College of Science and Technology will host an achievement reception on April 11 from 2—4 p.m. in Muse Banquet Hall. All students who participate in college and department academic clubs, honors societies, student and faculty collaborative research, Dean’s Student Advisory Council, and departmental and college award winners are encouraged to attend. All CSAT faculty are invited to attend.

This year’s keynote speaker is geography alumnus Mike Mullen, Vice President of Federal Sector, INgage Networks. After graduation from RU, he began his career as a GIS analyst. Previously, Mullen held numerous leadership roles at INDUS Corporation. During his 15 year tenure, he led INDUS’ growth from a start-up venture to a $100 million company, earning the company recognition among the Inc. 5000 Fastest Growing Private Companies in America, and four consecutive years on the Washington Technology Fast 50 list.

He recently joined INgage Networks’ executive team in 2010 as Vice President of Federal Sector.
**Innovation Inspired**

### CSAT STEM Club Spotlight: Activities and Upcoming Events

*By Arielle Reynolds, STEM Club secretary*

CSAT STEM Club is going to the Smithsonian Museum this Saturday. The bus is almost full. Plans are to have a full bus by Saturday. The club is hosting colloquium speakers. Dr. Premchand Uppuluri will present on Thursday, April 1 at 5 p.m. in Young 206. He will discuss current research and trends for host based computer security. Dr. Gary Coté will present on Thursday, April 8 at 5 p.m. (location TBA). Club members will be helping with the Super MACC competition on March 22, as well as with the Merit Badge event on March 27. The club is in the process of selecting a spring service project to honor the centennial celebration.

### Student Government Association News

*By Clarissa Clarke, CSAT SGA Representative*

The Student Government Association and other students, along with President Kyle and members of the faculty and Board of Visitors, recently visited Richmond for RU’s annual Advocacy Trip. A priority for the SGA was to advocate against the proposed "tax on students" that would have taken the auxiliary fees we pay each year with our tuition, and put them into the state's fund balance instead of RU’s. Shortly after the trip, both the Senate and House amended the proposed budget to remove the provision to take money from the auxiliary funds of Virginia public colleges. They acknowledged that this was a bad policy that would negatively impact Virginia schools, students and parents. Some legislators said they were made aware of the potential repercussions of this proposal through visits from students such as those who attended RU’s Advocacy Trip.

RU’s Centennial is this year, and on March 23-24, the entire campus community will be having a special celebration. On March 23, all students are invited to RU’s Birthday Bash (sponsored by SGA, R-SPaCE, and DAP) in the Bonnie from 6-11 p.m. There will be cake and ice cream, free giveaways, a free novelty photo booth, free game room, musical guest Steve Moakler, and more.

Charter Day is March 24, and the university community can participate in many exciting events and activities, including keynote speaker Blake Mycoskie, the founder of TOMS Shoes, who will also be mingling with students throughout the day. Charter Day schedule and details available at http://www.radford.edu/centennial/.