RU College of Science and Technology
Radford University

February 10, 2011

CSAT Bi-weekly Newsletter

From the Dean's Desk

CSAT Faculty Receive Grants

Eleven faculty members in the College of Science and Technology were recently awarded CSAT grants to support their research.

Biology faculty member Mark Cline received a $10,000 grant for his proposal "Elucidating the Central Mechanism Associated with Loss of NeuropeptideY Induction of Food Intake in a Model of Anorexia."

Biology faculty member Tara Phelps-Durr received a $7,873.70 grant for her proposal "Determining Why *HIRA* Nulls are Lethal in *Arabidopsis thaliana.*"

Biology faculty members Judy Guinan, Jason Davis and Robert Sheehy received $9,981.42 grant for their proposal "Ecological and Physiological Correlates of Extra-pair Paternity in Eastern Bluebirds (*Sialia sialis).*"

Biology faculty member Fred Singer received a grant of $5,744.37 for his proposal "Ecology in Action."

Biology faculty member Christine Small received a grant of $7,299.58 for her proposal "Recovery of Black Cohosh, a Southern Appalachian Medicinal Plant, Following Harvest."

Biology faculty member Jeremy Wojdak received a grant of $7,668.30 for his proposal "Scanning Electron Microscopy of Trematode Parasites."

Information technology faculty member Hui Wang received a grant of $8,573.58 for her proposal "Backsourcing: When and What to Consider."

Mathematics and statistics faculty member Wei-Chi Yang received a $8,858.95 grant for his proposal "Applying Mathematical Optimization Results to Fields of Computer Science, Architecture and Sciences."

Physics faculty member Rhett Herman received a $10,000 grant for his proposal "Geosphysical Investigations of the Nuvuk Burial Site Near Barrow, Alaska."

Congratulations to all grant recipients.

Alumnus Continues Success Found in CSAT

Brandon Shaver, a 2009 computer science graduate, will be beginning his Master's degree in computer information system this fall at Boston University.

He currently works for Northrop Grumman, Corp. as a Database Architect. He supports over 100 Oracle databases on various Unix and Linux platforms assisting with routine maintenance, performing database upgrades, and other database management functions. The sector of Northrop Grumman in which he works has an education reimbursement program which will cover nearly all of his tuition and book expenses each year.

Shaver and another student created a project for Pulaski Hospital. The project, created for information technology professor Dan Spillman's ITEC 485 class, was a decision support application in conjunction with hospital pharmacists to create an aminoglycoside dosing program that pharmacists and nurses could use in administering medications to treat aerobic bacterial infections.

Shaver's main interest is database management and business intelligence. He felt that attending Boston University would allow him to expand on what he learned at Radford University and go more in depth in this area.

Shaver hopes to use his Master's degree in the future to advance his career potentially in the area of database administration, and he also foresees a career in management as a possibility.

-Xiu Wang

Inside this issue:

Upcoming Events:

- CSAT Open House, Feb. 12, 1:30—4 p.m., McGuffey and Young Halls
- Blue Ridge Highlands Science Fair, March 4 – 5
- SuperMACC High School Academic Tournament, March 14, 4—9 p.m., McGuffey 206 and Bondurant Auditorium

Mills Receives Rogers Research Award

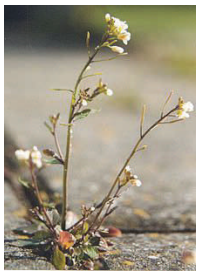
Biology major Christine Mills was recently awarded the Rogers Undergraduate Research Award. The Rogers Award, a $500 award to help fund undergraduate research, is granted on a competitive basis by the College of Science and Technology (CSAT) scholarship and awards committee to a current sophomore or junior undergraduate student enrolled in the college. CSAT Dean Orion Rogers and his wife Valerie created the award in 2008.

Mills and her faculty mentor Tara Phelps-Durr are working together on identifying proteins that interact with HIRA (HISTONE REPRESSION A) in *Arabidopsis thaliana*. The *Arabidopsis thaliana* plant, otherwise known as thale cress or mouse ear cress, is ideal for better understanding molecular biology because Its genome is one of the smallest plant genomes and was the first plant genome to be sequenced. Mills is going to test specific proteins that are known to interact with HIRA in other organisms or have been identified as potential interactants of HIRA by computer databases.

Mills thinks this project will help her achieve her future goals which include teaching undergraduate genetics and performing extended research at a university. The experience she receives from this project will help her be successful in graduate school. In addition, this type of research will allow her to develop new projects and improve her problem solving skills.

"As a graduate student, I will have to think quickly and be prepared if something goes wrong with my experiments. As a teacher, if something goes wrong with a lesson plan or lab, I will have to know how to fix the problem immediately," She says. This project will also give her the opportunity to fine-tune the laboratory skills she has already developed.

-Xiu Wang



Arabidopsis thaliana

CSAT Dean's Office Welcomes Spring Intern

Xiuming Wang

CSAT spring communication intern Xiuming Wang came from China and is currently working on her Master's degree in corporate and professional communication at Radford.

Previously, Wang studied at The Wuhan University of Technology as a journalism major with the intention of becoming a journalist. "During my undergraduate study, I realized communication was really significant and decided to change my direction in graduate study," says Wang.

As an intern working with the Assistant to the Dean Ann Brown, Wang writes articles for the College of Science and Technology (CSAT) newsletter *From the Dean's Desk* and assists in developing and maintaining content for the CSAT website. She also assists in event planning for the college's special events such as the Homecoming Career Panel Presentation, Summer Bridge, Camp Invention and the Super MACC academic competition.

In Wang's spare time, she enjoys cooking various types of cuisines for herself and her friends, traveling and reading novels.

Through this internship, she hopes to become a more confident writer, gain communication experience and be able to add to her professional portfolio.

Stump Earns Coveted Spot with Forest Service

Giles County native and senior biology major Meghan Stump says her interest in wildlife began as a child when she cared for baby birds and rabbits in her backyard.

When Stump came to Radford University, she initially declared a computer science major, but she quickly realized she wanted to go in a different direction. Stump never thought in her wildest dreams that her backyard adventures as a child would eventually turn into a career opportunity, but once she got involved with the environmental biology concentration at Radford, it finally clicked.

In May of her junior year she received a volunteer internship to work with the USDA Forest Service promoting the environment and its wildlife to young children. These classes are located at the Eastern Divide Ranger District in Blacksburg, Virginia where she is also stationed. Now this volunteer internship has turned into a part-time job working for the USDA Forest Service past her graduation in the spring of 2011 from Radford University.

When Stump was looking for an internship she didn't want the typical research positions usually offered such as ones having to do with just compiling data or perhaps just doing research. She wanted to do something that more directly impacted the public as well as educate them about the outdoors and wildlife. Stump is doing just that with her classes that are geared more toward the younger children to promote the importance of the outdoors and wildlife. Stump is especially proud that the children will show their understanding of what she is teaching them such as four year olds telling their parents everything from what exactly nocturnal animals are to what turkey vulture wings look like. She talked about her first experiences teaching a class.

"I'll never forget the day I taught my first class alone. Coming into this internship, I expected to work with the public, not mostly children. I was horrified; I've never been much for kids. My mentor was out sick, so the black bear 'Creature Feature' was all up to me. I was shaking when I started, but all of a sudden when they started asking questions and were making eye contact with me to give them the answers something clicked. I've loved children ever since their eagerness for knowledge is unmatched!" says Stump.

-Xiu Wang

A Wedding Under the Stars in Curie Hall

Radford University 2009 media studies graduate Nathan Jennings and his bride Molly Lane were married in the RU Planetarium in December. They planned on the wedding being held at midnight on New Year's Eve that meant 1/1/11, maybe even at 1:11 p.m. But due to coordinating the facility and guests of the wedding, they decided to move it.

They also originally planned for an outdoor wedding with just the two of them in a remote wooded location. But due to inclement weather, Jennings had to do some brainstorming. They have always enjoyed the outdoor lifestyle and sitting on the porch and gazing at the stars. He took this into consideration when deciding where to have their wedding — that was supposed to have the outdoor feeling, but not the outdoor temperature.

Floyd town manager Lance Terpenny presided over the ceremony.

-Xiu Wang

CSAT Nominates Two for Goldwater Scholarship

The College of Science and Technology (CSAT) recently nominated computer science and applied mathematics double major Ross Norvell and biology major Brandon Newmyer for the Barry M. Goldwater Scholarship. The Barry M. Goldwater Scholarship and Excellence in Education Program was established by the United States Congress in 1986. Its goal is to provide a continuing source of highly qualified scientists, mathematicians, and engineers by awarding scholarships to college students who intend to pursue careers in these fields.

The Scholarship is awarded to about 300 college sophomores and juniors nationwide. A maximum of $7,500 per academic year is granted and awarded based on merit, and the actual amount given is based on financial need.

Norvell said that it is his academic performance and experience in mathematical research that gave CSAT Dean Orion Rogers the idea to offer him an opportunity to be nominated. In the process of acquiring permission for overloading in credit hours, Norvell told Dean Rogers that the reason he wanted to take more credits was because his current 17 credit load was not offering him enough of a challenge.

There were four major parts to the nomination application. During the application process, students submitted academic transcripts and completed an online form which included short essays. Students also wrote a separate essay in two column format on their chosen career and interest in future research. Lastly, the application included three letters of recommendation for the student by his faculty mentors to be sent directly to the scholarship selection committee.

Competition for the scholarship is exceptionally intense and four-year universities are allowed to nominate only four undergraduate students per year to compete for the scholarship. As a result, it is widely considered the most prestigious award in the U.S. conferred upon undergraduates studying the sciences.

-Xiu Wang

United States Senator and 1964 presidential candidate Barry Goldwater, a Republican from Arizona.

RU
RADFORD
UNIVERSITY

CSAT Bi-weekly Newsletter

PO Box 6936
Radford University
Radford, Va. 24142

Phone: 540-831-5958
Fax: 540-831-5957
E-mail: jorogers@radford.edu

Innovation Inspired

www.radford.edu/csat

CSAT STEM Club News

This week, the CSAT STEM Club will have their first faculty guest speaker, which will be information technology faculty member Ian Barland. He will be speaking on Thursday, February 10 in Davis 142 at 5 p.m.

Saturday, February 12, the CSAT STEM Club will be holding a CSAT Open House, where many of the club members will be volunteering as student ambassadors of the college in their major, and taking prospective students to the Greenhouse, Museum of the Earth Sciences, and the RU Planetarium.

CSAT STEM Club T-shirts will be picked up on Friday, February 11 and available for sale for $15.

On February 28, we will be having a faculty spaghetti dinner. The club members will be preparing the meal and will offer a salad for anyone who is vegetarian. There will also be many side items. The students will deliver the food to the professors' offices. The times will be between 11a.m.— 3p.m.

On March 14, David Evans, Associate Professor in Information Technology from UVA will discuss Computer Security. On April 7, mathematics faculty member Wei-Chi Yang will present his latest research interests and activities.

On Saturday, April 2, the club will travel to the Smithsonian in Washington D.C. The trip costs $15 and registration forms are available with mathematics faculty member and club advisor Dr. Laura Jacobsen. We will be leaving at 5 a.m., and returning around 11p.m.

There will be many volunteer opportunities this semester, and we want to encourage everyone to volunteer if they are available. These opportunities include:

CSAT Open House, Saturday, Feb 12, 12 to 3:30 p.m.
Dress well, help visiting families, act as representatives of RU
Blue Ridge Highlands Science Fair, March 4 and 5
Super MACC, Monday, March 14, 4—9:30 p.m.
Scorekeepers, Timekeepers and Ambassadors are needed
Science Exploration Day, Saturday, March 26, 7:30 a.m.—3 p.m.
Teaching Assistants are needed for classes

Jasmine Jackson

Secretary of CSAT STEM Club