As we move quickly through the Fall Semester, The College of Science and Technology plays a role in many major University events. In the last few weeks, organizations within CSAT have hosted, enlightened and entertained hundreds of guests, students, alumni, family and friends. With dozens of outreach events every year, the community is truly a classroom. In this edition of “From the Dean’s Desk,” we recognize many of the great activities within our college.

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Radford University Celebrates National Chemistry Week

National Chemistry Week is a community based program of the American Chemical Society (ACS). This annual event unites ACS local sections, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life. The Chemistry Club and the Department of Chemistry serve as our hosts for National Chemistry Week on the RU Campus, bringing Chemistry to a larger audience.

On Monday, October 21, Dr. Tim Fuhrer presented an excellent program that explored some of the history of many great scientists involved in the discovery and development of Quantum Mechanics. One wonderful story shared by Dr. Fuhrer involved physicist Niels Bohr evading Nazi pursuit of the gold Nobel Prize medallions in his possession by dissolving them in "aqua regia," a mixture of three parts hydrochloric acid and one part nitric acid. This allowed the gold to go unnoticed by Nazi eyes and later to be converted back to gold by “reversing” the process. The gold was then shipped back to the Nobel Prize organization where new medals were cast using the original gold. A problem solved quickly through the Magic of Chemistry! (The full story was told via National Public Radio’s Robert Krulwich a few years ago and can be heard here.)

“The Magic of Chemistry” was on display both Tuesday and Wednesday as Dr. Francis Webster traveled to Kingsport Tennessee to present his chemical prestidigitation to our friends at Eastman Chemicals.

Also on Tuesday, Dr. Joe Wirgau presented an enlightening view of the science behind beer and wine with a history of some famous brew masters and winemakers. During his presentation, Dr. Wirgau explained many interesting facts about the chemical processes these beverages go through including that oxygen is a problem for wine because it will react with the ethanol that has been achieved through the fermentation process and will turn it to vinegar. He also went on to explain the importance of maintaining the stopper or cap to the wine container. If your cork dries out or becomes moldy, the chemistry of the wine will change and it will not taste good. In fact, while not as aesthetically pleasing, a steel screw-on cap actually helps preserve wine longer than cork.
Wednesday, October 23 was Mole Day, celebrated from 6:02am until 6:02pm to commemorate Avogadro’s Number \((6.02 \times 10^{23})\), a basic unit of measurement in Chemistry. Students dressed as “moles” and distributed information about the Chemistry Club and “molasses mole day cookies” were the treat du jour. At 6:02pm, the Chemistry Club members gathered at the River City Grill in Radford to continue the festivity.

Activities concluded on Thursday, October 24 with Department of Chemistry student and faculty participation in the Summer Research Celebration held in the Bonnie Hurlburt Student Center.

These events on the RU campus certainly helped fulfill the American Chemical Society’s mission for the week to reach the public with positive messages about chemistry, to make a positive change in the public’s impression of chemistry, to Promote a mechanism for effectively mobilizing ACS local sections; and Motivate the ACS membership through local section activities.”
(From the National Chemistry Week website.)
RU professor of mathematics and statistics earns recognition from Czech university

Radford University's Wei-Chi Yang, professor of mathematics/statistics, was awarded the title “Professor Honoris Causa” by the Czech University of Life Sciences Prague (CULSP) in a ceremony in Prague on Monday, Oct. 21.

Dr. Yang shared some thoughts about his special day:

“Memorable October 21, 2013

Ceremonial Session of my Honorary Professorship at Czech University of Life Sciences (CULS)

The ceremony was attended by not only rector, vice rectors and scientific board of CULS, but many rectors and vice rectors of other universities in Czech Republic were present at this highest honor ceremony for CULS. During the ceremony, the honorary doctor degree was also awarded to a French scientist. The Professor Honoris Causa (Honorary Professorship) is the highest honor that CULS awards.

I was led to choose my special academic dress in the morning, meeting with the many faculty members. After lunch and about 1:30 pm, all attendees lined up at a room. I was the third to the last in the line, followed by CULS insignia carrier and Rector of CULS. After entering all stands on their respective posts, anthems of Czech Republic and EU were played. Introduction of my brief professional achievements was read. I submit my solemn oath to the Rector ‘Spondeo ac Policesor’, and the Rector hands the Medal and Diploma to the Honorary Professor. I gave a short acceptance speech afterwards. A musical performance follows, and we left the auditorium for a reception, the whole process lasted about one and half hour.

I will stroll around Prague on the 22nd and go to University of South Bohemia on 23rd and 24th to give a talk there. I will head back to Taipei on the 25th.”

For more information on the award and on Dr. Yang’s outstanding efforts that helped to prompt this recognition, please visit RU News and Events coverage here.

http://www.radford.edu/content/radfordcore/home/news/releases/2013/October/Yang-Honoris-Causa.html
Radford University Geology Professor earns grant to continue research at Mountain Lake in Giles County

Dr. Chester “Skip” Watts has been awarded an additional $12,000 by the Mary Moody Northen Endowment to continue his work helping to restore the depleted lake at Mountain Lake Resort in Giles County. 2013-2014 marks the third year of this project that has seen a great deal of success as the lake has recently started to re-fill.

The project began in 2011 as the lake, which has been known to disappear for decades throughout its recorded history, had been reduced to little more than a small muddy pond. Famous for the movie Dirty Dancing, Mountain Lake had not seen regular water levels since 2002.

Dr. Watts lead a team of students and fellow geologists to first research the cause of the slow leak by exploring the area where the water appeared to drain and then devising a plan to help plug some of the gaps to improve water retention.

"The natural piping holes are about two feet long by a foot wide. They're sort of rectangular shaped. Basically what they are gaps between rock blocks that came down as part of the landslide." Watts said at the time of the work to close the leaks.

Since the effort to utilize natural material in slowing the leaks earlier this year, the lake has seen a remarkable resurgence, rising to approximately half-full pond by autumn of 2013. The process should take about two years to completely refill the lake.

The story is both a natural conservation success as the lake is an important ecosystem for the area, but also an economic engine for Giles County and the region. Coinciding with Dr. Watt’s work, the resort owners have made substantial improvements to the property in the hopes of revitalizing a waning tourist business.
CSAT STEM Club Science Display at the 2013 Radford Highlanders Festival

Members of the College of Science and Technology STEM Club staffed a booth replete with science activities for the families and guests visiting the Radford Highlanders Festival. The primary activity involved explaining the science behind reactions generated by dropping Mentos candy into 2-liter bottles of diet Coke. Demonstrations of the reaction produced geysers of 6-8 feet and drew large crowds throughout the afternoon. Additional science experiments delighted the audience at the STEM club station.

Club members also helped visitors create birdfeeders from recycled water bottles and discarded ink pen cartridges. The event was an overwhelming success with dozens of participants over the course of the afternoon.

At their regular meeting following the festival weekend, the STEM club celebrated their outstanding outreach project by making ice cream utilizing salt and ice to help lower the freezing point of cream, sugar and flavoring. Games employing electroencephalogram (EEG) devices were also explored during the meeting.
Homecoming and Family Weekend 2013 Activities

To celebrate the Radford University Homecoming and Family Weekend, numerous activities took place throughout the college.

The CSAT Advisory council met on Friday, October 18 in Hurlburt Hall to review the activities and success of the College over the past year and to preview plans for the construction of the new center for the Sciences building. Following presentations from the CSAT Departments and Dean Rogers and an outstanding discussion of the role of the College in preparing RU Students for the working world, Council members toured the construction area, Reed and Curie Halls and the annex of Preston Hall to get a first-hand look at the current college facilities and equipment. At future meetings, the Council will visit Davis, Cook and Walker Halls to learn more about activities of the CSAT Departments located within those facilities.

The Department of Math and the Math Club sponsored Math Night at the RU Volleyball game on Friday, October 18. Junior Jenna Braden, a “setter” for the volleyball team from New Knoxville, Ohio, is a math major and helped to inspire the support. A great crowd turned out for the event.

The finesse of the game was explained via a poster at the Math Club booth located near the entrance of the Dedmon Center.
Math was also on display on Saturday, October 19 as a trebuchet was demonstrated on campus by Mr. John McGee and James Stratton from the Math Club. Spectators were treated to the sight of water balloons and even a small pumpkin tossed several stories in the air and across a large portion of the campus by the recreated ancient castle-storming device. Videos of the trebuchet in action are posted on the College of Science and Technology Facebook page. 
https://www.facebook.com/RadfordUniversityCSAT

Inside the Reed-Curie complex, hundreds of guests visited the RU Greenhouse, the Museum of the Earth Sciences and the RU Planetarium for tours, demonstrations and shows throughout the day.
Radford University Alumni provide insight to CSAT Students

Homecoming week provided a great opportunity for visiting alumni to share their experiences with current students in the College of Science and Technology.

On Monday, October 14, Mr. Mike Hurt visited Dr. Jeff Pittges’ ITEC 490 class to discuss professional communication styles during his presentation “How to make a good impression.”

Mike, who has his Radford University degree in mathematics, is the co-founder and CEO of HBG Core Holdings, a multi-faceted holding company that owns a diverse set of private companies in multiple industries, and also the majority owner and CEO of ARMS Software, an industry leading software company focused on transforming the way that college athletic departments conduct business.

He has been an incredibly successful entrepreneur for the last 20 years and has been responsible for starting and building some of the most successful startup companies in North America during this time.

Mike has been involved in higher education and college athletics for many years as well. He serves as a board member for several private companies as well as a member of the Board of Visitors of Radford University and the President of the Athletic Foundation of his alma mater. He also served until mid-2013 as Vice President for The Radford University Foundation where he served on the Executive and Investment Committees.

On Thursday, October 17, Ms. Ellie Coggins met with College of Science and Technology students interested in careers in the medical laboratory. Ellie, a member of the CSAT Advisory Council, graduated with a Medical Technology degree from Radford University in 2002 and continued her education with a Master of Science in Health Administration. She is the Program Director for Augusta Health’s Clinical Laboratory Science Program in Fishersville, Virginia. The event was sponsored by the RU Beta Beta Beta Biological Honors Society.
On Friday, October 18, Mr. Kent Warren met with College of Science and Technology Students in Davis Hall to help them learn “how to be successful in their first job.” Kent is a Radford University graduate with a degree in Political Science, but he also studied information systems during his time at RU, which ended up being a big part of his professional career. Kent is currently the President of ManTech International’s Commercial Solutions and Technology Group. The group has a number of business and IT consulting practices and offers clients access to both on premise and/or Software as a Service (SAAS) IT Systems.

Earlier in his career, Kent spent 13 years at SAP prior to starting two IT Solution companies. His last firm, Peak10 Systems, was consulting to ManTech when he was asked to join the company full time.

He is a member of a number of industry associations like Technology Association of America (ITAA) and AFCEA. In 2001 Mr. Warren was part of a team that helped his business unit comply with National Institute of Standards and Technology (NIST) / National Information Assurance Partnership (NIAP) Common Criteria ISO Standard 15408. He has briefed Information System leads for both the House & Senate Select Committees on Intelligence.

Kent remains active with the RU community as a founding member of Radford University’s Rugby club and as the current President of Sigma Phi Epsilon’s RU Chapter alumni volunteer board. Kent is also a member of Radford University’s Foundation Board and sits on its audit committee.
Conference yields insights as well a visit from a small piece of Mars.

Dr. Jack Brockway, Associate Professor of Physics at RU, recently attended North Carolina Astronomers' Meeting (NCAM) at Guilford Technical Community College where ideas and theories are shared by fellow astronomers. At this meeting, something even more tangible about our neighbor in the solar system was shared as one of the attendees brought a small rock fragment from Mars. Dr. Brockway is pictured holding the specimen.

Learn more about the wonders of our solar system and the universe on clear Friday evenings after sunset at the Selu Observatory coordinated by Dr. Brockway and staffed by RU Students and Faculty.

http://www.radford.edu/content/csat/home/observatory.html

Learn more about the NCAM at: http://www.gtcc.edu/observatory/speaker-seriesncam/ncam.aspx
Upcoming events

“Hollow” screening with Director Elaine McMillion

Friday Nov 1
5:00 PM - 6:30 PM
Bonnie Auditorium

"Hollow" is an interactive documentary and community participatory project. "Hollow" examines the future of rural America through the eyes and voices of those living in McDowell County, W.Va. Hollow combines video portraits, data visualizations, photography, soundscapes, community-generated content, and grassroots mapping to bring these stories to life through an online experience.

Director Elaine McMillion will be here to screen portions of the documentary, discuss the experience of making an interactive documentary, and tell the story of life in Appalachia. The event will be hosted by Dr. Stockton Maxwell from the Department of Geospatial Science.

Radford University to serve as a site for the ACM International Collegiate Programming Contest – Mid-Atlantic Region

Saturday, November 2
8AM – 6PM

8:00-8:45 registration, McGuffey Hall, room 203
8:45-9:30 welcome, introduction, rules, orientation in McGuffey Hall, room 203
9:30-10:30 practice problem
11:00-12:00 lunch in McGuffey Hall, room 203
12:00-17:00 competition
17:00-18:00 dinner in McGuffey Hall, room 203
18:00-results announced and awards presented in McGuffey Hall, room 203

The contest is a two-tiered competition among teams of students representing institutions of higher education. Teams first compete in the Regional Contests, held around the world from September to November each year. The winning team from each Regional Contest advances to the Contest Finals, typically held in mid-March to early April. The Mid-Atlantic Regional Contest lasts for five hours. Each team of three students tries to solve as many problems as possible, programming the solutions in C++ or Java. The team that solves the most problems correctly wins, with ties broken by the least total time (the sum of the times consumed for each problem solved, from the beginning of the contest to the time the correct solution is submitted).
Representatives from Horizontech, Inc. visiting the ITEC 490 class

Monday, Nov 4
11AM
Davis Hall 151.

Horizontech, Inc. (HTI) is a Global Information Technology Services organization, with operations in the US, China and India. They develop technology solutions that integrate data, hardware, software and business processes to more efficiently automate customer enterprise business applications.

Representatives from Horizontech will be present to help students learn more about their organization and the roles that are played by their team members as well as to recruit potential new employees.

All students are invited to attend, but seating is limited.

Museum of the Earth Sciences Lecture: “Earthquakes in Virginia”

Tuesday Nov. 12
7:00 p.m.
Hurlburt Hall Auditorium

Dr. Chuck Bailey from the College of William and Mary will present “Earthquakes in Virginia” exploring what was thought by the general public to be an unlikely phenomenon in our region. His data might surprise you as to how geologically active Virginia actually is.