

From the Dean’s Desk – October 10, 2013



Photo credit: Vickie Taylor

The tower crane has arrived! We are thrilled to report that construction progress is becoming more visible at the site of the Center for the Sciences with the arrival of the large crane over the weekend of October 5 and 6, 2013. While site work has been under way for some time, more obvious signs of development are taking place with the installation of this piece of equipment. We will continue to report on the progress of this facility as we build a big part of the future for CSAT and Radford University.

Much of that future is being written by our faculty, students and alumni. In this edition, we are proud to highlight a number of their activities.

**EMILY WILLIAMSON: ENRICHING LIVES ONE BYTE AT A TIME**



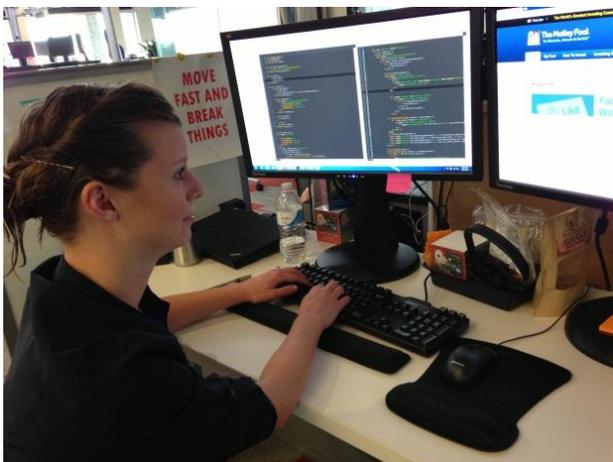
Emily Williamson, a 2009 graduate who majored in biology at Radford University, knew that she wanted a meaningful career that could positively impact the lives of others. “My original plan was medical school,” says Williamson “but I soon realized that my ability to help large groups of other people would be limited in that capacity.” So with a desire in her heart to find the role that would allow her to assist a larger audience, she stumbled into application development through a Washington D.C. seminar encouraging women to consider

computer programming opportunities. She was immediately hooked on the possibilities. “In November 2012, I decided to quit my job in health care and focus on learning development,” Williamson recalls, and found herself in the middle of a new career path by the spring of 2013 with one of the leading investment information services in the nation. “In April, I was hired into a 6 month apprenticeship program for developers at *The Motley Fool* and I love it!” The Motley Fool is a multimedia financial-services company that provides financial solutions for investors through various stock, investing, and personal finance products at its website fool.com. The company is based in Alexandria, Virginia.

What drew Williamson to this opportunity was the company’s philosophies of helping people invest better by finding strategies and paths which suit their life goals. “I really love the problem solving and getting to help people every day” Williamson states, having reached a professional aspiration of her own. “This is definitely a career I can see myself in for many, many years to come, with incredible growth potential.”

When discussing her Information Technology background at Radford, Williamson recalled “I had only taken a few basic I.T. classes at RU and now I wish I had taken many more!” She does note that it has been her biology coursework at Radford that has helped the most in her new career. Solution analysis was a staple of her biology work that emphasized sound and thorough practices to solve problems. This training helped her develop investigation and examination techniques that serve her well when dealing with computer program glitches.

Williamson encourages current and future Radford University students to consider a broad education emphasizing science and technology as she further explores her new career and she also wants to help embolden aspiring female programmers with a recommendation. “Recently I read the book, *Unlocking the*



*Clubhouse: Women in Computing*. Written by a visiting professor in sociological gender research at Carnegie Mellon and Carnegie Mellon's Dean of Computer Science, the book is a summary of research the two conducted on the differences between males and females in Computer Science at CMU, with a special focus on how to get females to enroll and stay in the major.” She adds, “I highly recommend any female, Computer Science major or not, to read this book and explore adding Computer Science courses to their curriculum. It will benefit them exponentially in any career and will help them appreciate what they as females can bring to the table.”

In addition to her classes, Williamson credits the Radford environment with her success stating “It was my relationships at RU with faculty, staff and students that have really been a benefit in the working world. Most people really make an effort to be available to you at Radford and that helps establish a lot of networking skills. I especially appreciated the opportunities I received through my involvement in various clubs and organizations.”

Williamson certainly embodies the “Innovation inspired” motto of the RU College of Science and Technology and has utilized networks both personal and electronic to continue her role in the Radford University tradition of service to others.

Logo courtesy of The Motley Fool, Inc. [www.fool.com](http://www.fool.com)

Photos courtesy of Emily Williamson

## **DR. BRENDAN FISHER: HELPING MOVE A MOUNTAIN OF WATER**

RU Geology Alum, Dr. Brendan Fisher served as our featured speaker during the first Museum of the Earth Sciences lecture for 2013-14. Dr. Fisher's captivating presentation detailed his role in helping overcome the challenges faced with moving water from one side of the Andes to the other.

The project was documented on the Discovery Channel television program "Build it Bigger". <http://www.dannyforster.com/item/bib-s3-e5>

Dr. Fisher is a 1998 Radford University graduate with a Master's of Science degree in Engineering Geology. Following his time at RU, he continued his education at Virginia Tech, where he completed another Master's Degree in Geotechnical Engineering, before moving on to complete his PhD in Geological Engineering at the University of British Columbia. Returning to the New River Valley in 2008, Dr. Fisher co-founded Fisher & Strickler Rock Engineering with offices in Radford, Virginia and Prescott, Arizona.

Dr. Fisher and his family currently reside in Radford.

There are two additional lectures sponsored by the Museum of the Earth Sciences this fall.

**"Earthquakes in Virginia" presented by Dr. Chuck Bailey, College of William and Mary.  
Tuesday, November 12 in the Bonnie Hurlburt Auditorium at 7pm.**

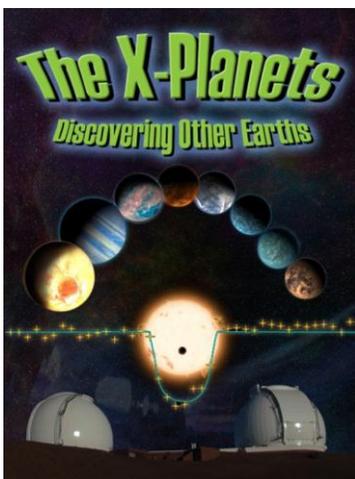
**"Searching for El Dorado, an Adventure in Guyana" presented by Mr. Ed Blackford.  
Tuesday, December 3 in the Bonnie Hurlburt Auditorium at 7pm.**

Admission is free and open to the entire University Community and General Public



Dr. Brendan Fisher pictured with the coveralls from the Olmos project in Peru

**IN THE RADFORD UNIVERSITY PLANETARIUM**



**Tuesday and Thursday shows: "The X-Planets"**

**7:30 PM - 8:30 PM**

We have found over 700 planets orbiting other stars and life forms on Earth that might survive on these alien worlds. The X-Planets visits the most famous of these exoplanets and explores 3D artists' renderings of each planet's surface. These are alien worlds around other suns where we are looking for life today - rocky worlds with comfortable temperatures and maybe liquid water. Some have two or three suns. But how do we see these worlds and know what their surfaces are like? Answering that question is also part of The X-Planets show.

**Saturday shows: "It's About Time"**

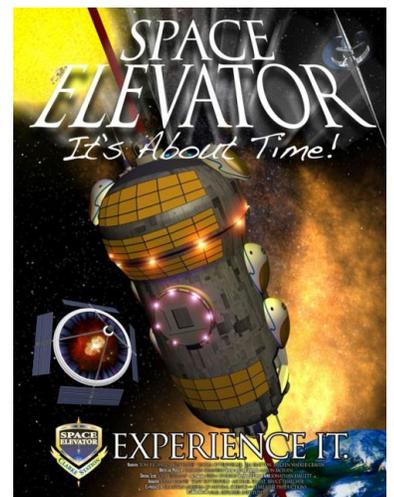
**10:30 AM - 11:30 AM**

Someday our children may travel to orbit in a Space Elevator. Some day we may use a Time Telescope to watch the Big Bang, the birth and death of a star, or an explosion on the Sun. Explore these wonderful inventions from the "science future" as you discover the many clocks that keep time in the Universe!

It's About Time takes you up from the top of Mt. Kilimanjaro to an orbiting geosynchronous space station. As the Earth gets smaller below you, your clocks stay the same, and we view the changes that days and seasons cause on earth.

At the top, look at the wonders of the universe through a major telescope, then see it as it really is today by viewing through a wormhole that shortens the distance that light must travel to get to you.

It's About Time talks about the cycles that rule our planet and our lives, and ends with the entire time since the Big Bang compressed into a single day.



## DOMESTICATION OF THE DOG

Dr. Darcey Morey presented the first part of his 5 part series on the "Domestication of the Dog" on Friday October 4, 2013. We learned of some of the ancestry of our modern dogs and their relationship to species of wolves, coyotes and more. Dr. Morey has spent much of his career learning more about "Man's best friend" and we are the beneficiaries of his research.



### Anthropology Lunchtime Lecture Series Presents:

"Domestication of the Dog"  
By Dr. Darcey Morey

**\*All lectures will be held in Whitt  
Hall 108 Friday @ noon\***

Do you love your dog? Have you ever wondered how the domestication of man's best friend developed? Join Dr. Morey every Friday at noon to discuss the domestication of the dog. Bring your lunch, bring a friend, but sadly, leave your pup at home.

- 10/4/13: Ancestry and the Earliest dog
- 10/11/13: The Process of Domestication
- 10/18/13: Late Prehistoric Dogs of the North American Arctic
  - 10/25/13: Ancient Dog Burials Worldwide
- 11/01/13: Why Dogs and People Relate So Well



The lecture series continues every Friday through November 1, 2013 and is sponsored by the Department of Anthropology. Sessions are held in Whitt Hall 108.

You can learn more in Dr. Morey's book "Dogs: Domestication and the Development of a Social Bond".

## NEW RADFORD UNIVERSITY SCHOLAR-CITIZEN VIDEO FEATURES BIOLOGY MAJOR

<https://vimeo.com/75525888>

Jessica Frazelle, a senior biology and Spanish major, participated in a six-week immersive study abroad this summer in Spain. Jessica plans to become an orthopedic surgeon and wants to use the Spanish language skills she gained through this experience to better communicate with her patients, both in practice and medical mission trips. She was able to travel to Spain through the Highlander in Action program, which directly supports students in their pursuit of transformative learning experiences.



## UPCOMING EVENTS:

National Chemistry Week: October 21-24

National Chemistry Week encourages chemists and chemistry enthusiasts to build awareness of chemistry in our community with a common goal: To promote the value of chemistry in everyday life. At Radford University this year, we will feature several programs including: "Quantum Mechanics: A Philosophical History" presented by Dr. Tim Fuhrer and "Happy Hour: An Eclectic Collection of Ideas Attempting to Coalesce Around the Chemistry of Beer and Wine" presented by Dr. Joe Wirgau. There will be additional activities added to the slate of events as the week draws closer, so please visit the RU Department of Chemistry Facebook page at:

<https://www.facebook.com/radfordchem> and their website at <http://www.radford.edu/content/csat/home/chemistry.html>

## RU CSAT STEM CLUB

The CSAT STEM Club will be bringing science to the 18<sup>th</sup> annual Radford Highlanders Festival on Saturday, October 12 with a bang. The group will feature an experiment showcasing what happens when you introduce Mentos candies to a container full of diet soda as well as some table-top science activities including recycling plastic water bottles into bird feeders.

## CSAT Advisory Council to meet during Homecoming/Family Weekend

Members of the College of Science and Technology Advisory Council are scheduled to meet during the annual fall homecoming and family weekend on October 18. During this meeting, the group will be updated on the activity of the College as well as consulted about future plans and opportunities.

## Department of Geospatial Sciences to co-sponsor movie event

On Friday, November 1, 2013 at 5pm in the Bonnie Hurlburt Auditorium, *Hollow*, an interactive documentary and community participatory project will debut at Radford University. Director Elaine McMillion will be a guest of Dr. Stockton Maxwell from the Department of Geospatial Science and will screen portions of her documentary as well as showcase some of the crowd-sourcing and visual techniques she utilized to tell this story of Appalachia. This event is co-sponsored by the Scholar-Citizen Initiative.

**A National Chemistry Week Event:**

Monday October 21<sup>st</sup> at 4pm  
in the Bonnie Auditorium

**"Quantum Mechanics: A Philosophical History"**  
by Dr. Tim Fuhrer

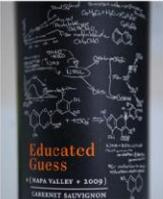


Come explore how the history of the discovery and development of the field of Quantum Mechanics changed our understanding of the universe, not just from a scientific perspective, but from a philosophical and even religious perspective

Tuesday October 22<sup>nd</sup> at 4 pm  
in the Bonnie Auditorium

**"Happy Hour: An Eclectic Collection of Ideas Attempting to Coalesce Around the Chemistry of Beer and Wine"**  
by Dr. Joe Wirgau

Come see the only chemistry talk ever given that mentions in context to chemistry zombies, Ben Franklin, I Love Lucy, North Carolina State, George Washington, Joan of Arc, microwave popcorn, the Council of Nicaea, Edgar Allen Poe, the Olympics, and the Roman empire.



## **SPECIAL ALUMNI PRESENTATIONS:**

### **Mike Hurt: "Professional Communication: How to make a good impression"**

**Monday, October 14, 11am Davis Hall 151**

The first impression you make can be a ticket to success or a barrier to overcome. Learn the essential elements of outstanding professional communication during this presentation.

Mike Hurt, a Radford University graduate with a 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.

Mike and his wife, Sally and their 4 children reside in Richmond, VA.

Joining Mike for his presentation will be his VP of Product Development, David Antoline.

### **Kent Warren: "How to Succeed in Your First Job"**

**Friday, October 18, 11am Davis 151**

Your first job is an important launching pad for your career. Learn from an industry professional what it takes to make this opportunity successful.

Topics covered will include:

- What does it mean to be part of a project team?
- How can you be a self-starter and why is this important?
- Are you easy to manage?

Kent Warren is a Radford University graduate with a degree in Political Science. While at RU, Kent also studied information systems 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.

## **CSAT CAREER OPPORTUNITIES**

Please help us spread these opportunities to our students.

### **Washington D.C. Employer Site Visits**

Join representatives from the Office of Career Services and Community Engagement in Washington DC for two scheduled site visits with regional non-profit and federal government employers. Students will be responsible for their own transportation to the Washington area, but the Office of Career Services and Community Engagement will help coordinate site visit logistics and provide additional information to student participants.

#### **Day 1- Visit the Secret Service Headquarters and Training Facility**

*Washington, DC and Laurel, MD*

*7:30-4:30 (not including travel)*

The United States Secret Service (Recruitment Division) is hosting a tour on Monday, January 13<sup>th</sup>, 2014 of their training center and agency Headquarters. We anticipate you will find this experience to be unique and enriching. You will have the opportunity that few people do to see the Secret Services' training facility and Headquarters which are not open to the public. Your experience will include a K-9 demonstration, a visit to the weapons library, a tour of the Protective Intelligence Operation Center and much more. You will hear from various instructors, forensic fingerprint technicians, the Secret Service historian and the recruitment squad.

#### **Day 2- Visit the National Center for Missing and Exploited Children (NCMEC)**

*Old Town, Alexandria, VA*

*9:30-11:30 (not including travel)*

The National Center for Missing & Exploited Children will host a tour of their headquarters on Tuesday, January 14<sup>th</sup>, 2014. The NCMEC believes that every child deserves a safe childhood. For 29 years they have been at the forefront of the fight to keep children safer from abduction and sexual exploitation. They provide the resources needed to help protect children, bring perpetrators to justice and prevent these devastating crimes committed against children. The NCMEC provides services, resources and technical assistance to child victims of abduction and sexual exploitation, their families and the professionals who serve them. They provide the most comprehensive resources regarding missing children, child sexual exploitation, child safety and prevention, law enforcement training and victim and family support. Radford students will tour the NCMEC headquarters and hear from representatives from each of the various departments that support NCMEC's mission.

Registration is required and space is limited. Background checks are required by the Secret Service. To register, login to [HireAHighlander](#). You will then be contacted by a Career Services staff member with additional information.

## PAID INTERNSHIP OPPORTUNITIES

SPRING, SUMMER, and FALL 2014

The Virginia Space Grant Consortium and its partners in collaboration with Virginia's colleges and community colleges are offering the Commonwealth STEM Industry Internship Program (CSIIP). CSIIP is a free resource finding paid spring summer and fall internships. Visit <http://www.csiip.spacegrant.org> for more information.

[www.csiip.spacegrant.org](http://www.csiip.spacegrant.org)



# PAID INTERNSHIP OPPORTUNITIES SPRING, SUMMER, AND FALL 2014



### **ABOUT THE PROGRAM:**

The Virginia Space Grant Consortium (VSGC) and its partners (shown below) in collaboration with Virginia's colleges and community colleges are offering the [Commonwealth STEM Industry Internship Program \(CSIIP\)](#). CSIIP is a free resource for finding paid spring, summer, and fall internships. CSIIP provides an online system where undergraduate students majoring in science, technology, engineering or mathematics (STEM) disciplines at Virginia universities, colleges and community colleges complete a single application package that will be reviewed by companies throughout Virginia. *There is no cost to students, universities, or companies to participate.*

Students may apply statewide or by region and can also express interest in specific internships posted by companies. Apply now for maximum consideration by companies. Application is through the CSIIP website at



### **ELIGIBILITY REQUIREMENTS:**

- At least 18 years of age and attending an accredited Virginia college, community college, or university. Virginia residents attending an accredited out-of-state college may apply.
- A full-time undergraduate student, taking at least 12 credit hours per semester.
- Have completed at least 30 or more post-secondary education credits and are at least of rising sophomore status prior to the internship. Newly graduating seniors in 2014 are also eligible to participate.
- Majoring in a STEM (science, technology, engineering or mathematics) field.
- U.S. Citizen or Permanent Resident.
- A minimum GPA of 2.7 on a 4.0 scale.



Contact VSGC regarding CSIIP  
at [csiip@spacegrant.org](mailto:csiip@spacegrant.org)  
or (757) 766-5210.

[www.CSIIP.org](http://www.CSIIP.org)

## LEARN MORE AND APPLY AT:

*One application puts a student in front of a multitude of companies offering internships. There are no company applications to fill out until a company decides to make a student an offer.*





# WORLD FOOD DAY - OCT 16

## **“Sustainable Food Systems for Food Security and Nutrition”**

Panel Presentation

Subeyr Sagal

Thomas Turner

Dr. Kiert Toh, Moderator

12:00 PM in the Bonnie Auditorium

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- 868 million people in the world are hungry.
- One out of every four children under the age of five is stunted.
- Malnutrition costs the global economy \$3.5 trillion per year or \$500 per person.
- Agriculture must become more nutrition-sensitive, working to produce more nutrient-dense foods such as fruits, vegetables and legumes over just staples.
- 60 percent of the world’s ecosystems are degraded or used unsustainably, which poses serious threats to food security and nutrition.
- By definition, sustainable food systems produce nutritious diets for all people today while also protecting the capacity of future generations to feed themselves tomorrow.
- 40 percent of food is wasted in the United States. Consumers have the power to create a more sustainable food system by minimizing their food waste

**What would a more sustainable, environmentally-friendly food system look like?**

**How can agriculture work to end all forms of malnutrition, including undernutrition and overweight?**

**What would have to change to move us in that direction?**

The World Food Day 2013 Panel Presentation is an opportunity to explore these questions, and help bring about the future we want.

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For more information, contact Dr. Prahlad Kasturi, Coordinator of the World Food Day Panel Presentation at [pkasturi@radford.edu](mailto:pkasturi@radford.edu) or 831-5884. Sponsored by the Department of Economics; Radford University.