

Spring 2015

FORESTRY

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New Water Degree Program Begins Fall 2015



Stressors, such as climate change, land use, and changing demands on water resources, call for people with a scientific understanding of the water cycle. Sustainable urban expansion requires an understanding of the interactions among water availability, water quality, culture, and society. Increasingly, solutions to sharing water in a sustainable manner require a mix of skills involving water science, law, economics, management, and related social sciences.

The challenges in this growing industry involve existing disciplines at Virginia Tech, ranging from water engineering to human nutrition to aquatic ecology. Students with interdisciplinary training in water science, policy and management provided by this new degree at Virginia Tech will be equipped to meet the many expanding water challenges facing society. These complex water challenges offer unprecedented opportunities for student careers in the fields of water science, policy, and management.

The bachelor of science program “Water: Resources, Policy, and Management” will start in fall 2015, building its curriculum from existing classes in 13 departments. Seven faculty members were hired specifically for their water expertise and will explore such subjects as the effects of climate change on agriculture, management of water and natural resources, transportation of chemicals to surface water and groundwater, and development of decision-support tools to mitigate the negative impact of human activities. Students will select areas of focused study from water science and policy specializations.

From the Department Head

As you may have heard already, big changes are occurring around the halls of FREC. Janaki Alavalapati has left to become Dean of the School of Forestry and Wildlife Sciences at Auburn University, and Sue Snow is retiring and moving on to full-time grand-parenting. Janaki has served the department for nearly seven years, and among many other accomplishments has seen us through difficult budgetary circumstances, a name change, substantial curriculum revisions, and a number of outstanding faculty and staff hires. Sue Snow has retired at the end of June after 32 years, much of that time as our departmental Administrative Assistant. Sue has been the always-pleasant face and voice since the dawn of the Chicken McNuggets and mini-van era (both introduced the year Sue started!), and is a veritable library of wisdom and knowledge about the program. We are grateful for the immeasurable contributions that each of these colleagues/friends have made, and we wish them both the best as they take on their exciting next endeavors.



Dr. Jay Sullivan
Professor and Interim Head
Forest Resources and
Environmental
Conservation

We certainly will miss Janaki and Sue dearly, but as always we continue to move forward. We have hired Mary Williams as our new Administrative Assistant and Staff Graduate Coordinator, and we are in capable hands.

Mary is a Virginia Tech alum who received a degree in Business Management with a concentration in Human Resources. She has extensive experience in Human Resources and financial operations, coming to us most recently from the Virginia Bioinformatics Institute. Mary has already hit the ground running, so please welcome her as you have the opportunity to interact in the coming weeks and months.

We continue to have a bright future with an exceptional faculty and staff, excellent students, and the tremendous support of so many alums and friends. For my part, I am humbled to be in this position, even as interim, and look forward to interacting with many of you in exciting new ways.



Dear Faculty, Staff, Students, and Advisory Board Members:

I want to thank you for allowing me to work with you for the past seven years to move the Department of Forest Resources and Environmental Conservation forward. My special thanks are to my front line colleagues--the support and technical staff--for their cooperation and outstanding service/support. It is because of you the department sails smoothly! My sincere thanks to faculty and students for their creative and hard work. It is because of you FREC's excellence is up and rising! I want to thank all members of the Advisory Board for their commitment and continued support/guidance. It is because of you, FREC is strong and relevant to the Commonwealth of Virginia and beyond! I want to thank Dean Winistorfer for his guidance and support to FREC!

Dr. Janaki Alavalapati

It was an honor and privilege working with you. I hope our paths cross again soon!



Welcome New Faculty/Staff



Hua Bai joined the Department of Forest Resources and Environmental Conservation in April 2015 as a Postdoctoral Associate working with Amy Brunner and Jason Holliday. Her research interests are transcriptional responses to abiotic stress and floral regulatory networks in poplar, which is a model of woody plants. Hua earned her M.S. in Molecular Biology from Beijing Forestry University in China, and her Ph.D. in Forest Botany and Tree Physiology from Georg-August-Universität Göttingen in Germany.



Kirsten Silvius joined the Department of Forest Resources and Environmental Conservation in March 2015 as a Senior Research Associate. She is a tropical ecologist with research interests in coupled naturehuman systems, protected area effectiveness, and wildlife management by local and indigenous peoples. Kirsten is supporting strategic planning for sustainable productive activities in Amazonian protected areas and indigenous lands. Kirsten received her B.A. in Biology and Romance Languages from Bowdoin College, and holds M.S. and Ph.D. degrees from the University of Florida at Gainesville.



Rita Teixeira joined FREC in January 2015 as a Research Scientist working with Amy Brunner. Her research interests are the identification of genes involved in the perception of short and long days as well as nitrogen availability/deficiency in *Populus* and how these factors promote growth cessation in the beginning of autumn and resume growth when spring starts. The main interest will be the establishment of the gene network responsible for light signal perception in trees. She received her Ph.D. from the Swedish University of Agricultural Sciences, Uppsala, Sweden; an M.S. in Cell Biology from the University of Coimbra, Coimbra, and a Biology degree from the same university.



Mary Williams joined the Department of Forest Resources and Environmental Conservation in May 2015 as Administrative Assistant and Graduate Student Coordinator. Mary graduated from Virginia Tech in 2007 with a Bachelor's degree in Business Management with a concentration in Human Resources. She joined Virginia Tech as a full-time staff member in 2008 and received her Professional in Human Resources (PHR) certification from the Human Resources Certification Institute in 2013 and her Society for Human Resources Management-Certified Professional (SHRM-CP) certification in 2015. Mary is married and has one son. She enjoys spending time outside with her family, working in her flower gardens, and helping her husband refinish furniture.



Highlights: Teaching - Research - Extension

Sorice named Scholar of the week



The Office of the Vice President for Research recognized Michael Sorice for his work in protecting imperiled ecosystems. His research focuses on how natural resource users and landowners affect biodiversity and ecosystems.

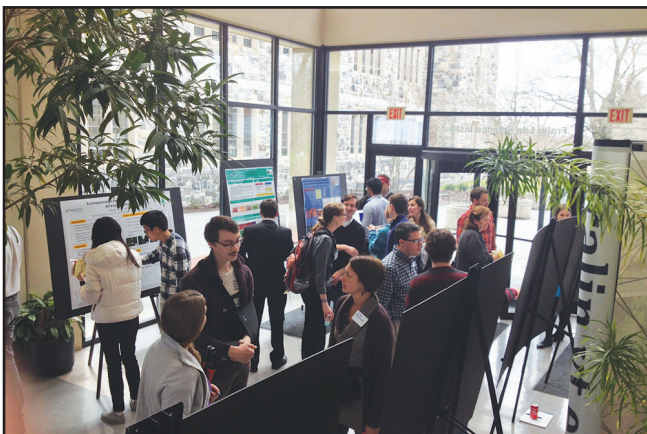
Recreational use of natural resources is continually growing. Mike addresses the paradox of maintaining or increasing recreation/tourism benefits while protecting the target resource. Increased use leads to increased revenues that can be reinvested in management, but it also leads to an increase in social and biophysical impacts.

Stern Leads Professional Certificate Program in Bali

Associate Professor Marc Stern led a professional certificate program this spring semester in International Sustainability Consulting offered by the Center for Leadership in Global Sustainability. Eight post-graduate students participated in the semester-long program, which culminated in an immersive consulting experience in Bali, Indonesia, in May and June. The group worked with multiple entities in Bali, focusing on issues of waste management, marine conservation, ecotourism, and land and cultural preservation.



Seventh Annual Graduate Research Symposium



The successful Seventh Annual Graduate Research Symposium was held March 27, 2015. The keynote speaker was Paul Johnson, Urban and Community Forestry Program Coordinator for the Texas A&M Forest Service.

Oral presentation winners were: Rajesh Bawa, Annika Jersild, and Catherine Bukowski. Poster presentation winners were Molly Darr (Entomology), Anna Santos, and Won Hoi Hwang.

(continued next page)

Highlights: Teaching - Research - Extension

Seventh Annual Graduate Research Symposium *(continued)*

A special thank you to the 2015 Symposium Committee Members:

- Benjamin Ahlswede
- Rajesh Bawa
- Damion Drover
- Ranjith Gopalakrishnan
- Nathan Hanzelka
- Kristin Hurst
- Annika Jersild
- Cene Ketcham
- A.J. Lang
- Keith O'Herrin
- Adam Oliphant
- Trisha Sanwal
- Kriddie Whitmore

Forest Field Studies Tour

Eighteen Forest Resource Management and Forest Operations and Business undergraduates and three graduate students participated in a five-day Forest Field Studies Tour throughout Virginia during the week of May 18. The group lodged at the Airfield 4-H Center in Wakefield.

The tour, led by Scott Barrett and Chad Bolding, spent each day in the field visiting logging operations, touring mill facilities, examining field sites displaying a range of management strategies, and meeting with forestry professionals in numerous aspects of the profession. Students toured a chip mill, a pellet mill, a wood-fired power plant, the VDOF Garland Gray Nursery, a plywood mill, two pine sawmills, a hardwood sawmill, and a pulp mill. Students also visited both Piedmont and Coastal Plain sites displaying intensive pine silviculture, pre-commercial thinning, and numerous mechanized logging operations including shovel logging and high-production clean chipping.



The Southeast Chapter of the Society of American Foresters, chaired by Neil Clark, held a joint meeting with the students and AmeriCorps volunteers and provided a BBQ dinner. In addition, Harrell Turner gave a presentation encouraging the students to set priorities, work hard, and find a life/work balance. Thanks are due to our many hosts, alumni, and company representatives for making the trip a success!



Spotlight: Faculty - Staff - Students

Gagnon receives Virginia Agribusiness Council's Land-Grant University Award



Jennifer Gagnon, coordinator of the Virginia Forest Landowner Education Program, received the 2015 Land-Grant University Award from the Virginia Agribusiness Council.

Jennifer received the award at the Virginia Forestry Summit in Charlottesville on April 16. The council presents awards annually to faculty, staff, and administrators of the commonwealth's land-grant universities, which include both Virginia Tech and Virginia State University, for meritorious or exemplary services to the industry of agribusiness during their careers.

Jennifer develops educational programs and materials for over 375,000 private forest landowners in Virginia, including short courses, an online class, retreats, the Virginia Forest Landowner Update website, and a quarterly newsletter. She also coordinates the annual Forestry and Wildlife Field Tours, in which landowners, natural resource professionals, and other interested Virginians spend a day visiting private, industry, and public lands that center

on multiple-use management opportunities and practices. The tour series is the longest-running program of its kind in the commonwealth.

In addition to traditional landowner programs, she developed the Real Forestry for Real Estate Program to reach new woodland owners. This program engages real estate professionals who sell woodland properties by offering them continuing education credits on forestry topics and provides educational materials to new woodland owners. Forestry industry members attribute Jennifer's success to her engagement with landowners and the forestry industry across the commonwealth.

Jennifer is currently the chair of the Appalachian Society of American Foresters as well as a member of both the Association of Natural Resource Extension Professionals and the Virginia Forestry Association's Board of Directors. She has been a regional chair for the Virginia Tree Farm Program and a volunteer for the Virginia Master Naturalist Program since 2006.

Lee Receives Grants/Awards



Raymond Lee (Ph.D. candidate) is the recipient of two grants/awards. He was awarded the Virginia Water Resources Research Center Student Competitive Grant (\$5,000) and the Edna Bailey Sussman Fund Environmental Internship Program (\$5,910). Congratulations, Raymond!





Spotlight: Faculty - Staff - Students

Timpano Awarded Best Student Presentation



Tony Timpano (Ph.D. candidate) was awarded best student presentation at the 2015 Annual Meeting of the American Society for Mining and Reclamation held in Lexington, KY, in June. The title of his talk was “Stream Ecosystem Response to Mining-Induced Salinization in Appalachia,” which covers his dissertation research topic. Congratulations, Tony!

McElligott Receives Grants/Awards

Kristin McElligott (Ph.D. candidate) is the recipient of two grants/awards. She was awarded the Virginia Tech Graduate Student Assembly Graduate Research and Development Fund (\$700) and the Best Graduate Student Paper Award, 18th Biennial Southern Silvicultural Research Conference. Congratulations, Kristin!



University Excellence in Outreach Award



John Munsell

The Excellence in Outreach Award recognizes exceptional efforts and outstanding contributions toward constituencies beyond the College of Architecture and Urban Studies and Virginia Tech.

This award was presented to Casey Tree Farm Team Members John Fike (Crop & Soil Environmental Science), Nathan Heavers, Paul Kelsch, and Susan Piedmont-Palladino (School of Architecture and Design), John Munsell and Eric Wiseman (FREC).

Their work engaging students in projects that reach far beyond the classroom and involve the public at large is exemplary. Congratulations!



Eric Wiseman



Spotlight: Faculty - Staff - Students

Munsell Elected President of Association for Temperate Agroforestry (AFTA)



John Munsell was elected president of the Association for Temperate Agroforestry (AFTA). The mission of AFTA is to promote the wider adoption of agroforestry by landowners in temperate regions of North America. With members in the US, Canada, and overseas, AFTA pursues its mission through activities such as networking, information exchange, public education, and policy development. AFTA serves university researchers, educators and extensionists, private farm and forestry groups, public policy makers, and private landowners, and its programs facilitate the exchange of scientific and practical information about temperate agroforestry.

Promotions and Tenure



Jason Holliday has been promoted to Associate Professor with tenure. His interest areas include climatic adaptation in widely distributed tree species, transcriptional responses to abiotic stress, genotype-phenotype association studies, conservation genetics, genome-enabled breeding, adaptation of tree populations to climate change, and landscape genomics.



Brian Strahm has been promoted to Associate Professor with tenure. His interest areas include forest soils, ecological restoration, carbon and nutrient cycling, biogeochemistry, ecosystem ecology, reforestation, soil-plant-atmosphere interactions, sustainability, chemistry of soil interfaces, effects of land use and global change on soil properties, processes, and function.



John McGee has been promoted to Professor. His interest areas include natural resource management, geospatial applications, and technology transfer.

John develops, delivers, and evaluates high-quality educational programs for extension agents, natural resource managers, and teachers, and organizes and conducts workshops to support Workforce Development programs in the Commonwealth.



Spotlight: Faculty - Staff - Students

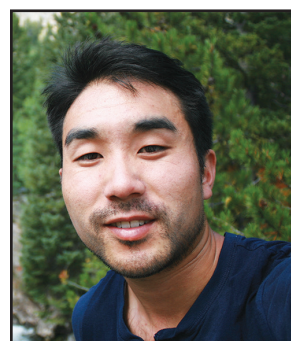
Sussman Funds Summer Interns

Three graduate students in the Department of Forest Resources and Environmental Conservation have received summer support for 2015 from the Edna Bailey Sussman Fund.

Congratulations to these three students for successfully securing funding by a highly competitive summer intern program. Special recognition goes to Cameron Houser, whose proposal was judged to be of exceptional merit by the Sussman Fund Board and received additional funding above and beyond the standard level of support.



Gavin Corral, a Ph.D. candidate in forest biometrics, will be interning with American Forest Management, a private company that manages over five million acres of forest land in the U.S.



Raymond Lee, a doctoral candidate in forest ecology, will conduct research on nutrients in soil water at the USDA Forest Service Coweeta Hydrologic Laboratory in Otto, North Carolina.



Cameron Houser will spend the summer at the USDA Agricultural Research Center Hydrology and Remote Sensing Laboratory in Beltsville, Maryland, as part of her Ph.D. studies.

Jersild Receives Fellowship



Annika Jersild (M.S.) received a Virginia Space Grant Consortium (VSGC) Graduate Research STEM Fellowship for the 2015-2016 school year. This program provides fellowships of \$6,000 in add-on support to supplement and enhance basic research support.

The purpose of the program is to encourage talented individuals to pursue careers in STEM and support NASA's mission and is intended to enhance basic graduate support such as graduate research assistantships, graduate teaching assistantships, and non-federal scholarships and fellowships. Congratulations, Annika!





Spotlight: Faculty - Staff - Students

Annual Awards Recognition

The annual awards recognition celebration within the College of Natural Resources and Environment (CNRE) held on April 7 resulted in several FREC faculty and student awards.

CNRE Student Organization Member Recognitions:

- **Brendan Little**, Natural Resources Conservation
- **Tyler Sims** - Forestry Club
- **Keith O'Herrin** - Forestry Graduate Student Association (FGSA)
- **Anna McAuley** - Natural Resources Recreation Society
- **Sara Vial** - Society of American Foresters

FREC Student Ambassador Recognitions: *Emma Boltz, Caleb Hopler, Catherine Kim, Fred Lancaster, and Brendan Little*

FREC Graduate Student Recognitions:

- **A.J. Lang** - The A.B. Massey Outstanding Doctoral Student Award and Outstanding Teaching Assistant
- **Anna Santo** - The H.E. Burkhart Outstanding Master's Student Award

Scholarships:

The Dean's International Study Scholarship: **Emily Huth**

Champion International: **Michaela Wenger**

The Richard B. Vasey Scholarship: **Cody Edwards**

Bartlett Tree Foundation Annual Scholarship: **Stuart Hupp and Michael Webb**

John M. and Janet H. Doughty Endowed Scholarship: **Heather Harcum**

Peter P. Feret Memorial Scholarship: **Samantha Malone**

Richard Foster Urban Forestry Scholarship: **Anna McAuley**

Jeffrey Andrew Fuerst Memorial Scholarship: **Breanna Anderson**

Herman William Gabriel Scholarship: **Jessica Lord**

Mr. and Mrs. Thomas C. Newbill Scholarship: **Hannah Goldsmith**

George and Mary Ragsdale Scholarship: **Jessica Lord**

Gretchen and Clyde Smith Memorial Scholarship: **Katherine Aylett Lipford**

J. Russell Smith Scholarship: **Sara Vial**

Thomas A. Walbridge Scholarship: **Andrew Downs**

Georgia-Pacific Corporation Scholarship: **Andrew Downs**

John D. Farmer Scholarship: **Cody Edwards**

John F. Hosner Scholarship: **Josh Yost**

Victor W. Stewart Scholarship: **Ilia Donner and Sara Vial**

Mable Beard Stuermann Scholarship Fund: **Eli Podyma**

William August Stuermann and Mable Beard Stuermann Scholarship Fund: **Louise Cohn-Still, Cody Edwards, Fred Lancaster, Anna McAuley, Joel Sisson, Ben Tolton, and Sara Vial**

Brent Keefer Annual Scholarship: **Emily Newburg**

Camp Ottari Nature Instructor Scholarship: **Brad Fleming**

(continued)



Spotlight: Faculty - Staff - Students

Annual Awards Recognition *(continued)*

Jacob B. Huffman Annual Scholarship: **Cameron Owens**

Mike Hinchey Annual Scholarship: **Hannah Nyquist**

Outstanding Recent Alumni Award: Matthew D. Brinckman (M.S. Forestry: Forest Economics, Policy, and Management, 2010)

Outstanding Teaching Award for 2014 - 2015: Brian Strahm

Agroforestry Club Update



After receiving a John E. Dooley Student Engagement Grant (JEDSEG) in April 2014, the club over the past year has held a series of educational discussions for community garden members on food forest design and concepts. Two planting days have resulted in over 40 plants being established, including an apple tree, hazelnuts, and chinquapins for a canopy layer, blueberries, honeyberries, blackberries, currants, golden raspberries, grapes and elderberries as the sub-canopy and rhubarb, asparagus, strawberries, cranberries and a variety of herbs as the understory. Objectives of the grant are to: Bring together community members to connect through nature and collaborative action, create access to fresh, healthy produce for years to come, provide a learning opportunity on sustainable land management practices and horticulture, and have a planting day to Celebrate Earth Day with the community.

FREC Spring 2015 Graduates!

- Jordan Endahl - M.S.
- Nathan Hanzelka - M.S.
- Nathan Kennedy - Ph.D.
- Rebecca Kidd - Ph.D.
- Robert Krenz - Ph.D.
- Lindsey Nolan - M.F.
- Anna Santo - M.S.
- William Saulnier - M.F.
- Santosh Subedi - Ph.D.
- Catriona Walker - M.F.
- Bingxue Wang - Ph.D.

Welcome New Graduate Students!

- Raymond Lee
- Mary Kester
- Charles Neaves



Alumni Corner



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Nick Fuhrman (B.S. in Forestry 2002 and M.S. in Forestry 2004) recently gave the Blue Ribbon Speaker presentation at the National College and Teachers of Agriculture (NACTA) Annual Meeting held in Athens, Georgia. His presentation was titled, "Turning Down the Noise and Inspiring Some Singing." The mission of NACTA is to advance the scholarship of teaching and learning in agricultural, environmental, natural and life sciences. The annual NACTA Conference

offers faculty members who share a love of teaching and teach in colleges of agriculture the opportunity to share research results and participate in professional development opportunities related to teaching.

Fuhrman is currently an Associate Professor and Graduate Coordinator in the Department of Agricultural Leadership, Education, and Communication at the University of Georgia.

The Department of Forest Resources and Environmental Conservation is on social networks! Facebook (<https://www.facebook.com/vtfrec>) and Twitter (<https://twitter.com/VTFREC>). If you are a part of these social networks, look us up!

Gifts from our clients and friends have a direct impact on the quality of learning, discovery, and engagement programs that the Department of Forest Resources and Environmental Conservation offers. We invite you to become part of our team! To make a tax-deductible contribution, send your check, payable to the Virginia Tech Foundation, Inc., to: Department of Forest Resources and Environmental Conservation, 313 Cheatham Hall (0324), Virginia Tech, Blacksburg, VA 24061

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