Endowed Professorships

Julian N. Cheatham Professorship of Forestry

Thomas M. Brooks Professorship of Forestry

The Honorable Garland Gray Professorship of Forestry

Thomas M. Brooks Professorship of Sustainable Biomaterials

Thomas H. Jones Professorship of Fisheries and Wildlife Sciences

The Honorable and Mrs. Shelton H. Short Jr. Professorship of Forestry
Endowed Professorships in the
College of Natural Resources and Environment at Virginia Tech

A Message from the Dean:

Endowed professorships bestow recognition on faculty who have achieved scholarly distinction and whose contributions make a significant impact both within and beyond the campus community.

We are honored to present and highlight the work and accomplishments of our named professors in the College of Natural Resources and Environment. These individuals bring distinction and accolade to their departments, our college, and the university. Their accomplishments are many and we benefit greatly from their passion for their work.

We are thankful for the generous support of our donors for whom these endowed professorships are named. These individuals have generously given of their personal resources to create a lasting legacy reflected in the life’s work of these outstanding faculty members.

We are honored to recognize our College of Natural Resources and Environment faculty who hold these distinguished named professorships.

Warm regards,

Paul M. Winistorfer
Dean
Amacher’s research has focused on international development and the design of policies to reduce forest degradation and exploitation. He has also worked in the areas of environmental regulation and econometrics as related to natural resource management questions. His early work was the first to propose models for subsistence household decision making concerning natural resources and the first to examine bargaining in the design of policies and regulations.

His research has been funded by several international organizations such as the World Health Organization, the World Bank, the Inter-American Development Bank, the U.S. departments of Energy and Agriculture, and the National Science Foundation. He has conducted research in Africa, Asia, and Latin America, including studies of deforestation in the Transamazon region of Brazil, an assessment of the cost of malaria to subsistence households in the Tigray region in Ethiopia, an assessment of the importance of Gorongosa National Park in Mozambique in allowing poor farmers to adapt to health and poverty shocks, and, most recently, a study of conservation agriculture adoption and adaptation to disease and climate shocks in the Central Plateau of Haiti.

Amacher, along with colleagues from Finland, recently wrote the first graduate textbook in forest economics published in the past 25 years. In all, he has written over 150 publications, including three books and monographs, and over 100 refereed journal publications. His work has collectively been cited more than 500 times by other researchers in refereed publications.

Amacher has received several honors since becoming a faculty member at Virginia Tech. He served as editor of Forest Science, the preeminent journal of research in forestry, from 2000 to 2003, and has been a senior editor in the forest and wildlife area for Natural Resource Modeling. Since 1999, he has served as editorial council member for the Journal of Environmental Economics and Management, which is widely recognized internationally as the top academic publishing outlet in the field. Amacher has also served as associate editor for the Journal of Forest Economics, Forest Science, and Natural Resource Modeling. His teaching awards include the university-wide Panhellenic Teaching Excellence Certificate and the College of Natural Resources and Environment Excellence in Teaching Certificate.

Amacher has also held several honorary appointments, including adjunct professor for the Center for Chinese Agricultural Policy at the Chinese Academy of Sciences, and is currently an associate researcher for the Woods Hole Research Center and for the Instituto de Pesquisa Ambiental da Amazônia, the largest nongovernmental organization involved in conservation work in Brazil. He has been a visiting associate professor in the Department of Economics at Virginia Commonwealth University, and a visiting scholar in the Department of Environmental Economics at the University of Gothenburg in Sweden and the Department of Economics at the University of Helsinki.
HAROLD E. BURKHART
Thomas M. Brooks Professor of Forestry

This professorship was established in 1980 to express the value of Virginia forest lands and the contributions to economic vitality provided by the greater forest-based industry. Thomas M. Brooks was a prominent Virginia lumberman who strongly supported the College of Natural Resources and Environment. The professorship is limited to senior faculty in the Department of Forest Resources and Environmental Conservation.

Burkhart has been a faculty member in what is now the Department of Forest Resources and Environmental Conservation since 1969, rising in the ranks from assistant to associate to professor, to Thomas M. Brooks Professor, and to University Distinguished Professor in 1999. He served as head of the department from 1995 to 2008. From 1976 to 1977, Burkhart was a Senior Research Fellow at the Forest Research Institute in Rotorua, New Zealand. He has published extensively in professional journals on forest growth and yield prediction, and forest inventory and sampling. He is co-author of the textbook “Forest Measurements,” now in its fifth edition, and lead author of the advanced-level book “Modeling Forest Trees and Stands.”

Burkhart’s research and graduate education efforts are focused on developing tree growth and stand development models that advance the science of modeling and provide land managers with the decision support capabilities needed to practice sustainable forestry. Much of the funding for this research has been generated through the Forest Modeling Research Cooperative, a Virginia Tech/industry consortium that Burkhart founded in 1979. Additional financial support has come from a number of research grants from federal sources, including the National Science Foundation, USDA Forest Service, and Environmental Protection Agency.

Burkhart’s contributions to forestry education have been recognized through awards from several organizations, including the International Union of Forest Research Organizations Scientific Achievement Award, the Virginia Academy of Science J. Shelton Horsley Research Award, the Virginia Tech Alumni Award for Research Excellence, the Virginia Tech Graduate Advising Award, the State Council of Higher Education for Virginia Outstanding Faculty Award, and the Society of American Foresters Barrington Moore Memorial Award. He was named Virginia’s Outstanding Scientist of 2013. A former editor of the journal Forest Science, Burkhart is a Fellow in the American Association for the Advancement of Science and the Society of American Foresters.
THOMAS R. FOX
The Honorable Garland Gray Professorship of Forestry

This professorship was established in 1985 by Elmon Gray in honor of his father, the Honorable Garland Gray, who served in the Virginia State Senate for over 25 years. The professorship is limited to senior faculty in the Department of Forest Resources and Environmental Conservation.

Thomas R. Fox joined the faculty in the Department of Forestry Resources and Environmental Conservation in 2000 after working in the forest industry for 15 years. At Virginia Tech he developed an internationally recognized research and technology transfer program in forest soils, silviculture, and ecophysiology focused on increasing the productivity and sustainability of plantation forest ecosystems. He has written over 200 publications, including more than 75 refereed publications and five book chapters. Fox has served as associate editor for the Soil Science Society of America Journal, Forest Science, Journal of Forestry, and the Southern Journal of Applied Forestry. He is on the editorial board for the journal Bosque in Chile.

Fox embraces the land-grant mission of Virginia Tech and has also been actively involved in its teaching and outreach missions. He teaches undergraduate and graduate courses in forestry field studies, forest soils, and silviculture. As part of his outreach program, Fox travels extensively through Virginia, the United States, and Latin America, working with landowners and managers to find practical solutions to the forest management problems they face. Fox was awarded the College of Natural Resources and Environment Award for Outreach Excellence in recognition of these efforts in 2006. He was a Fulbright scholar and visiting professor at the Pontifical Catholic University of Chile in 2010, where he conducted research on forest productivity and climate change and taught a graduate class in biogeochemistry.

Fox's research has led to substantial increases in productivity and value of plantation forests in North and South America. Much of his research is conducted under the auspices of the Forest Productivity Cooperative, a forest industry/university partnership that he has led since 2003. This program is one of the largest forest industry-funded research programs in the world, with more than 60 members in the United States, Central and South America, and Indonesia. Through this program, Fox actively collaborates with university colleagues at North Carolina State University, the University of Concepcion in Chile, and the University of Sao Paulo and the Institute of Forest Research in Brazil.

Additional funding for his research has come from the U.S. Forest Service, USDA National Institute of Food and Agriculture, NASA, U.S. Department of Energy, U.S. Department of State, and the National Science Foundation. Fox currently serves as site director of the National Science Foundation Center for Advanced Forestry Systems and is the lead principal investigator at Virginia Tech for PINEMAP (Pine Integrated Network: Education, Mitigation and Adaptation Project), a $20 million project funded by the National Institute of Food and Agriculture.

Fox's contributions to forestry have been recognized by awards from several organizations. He received the Rayonier Presidential Achievement Award, the Stephen Spurr Award for Research, and the Barrington Moore Memorial Award from the Society of American Foresters. Fox is a Fellow in the Society of American Foresters and the Soil Science Society of America.

Education:
Ph.D., University of Florida, 1989
M.S., Virginia Tech, 1983
B.S., University of Maine, 1980

Contact Information:
Department of Forest Resources and Environmental Conservation
Virginia Tech
Cheatham Hall, Room 228G (MC 0324)
310 West Campus Drive
Blacksburg, VA 24061
Phone: 540-231-8862
trfox@vt.edu
After completing his doctorate at Virginia Tech, Frazier was hired by what is now the Department of Sustainable Biomaterials and charged with the development of an adhesion and composite materials research and teaching program. Research was his initial motivation, but Frazier soon learned that teaching was a source of great personal satisfaction. Central to his teaching philosophy has been a demanding but caring desire to make chemical sciences easily accessible to everyone. Frazier earned the 1999 University Sporn Award for Excellence in Teaching Introductory Subjects for teaching Survey of Organic Chemistry in his role as an adjunct professor in the Department of Chemistry.

Frazier’s research has had a similar emphasis in chemistry, but with a specific focus in wood polymer science. Much of his research has been directed to the chemical and physical properties of the wood/adhesive interphase — the critical nanoscale zone that controls the properties of composite materials. His research group is known for the development of analytical methods to help correlate molecular structure with macroscopic performance in adhesion and, more recently, for bioenergy applications.

Frazier’s research funding has originated from federal and industrial sources, such as the U.S. Department of Agriculture and the National Science Foundation, as well as leading chemical and composite manufacturing companies in North America.

Frazier serves as director of the Wood-Based Composites Center, a National Science Foundation Industry/University Cooperative Research Center to advance the science and technology of wood-based composite materials.

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**Education:**

Ph.D., Virginia Tech, 1992  
M.S., University of Washington, 1987  
B.S., Virginia Tech, 1985

**Contact Information:**

Department of Sustainable Biomaterials  
Virginia Tech  
Cheatham Hall, Room 230H  
(310 West Campus Drive)  
Blackburg, VA 24061  
Phone: 540-231-8318  
cfrazier@vt.edu
Orth is a fisheries specialist whose research expertise focuses on the response of river habitats and fishes to human alterations. Although many of these alterations have complex and indirect effects, Orth has focused his personal research efforts at understanding the influence of changes in the stream flow resulting from dams, diversions, and water withdrawals. This field of investigation was born in the arid Western states, where water is scarce and many communities are dependent upon ground water drawn from storage, which is an unsustainable strategy. When Orth started his academic career at Virginia Tech in 1980, these issues were far from the minds of decision makers in the Eastern United States. Today, however, every state has an instream flow program and many of Orth’s former students are leading these efforts.

Orth encourages his students to “become deeply committed to an unresolved environmental issue for your career, as these issues are only resolved in career time.” The field of instream flow — the water flow in a stream and an indicator of the stream’s ecological health — was new in the 1980s, and few academic researchers were exploring the field. While developing his expertise, Orth, with his graduate and undergraduate researchers, has been funded by numerous grantors to study population dynamics, habitat requirements of fish and invertebrates, hydrologic determinants of habitat, and instream flow methodologies. In 2008 Orth received the Instream Flow Council’s Making a Difference Award, which recognizes persistent activities to inform and educate the public about the importance of instream flow and its benefits to society. Currently this field of study has grown and expanded globally.

Orth has served in numerous leadership positions and on the editorial boards for journals such as Transactions of the American Fisheries Society, and Rivers: Studies in the Science, Environmental Policy, and Law of Instream Flow. He served as head of what is now the Department of Fish and Wildlife Conservation from 1999 to 2006. He has developed and taught numerous courses both on- and off-campus.

Orth has taught numerous classes, from the first-year to the graduate level, and has received two Certificates of Teaching Excellence and three Outstanding Faculty Awards. He led the efforts to revise his college’s First-year Experience Program—Invent the Sustainable Future—which received the University Exemplary Program Award in 2013. He has directed more than 30 undergraduate student research projects and 33 graduate student projects. Among his many classroom contributions, Orth revised the curriculum of Ichthyology, the introductory class on the study of fishes. Today, the course includes drawing, annotating, photography, essays, and reflective writings. He incorporated the use of Flickr for archiving, tagging, and annotating photos of fishes. In 2014 he received the William E. Wine achievement award for teaching and the Edward Diggs Teaching scholar award for applications of innovative pedagogy, including ePortfolio and digital storytelling.
JOHN R. SEILER
The Honorable and Mrs. Shelton H. Short Jr.
Professor of Forestry

This professorship was established by the generous gift of Shelton H. Short III and his wife, Jean Snyder Renner Short, in honor of Mr. Short's parents and as part of Shelton and Jean Short's commitment to promoting forestry and conservation in Virginia. The professorship is limited to senior faculty in the Department of Forest Resources and Environmental Conservation.

Seiler’s tree ecophysiology research program, funded from a variety of sources including the U.S. departments of Energy and Agriculture, the National Aeronautics and Space Administration, and the U.S. Forest Service, very broadly aims to understand carbon flow through the forest. His research has investigated water stress, acid rain, ozone, and elevated carbon dioxide effects on forest tree growth and health. His most current research focuses on understanding how forest management practices and elite pine genotypes influence carbon pools both above and below ground. Through an understanding of these carbon fluxes, the role forests play in mitigation of increasing atmospheric carbon dioxide and potential climate change will be clarified.

Seiler, who considers himself a “teaching professor,” has taught a variety of courses, including dendrology (tree identification), forest biology, silviculture, forest fire management, plant water relations, advanced forest ecology, ecophysiology, and tree physiology. He also teaches a summer online course, Forest Ecology and Dendrology for Educators, which was designed for public school biology teachers.

Seiler and his colleagues have also developed an array of multimedia teaching tools to aid students in learning tree identification and forest biology. They have recently developed the most widely used and downloaded tree identification app (vTree) for smartphones and tablets. As a result of this work, Seiler and his team have won numerous state, national, and international teaching related awards.

Throughout his career, Seiler has been involved in curriculum development at the department, college, and university level. He was named an Alumni Distinguished Professor by the university in 2010.

Education:
Ph.D., Virginia Tech, 1984
M.S., The Pennsylvania State University, 1981
B.S., The Pennsylvania State University, 1979

Contact Information:
Department of Forest Resources and Environmental Conservation
Virginia Tech
Cheatham Hall, Room 230J (MC 0324)
310 West Campus Drive
Blacksburg, VA 24061
Phone: 540-231-5461
jseiler@vt.edu
College of Natural Resources and Environment
540-231-5481, cnre.vt.edu

Advising Center
540-231-5482, students.cnre.vt.edu

Department of Fish and Wildlife Conservation
540-231-5573, fishwild.vt.edu

Department of Forest Resources and Environmental Conservation
540-231-5483, frec.vt.edu

Department of Geography
540-231-7557, geography.vt.edu

Department of Sustainable Biomaterials
540-231-8853, sbio.vt.edu

Center for Geospatial Information Technology
540-231-8935, cgit.vt.edu

Center for Leadership in Global Sustainability
571-858-3338, cligs.vt.edu

Center for Natural Resources Assessment and Decision Support
540-231-7674, cenrads.cnre.vt.edu

Conservation Management Institute
540-231-7348, cmi.vt.edu

Virginia Water Resources Research Center
540-231-5624, vwrcc.vt.edu

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College of Natural Resources and Environment

- Fish and Wildlife Conservation
- Forest Resources and Environmental Conservation
- Geography
- Sustainable Biomaterials
- Center for Environmental Applications of Remote Sensing
- Center for Forest Products Business
- Center for Geospatial Information Technology
- Center for Leadership in Global Sustainability
- Center for Natural Resources Assessment and Decision Support
- Center for Packaging and Unit Load Design
- Conservation Management Institute
- Forest Modeling Research Cooperative
- Forest Operations and Business Research Cooperative
- Forest Productivity Cooperative
- Freshwater Mollusk Conservation Center
- National Science Foundation Center for Advanced Forestry Systems
- Reynolds Homestead Forest Resources Research Center
- USDA Forest Service Southern Research Station: Center for Aquatic Technology Transfer
- USDA Forest Service Southern Research Station: Forest Watershed Science Research Work Unit
- USDA Forest Service Southern Research Station: Utilization of Southern Forest Resources Research Work Unit
- USDA National Agroforestry Center
- USGS Patuxent Wildlife Research Center
- Virginia Cooperative Fish and Wildlife Research Unit
- Virginia Water Resources Research Center
- Wood-Based Composites Center

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