



Virginia Scientists

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September-October, 2011

UR 2011 VAS-VJAS Meetings

Renfroe Inducted. GMU Research Team Wins Horsley Prize, Junior Academy Awards \$30,000

Over a thousand current and aspiring scientists, including 743 Virginia middle and high school students, discussed their research and renewed old ties at the University of Richmond, May 24-27. At the Annual Banquet, President Arun Verma of Hampton University passed the gavel to James Madison University's Mike Renfroe. The Academy's highest honor for original research, the J. Shelton Horsley Research Prize, went to Eswar Prasad R. Iyer, Srividya Chandramouli Iyer, Ramakrishna Meduri, Dennis Wang, and Daniel N. Cox, Department of Molecular and Microbiology at The Krasnow Institute for Advanced Study, George Mason University, for their paper: "Class-specific profiling and *in vivo* RNAi screen reveal complex transcriptional regulatory networks mediating dendritic architecture."

The Edward Swain Harlow Chemistry Scholarship, established in 2003 by Arthur W. Burke, Jr., M.D., was first awarded in 2005. The memorial of \$1,000 honors an undergraduate selected by the faculty of the Department of Chemistry at the University of Richmond, the alma mater of VAS President Harlow. The 2011 recipient is Kevin E. Kindler, who was accompanied by his mentor, Professor Michelle Hamm.

Andrew Sidhom, a rising senior selected by the faculty of the Department of Chemistry of the College of William and Mary, received the Blanton Mercer Bruner Chemistry Scholarship. The \$1000 award was founded in 2001 by the estate and daughters of Mr. Bruner, a W&M graduate who retired as VAS Executive Secretary-Treasurer at the age of 90. Andrew's mentor is Professor Kristin Wustholz.



Professor Cox, Krasnow Institute
Photo: Evan Cantwell/GMU.

(Continued, See "UR 2011," Page 4)

Academy Fellow Named SCHEV Outstanding Faculty

When Jim O'Brien came to Tidewater Community College in 1972, "Ray Kirby was chair of the psychology department at ODU. He went out of his way to mentor me and my colleagues," Jim says. "Ray also chaired the VAS Psychology Section and made it clear that joining your state's academy was simply a matter of professional responsibility. Being from Human Factors, a highly interdisciplinary field, I was attracted by the Academy's unique opportunities for cross-fertilization in the sciences, technologies, medicine, and engineering. I admired the goals of supporting research and education for the benefit of all Virginians and the selfless dedication with which the people I met in the Academy went after those goals. Eventually, I did research with my TCC honors students and I saw how our work was received with respect and encouragement and how VAS supported undergraduate research. I presented my first paper in 1974 and quickly realized the Academy was an organization worthy of my time and effort. Whatever I may have achieved, it is substantially due to the mentors and models who have treated the Academy like their home and welcomed me in."



Dr. O'Brien is Professor of Psychology at Tidewater Community College; he has also taught as an Adjunct Faculty at the University of Virginia and Virginia Commonwealth University and as an Exchange Scholar at Charles University (Prague). He was twice named a Chancellor's Commonwealth Professor by the Virginia Community College System. Elected a Fellow of the Virginia Academy of Science (1997), he served as President (1993-94) and was founding editor of *Virginia Scientists*. Former Governor Kaine and Governor McDonnell appointed him to the VAS Seat on the Board of Trustees of the Science Museum of Virginia; he is the Academy's delegate to the AAAS and NAAS. He was the inaugural recipient of the VCCS Chancellor's Award for Teaching Excellence and in 2010 he became the first community college professor to be named

(Continued, See "SCHEV Winners," page 2)

SCHEV Winners, 2011

(Continued from Page 1)

Virginia Professor of the Year by the U.S. Professor of the Year Program of the Carnegie Foundation for the Advancement of Teaching and the Council for the Advancement and Support of Education. For the past decade Dr. O'Brien's research has focused on independence, conformity and freedom.

Now celebrating its 25th year, the SCHEV award recognizes the finest among Virginia's college faculty for their excellence in teaching, research and public service. Since the first awards in 1987, just over 300 Virginia faculty members have received this high honor. Honorees were presented in the Senate chamber of the General Assembly on February 17. Governor Gerald Baliles was the keynote speaker at a luncheon and ceremony at The Jefferson Hotel that afternoon where honorees received a \$5,000 cash award sponsored by the Dominion Foundation and an engraved commemorative.

SCHEV also honored several other Virginia faculty in the sciences and technologies as well as other disciplines. We congratulate all of our colleagues and present their profiles here. (Unless otherwise indicated, photos courtesy of Pierre Courtois and the State Council of Higher Education for Virginia.)

Timothy Beatley, Teresa Heinz Professor of Sustainable Communities, University of Virginia

Much of Dr. Beatley's work at UVA's School of Architecture, where he has taught for the last 24 years, focuses on sustainable communities and creative strategies by which cities and towns can fundamentally reduce their



Photo: Beatley/UVA

ecological footprints, while at the same time becoming more livable and equitable places. Dr. Beatley is the author or co-author of more than fifteen books including *Green Urbanism: Learning from European Cities*, *Native to Nowhere: Sustaining Home and Community in a Global Age*, and most recently *Biophilic Cities: Integrating Nature into Urban Design and Planning*. His

research has been funded by NSF, Virginia Sea Grant, and NOAA among others.

Mark Butler, Professor and Eminent Scholar, Biological Sciences, Old Dominion University

Dr. Butler teaches marine ecology and biostatistics; he received the Hirschfield Award for Faculty Excellence and the "Most Inspirational Faculty" Award from the ODU College of Sciences. An internationally known marine biologist, Dr. Butler has published more than 100



scientific articles and book chapters, and has been awarded more than 50 grants totaling over \$8 million. Dr. Butler has been an advisor to fishery management agencies in Florida, the Caribbean, Australia, and the Galapagos Islands and has trained coral reef managers in Mesoamerica. In 2008, he co-authored a policy brief for the United Nations on improving coastal marine management and last year he led a conservation assessment of lobsters worldwide. In Virginia, he has served on the Blue Crab Scientific Task Force.

Gary Downey, Alumni Distinguished Professor of Science and Technology in Society, Virginia Polytechnic Institute and State University

A mechanical engineer and cultural anthropologist, Dr. Downey is recognized internationally for integrative work founding a unique interdisciplinary field called Engineering Studies. His 55 publications include four books; *The Machine in Me: An Anthropologist Sits Among Computer Engineers* won praise from reviewers for mapping tensions experienced by engineers in computer-aided design. Dr. Downey nurtured Engineering Studies by publishing synthetic reviews of research on engineers and engineering, founding the International Network for Engineering Studies, and founding and editing the journal *Engineering Studies*.



Winner of the American Society for Engineering Education's Sterling Omsted Award. Dr. Downey has also won Virginia Tech's Wine Award for career excellence in teaching, the XCaliber Award for excellence in teaching with technology, the Graduate School Award for best dissertation advisor, and the Diggs Teaching Scholar Award for innovative scholarship in teaching.

Eden King, Assistant Professor of Psychology, George Mason University, Rising Star Recipient

Eden King came to GMU after earning her Ph.D. from Rice University in 2006. In collaboration with graduate and undergraduate students, Dr. King's research integrates organizational and social psychological theories in conceptualizing social stigma and the work-life interface and addresses three primary themes: current manifestations of discrimination and barriers to work-life balance in organi-



zations, consequences of such challenges for its targets and their workplaces, and individual and organizational strategies for reducing discrimination and increasing support for families.

Her research has been supported by funding from the Sloan Foundation and the American Psychological Association and has been recognized

by awards from the Society for Industrial-Organizational Psychology and the Society for the Psychological Study of Social Issues. Her first book, *How Women Can Make it Work: The Science of Success*, will be published soon.

Robert Kolvoord, Professor of Integrated Science and Technology and Educational Technologies, James Madison University, *Teaching with Technology*

Bob Kolvoord's teaching has focused on data visualization, modeling and simulation, and Geographic Information Systems (GIS). He joined the JMU faculty in 1995 and was recently appointed Interim Director of the School of Engineering.

He is the creator (with Kathryn Keranen) of the Geospatial Semester, a unique partnership between JMU and Virginia high schools, where high school seniors learn geospatial technologies, apply them to local projects, and earn JMU credit. In its sixth year, the Geospatial Semester was recognized with an Honorable Mention, 2010 Governor's Technology Award for Innovation: K-12. He and Keranen are co-authors of the award-winning *Making Spatial Decisions Using GIS*.

Dr. Kolvoord was recognized by the Virginia Association of Science Teachers with the 2008 Outstanding Science Educator (non-K-12) Award.

Kenneth Rasmussen, Professor of Geology, Northern Virginia Community College

Dr. Rasmussen has created a variety of new geoscience offerings since joining the faculty at the Annandale Campus, where he mentors a diverse group of students. He won the NOVA Alumni Federation's Faculty of the Year Award, and the John H. Moss Award for Excellence in College Teaching from the National Association of Geoscience Teachers. Dr. Rasmussen received a Post-Doctoral Fellowship from NSF and NATO in 1993 for investigations of Lake Issyk-Kul, and was one of the first



Western geoscientists to live, conduct research, and lecture in Kyrgystan. His interests range from oceans to



Photo: Rasmussen/NVCC

lakes and sedimentation to paleoclimate, with research spanning the Bahamas, Belize, Europe, and Asia and he has contributed to 26 scientific publications since joining NOVA in 1992.

Dr. Rasmussen believes that all students should get out of the classroom and into the field to "study nature, not books." His

many field courses include trips to the Chesapeake Bay, ancient inland seas of West Virginia, and the coral reefs and active volcanoes of Hawaii.

J. Barkley Rosser, Jr., Professor of Economics and Kirby L. Cramer, Jr. Professor of Business Administration, James Madison University

John Barkley Rosser has taught at JMU since 1977 and has been a Visiting Professor at universities in Sweden, Australia, France, Italy, and Japan. Dr. Rosser is best known for applying ideas from complex nonlinear dynamics to various sub-fields of economics. His books include *From Catastrophe to Chaos: A General Theory of Economic Discontinuities*, *Comparative Economics in a Transforming World Economy*, *Complexity in Economics*, *The Changing Face of Economics*, *Handbook of Complexity Research*, and *European Economics at a Crossroads*. He has advised U.S. agencies related to national security, the U.S. House of Representatives, various presidential candidates, and international bodies including the National Science



Foundation of Japan and the Organization for Economic Cooperation and Development.

He founded the Society for Nonlinear Economic Dynamics, co-founded the U.S. Society for Ecological Economics, and was named a Fellow of Economists for Peace and Security (2009). He is a member of the Scientific Advisory

Board for the Max Planck Institute of Economics. In 2010 a festschrift was published in his honor: *Nonlinear Dynamics in Economics, Finance, and the Social Sciences: Essays in Honour of John Barkley Rosser, Jr.*

Outstanding Faculty Award honorees in other disciplines are:

James Ryan, Professor of Law, University of Virginia;

(Continued, See "SCHEV Winners," page 4)

SCHEV Winners, 2011

(Continued from Page 3)

Melanie Almeder, Associate Professor of Creative Writing and Literature, Roanoke College;
Rebecca Benefiel, Assistant Professor of Classics, Washington and Lee (Rising Star Recipient.);
Dominica Radulescu, Professor of Romance Languages, Washington and Lee University.



For detailed information on all of the honorees including their nomination packets, ceremony photos, and program description, go to <http://www.schev.edu/AdminFacultyOFAprogramIndex.asp>

UR 2011 Meetings (Continued from Page 1)

The Vera Bruce Remsburg Biology Scholarship memorializes a public school teacher, VAS President, and Longwood alumna. First awarded in 2003, the \$1,000 scholarship was funded by the Academy's Trust Committee and supplemented by the Fellows in 2007. This year, the faculty of Biological Sciences at Longwood University selected rising senior Catherine Daniels. Her mentor is Professor Mary Lehman.

At the 2011 Virginia Junior Academy of Science ceremonies, 194 middle and high school researchers shared prizes in 31 disciplinary sessions and 25 special awards and scholarships.

The \$14,000 Frances and Sydney Lewis Scholarship, sponsored by the Virginia Environmental Endowment (VEE), was awarded to Sarah Sisson, Chesapeake Bay Governor's School for Marine and Environmental Science.

Allan Booth, Hampton High School, won the VEE-VJAS \$5000 Judge Henry W. MacKenzie, Jr. Environmental Scholarship. It recognizes student research that contributes most significantly in the field of Environmental Science dealing with the James River Basin and Chesapeake Bay.

For almost 30 years, VJAS has awarded the \$1000 Bethel High School Scholarship, thanks to the students in their science club who endowed its \$10,000 corpus with money raised in car washes and bake sales in Hampton. Rachel Corrigan, Chesapeake Bay Governor's School for Marine and Environmental Science, is the 2011 winner.



VJAS Paper Session at the University of Richmond, 2011

Virginia Scientists Welcomes New Editor

Deborah Neely-Fisher, Assistant Professor of Biology at J. Sargeant Reynolds Community College, begins her editorship of the newsletter with our next issue. Debbie has taught Introductory Biology and Anatomy and Physiology for 25 years. "I started my teaching career at Virginia Commonwealth University as a graduate teaching assistant and earned my Master's in Biology in 1988. I am so excited to have the opportunity to serve the membership of the Virginia Academy of Science as Editor of your newsletter, *Virginia Scientists*."



VAS and I have a long history since I attended as an undergraduate observer, then as a graduate student presenter, and eventually as a mentor to undergraduate students completing research projects at VCU through an NIH-sponsored Bridges Program. I recently had my first experience judging for the Virginia Junior Academy of Science; I have to say I have not had that much fun in years. There were so many bright, engaging middle and high school students and their dedicated teachers; and we were all working together to celebrate and encourage their students' interest and excitement in science and research. I highly recommend the experience if you want to reconnect with your investigative roots and remember why you got into science and teaching in the first place!"

"Jim O'Brien created this newsletter, nurtured it, and worked diligently to maintain the high standards expected of the Academy. I promise to work as hard to fulfill those standards and work with the Academy to maintain the expected level of excellence. I'll need everyone's help to do that; so send me any information you think our members should know about ... And don't forget pictures too! *Virginia Scientists* is YOUR newsletter!"

Timothy J. Criner was honored with The E.C.L. Miller Science Teacher of the Year Award. In 2009 Tim, a science teacher at Gildersleeve Middle School in Newport News, was named Educator of the Year by the Hampton Roads Technology Council. The VJAS honor memorializes E.C.L. Miller who joined VAS at its

(Continued next page)



VAS Section Officers Luncheon

UR 2011

(Photos: Debbie Neely-Fisher)



VAS Poster Presentation

first meeting in 1923 and served as the Academy's executive officer for three decades. A relentless advocate of science education, Miller chaired the VAS committee that established the Virginia Junior Academy of Science.

Michael Lovrencic was recognized for outstanding contributions to the work of the Junior Academy with its most prestigious honor, The VJAS Distinguished Service Award. Mike chairs the science department at Yorktown High School in Arlington and, for several years, has served with uncommon dedication on the Academy's JAS Committee.

May 2012 — See You at Norfolk State University!



VJAS "Dinner with the Scientists."

Sign up for next year at NSU: susanscience@gmail.com

VIRGINIA SCIENTISTS is the newsletter of the Virginia Academy of Science and is published twice each year. In addition to members, it is also mailed to government officials, members of the General Assembly, and Virginia college and university presidents. Correspondence should be sent to Editor Debbie Neely-Fisher: dneely-fisher@verizon.net; 804-458-2049

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Associate Editor.....Deborah Neely-Fisher
Managing Editor.....Art Conway

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Call-For-Proposals: Undergraduate Grants

***VAS Fall Undergraduate
Research Conference***

***J. Sargeant Reynolds Community College
Parham Road Campus, Richmond, SAT, Oct. 15***

Submission Deadline: MON, October 3, 2011

Posters are cordially invited from Virginia undergraduate students and their mentors. Five prizes up to \$500 each are offered to support proposals for research projects to be conducted in the 2011-12 academic year. Winners in the competition will present results of their projects in an appropriate disciplinary Section at the 2012 Annual Meeting at Norfolk State University in May.

***Members' Invitations Sent in Mid-August
Instructions and forms posted at vacadsci.org
Click "Meetings" & "Fall Meeting Templates"***

**90th Annual VAS Meeting
May 23 - 25, 2012**

**71st Annual VJAS Meeting
May 22 - 24, 2012**

Norfolk State University

***Fellows Nominations Deadline:
October 1, 2011***

Instructions for nominating Fellows and Honorary Members of the Academy are on the website at:

<http://www.vacadsci.org/nomfellow.htm>

Send nomination materials to

Dr. Art Conway, Executive Officer
Virginia Academy of Science
2500 W. Broad Street
Richmond, Virginia 23220

1739 - 2012 ... It's About Time!



A 60-year project initiated by the Academy to finally update the ancient Clayton-Grovinus source, the new *Flora of Virginia* is nearing completion and all Virginians are encouraged to support this valuable botanical reference! You can click *Give Now* at

<http://floraofvirginia.org/flgive.shtml> or send a check, payable to *The Flora of Virginia Project*, to

**Flora of Virginia Project
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**J. Sargeant Reynolds Community College
Submission Deadline: October 1, 2011**

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