

AEESP Newsletter

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Go to "Membership > Online Renewal"
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AEESP Newsletter Submissions

Please send news, conference
announcements, job postings, letters
to the editor, and other contributions
to the newletter to Steve Mylon at
mylons@lafayette.edu. The next
newsletter will appear in
May 2017

President's Letter

by PETER VIKESLAND
Virginia Tech

Dear AEESP Members:



Like many other members of AEESP, I was empowered this past weekend by taking part in one of the many Women's Marches that occurred across the world on January 21. People Marched for hundreds of different reasons. I Marched in Washington D.C. first and foremost as the father of two wonderful pre-teen girls and a young boy whose future I worry is imperiled by greed and short-sightedness. I Marched as the husband of a powerful Korean-American woman whose immigrant parents came to this country with virtually nothing, but were able through very hard work to send their children on to highly successful careers. I Marched as the son of parents who provided me with a sense of purpose and a deep respect for others. I Marched as a private citizen concerned about the future of our country. And, I Marched as an environmental engineer who recognizes that the world is at a tipping point with respect to climate change, water availability, antibiotic resistance, and many other impending Global threats.

While empowering, the Marches must serve as the inspiration for future work. In the days and weeks following the election, I heard from many of you about the ways that AEESP should or should not respond in the face of the uncertainty that faces us all. Some have strongly advocated for AEESP to play a role in the resistance to President Trump's agenda, while others have noted that AEESP should be apolitical. Passions are high regardless of one's political beliefs. Amidst all of the messages I received, however, it is clear that many in our community want to get more involved and step outside the insulated halls of academia. The key challenge of course is how to do so within the constraints of our personal and professional lives.

The environmental science and engineering community has a rich history of environmental protection with much to be proud of, but we are not always good at disseminating our knowledge outside of academia. Too often each of us obsess with publishing in the right journals, and not with making sure that our stories and their relation to the Global community are shared. On that note, I encourage each of you to think about what you can do locally, regionally, and globally to tell the stories you uniquely know how to tell. Whether it be lead in Flint, cyanotoxins in Lake Erie, climate change, disinfection by-products, or smog in L.A. our members have a wealth of knowledge and experience that needs to be shared with the world in the form of Op Eds, letters to the editor, community forums, or other Outreach activities.



AEESP President Peter Vikesland and family at the Women's March on Washington, January 21, 2017

Of course, none of us have to do this alone. While some members of our community have the energy and capacity to very publicly advocate for en-

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www.aeesp.org/news

Newsletter submissions, comments, and letters to the editor may be sent to:

Steven Mylon, AEESP Newsletter Editor
Department of Chemistry
Lafayette College
Hugel Science Center
Easton, PA 18042
Phone: 610-330-5825
mylons@lafayette.edu

Letters to the president may be sent to:

Peter J. Vikesland
Dept of Civil &
Environmental Engineering
Virginia Tech
415 Durham Hall
Blacksburg, VA 24061
Phone: (540) 231-3568
Fax: (540) 231-7916
[pvikes@vt.edu](mailto:pvikses@vt.edu)

Please send address changes to:

Brian Schorr
AEESP Business Office
1211 Connecticut Ave NW, Suite 650
Washington, DC 20036
phone: (202) 640-6591
email: bschorr@aeesp.org

AEESP Membership Application online:

www.aeesp.org/membership

President's Letter

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environmental science and engineering, others simply may not have such a skill. Each of us should do what is right for ourselves and our loved ones at this point in time. In particular, for those of you just starting your careers, please know it is OK to focus your energies on teaching and producing the science and engineering scholarship required to address the environmental challenges of the present and the future (As a community, we need you to get tenure). I can guarantee that many of us who are tenured and have a few more grey hairs will act on your behalf and that of the community to speak up for the science and engineering that we collectively produce.

Regardless of what you as an individual are capable of doing, I encourage each of you to think of

AEESP as a conduit by which you can share and learn about Outreach activities and approaches either through the Listserv, by serving on an AEESP committee, by attending the AEESP biennial meeting in Ann Arbor this coming summer, or by contacting an AEESP Officer and asking them to disseminate your thoughts either with the community or amongst the members of the Board. As individuals, our voices may be small, but as the collective AEESP community we can share our successes and failures such that we can learn from one another to positively advocate for our profession as well as the Earth.

Peter Vikesland
pvikes@vt.edu

January AEESP News from the Water Environment & Reuse Foundation

The Water Environment & Reuse Foundation leads research that enhances the quality and reliability of water for natural systems and communities with an integrated approach to resource recovery and reuse; while facilitating interaction among practitioners, educators, researchers, decision makers, and the public. Requests for proposals for research funding in 2017 will become available beginning in late spring, 2017. Please visit our website at www.werf.org to find opportunities or sign up for our newsletter, Laterals, and follow us on twitter @WERFResearch.

LIFT Link is Live

Have you logged into LIFT Link, our new online innovation and collaboration platform? Log-in with your WE&RF credentials to discover new technologies, post your research and technology needs, and connect with others on technologies of mutual interest. Visit LIFT Link to learn about the newest accepted technologies:

- Reclaimed Water Pasteurization & Energy Recovery for Disinfection and Reuse from the Pasteurization Technology Group
- All-in-One Milli-Electrode Array from the University of Connecticut

And many more!

WE&RF is accepting applications for the 2017 Paul L. Busch Award.

Through the Endowment for Innovation in Applied Water Quality Research, WE&RF's Paul L. Busch Award offers \$100,000 to encourage researchers working in wastewater, water reuse, biosolids, stormwater, watersheds, and other areas to pursue groundbreaking research. Applicants may self-nominate or be nominated by a third party. Interested individuals must submit their application to WE&RF by June 1, 2017. More information on the Paul L. Busch Award, including the application process, is online at www.werf.org/PaulLBusch.

AEESP Journal Environmental Engineering Science Spotlight

Domenico Grasso (EES Editor-in-Chief), Catherine A. Peters (EES Deputy Editor), and Susan J. Masten (Chair, AEESP Publications Committee)

This "Spotlight" draws attention to selected articles in *Environmental Engineering Science*, the official journal of the Association of Environmental Engineering and Science Professors (AEESP). This piece marks the beginning of the second year of this column, which appears regularly in the AEESP Newsletter, as well as in the journal as an Editor's Note. Through publication of high-quality peer-reviewed research, the EES journal helps AEESP achieve its mission of developing and disseminating knowledge in environmental engineering and science. In this entry, we shine the spotlight on selected articles from the August through November 2016 issues of EES. Congratulations to all whose work is highlighted.

Blaney L., Kandiah R., Ducoste J.J., Perlinger J.A., Bartelt-Hunt S.L. "Trends in Population and Demographics of U.S. Environmental Engineering Students and Faculty from 2005 to 2013," *Environmental Engineering Science*. 2016, 33(8): 578-590.

This report provides a survey of enrollments, degrees, and faculty in environmental engineering disciplines. From 2005 to 2013, the number of BS, MS, and PhD degrees rose by 90%, 27%, and 39%, respectively, outpacing comparable fields. Representation of women is much higher than in related engineering disciplines; the percentage of environmental engineering degrees awarded to women was 46% for 2013.

Merino N., Qu Y., Deeb R.A., Hawley E.L., Hoffmann M.R., Mahendra S. "Degradation and Removal Methods for Perfluoroalkyl and Polyfluoroalkyl Substances in Water," *Environmental Engineering Science*. 2016, 33(9): 615-649.

PFASs are environmental pollutants of emerging concern. This review article documents methods for removal of PFASs from water, to inform cost-effective remediation and treatment strategies. Several sorption strategies are effective, but chemical destruction presents challenges especially under field conditions.

Clarens A.F., Peters C.A. "Mitigating Climate Change at the Carbon Water Nexus: A Call to Action for the Environmental Engineering Community," *Environmental Engineering Science*. 2016, 33(10): 719-724.

In this special-issue overview article, Clarens and Peters make the case that environmental engineers must be ready to play a leadership role in the development of climate change mitigation strategies at the carbon-water nexus (CWN). This EES special issue, on "The science and innovation of emerging subsurface energy technologies," provides one example of a CWN domain within which environmental engineers are making important contributions.

Bi Y., Zhang H., Ellis B.R., Hayes K.F. "Removal of Radium from Synthetic Shale Gas Brines by Ion Exchange Resin," *Environmental Engineering Science*. 2016, 33(10): 791-798.

This study, published in the October special issue, was motivated by the need to effectively separate radium from shale gas production wastewater. Ion exchange materials are potentially well suited for the concentrations of Ra in a low volume solid waste form. This study demonstrated that a cation exchange resin is effective in separating Ra from high salinity brines. The unconventional treatment strategy of metal chelation coupled with ion exchange resins may reduce generation and disposal costs of low-level radioactive solid waste.

Ergas S.J., Kinyua M.N., van der Steen P., Butler C.S., Lens Piet N.L., Chandran K., Mihelcic J.R. "Innovative Global Solutions for Bioenergy Production," *Environmental Engineering Science*. 2016, 33(11): 841-842.

This EES special issue edited by Ergas et al. focuses on biological waste-to-energy technologies that can help meet global energy needs while stabilizing domestic, agricultural, and industrial wastes. Anaerobic digestion, which is increasingly applied for treatment of mainstream wastewaters, was the focus of several articles. The versatility of anaerobic digestion highlights the diversity of approaches to recover underutilized energetic resources.

Sills D.L., Wade V.L., DiStefano T.D. "Comparative Life Cycle and Technoeconomic Assessment for Energy Recovery from Dilute Wastewater," *Environmental Engineering Science*. 2016, 33(11): 861-872.

Dilute wastewaters present unique challenges in anaerobic treatment. This study, published in the November special issue, coupled wastewater treatment process modeling with life cycle assessment to examine the trade-offs among climate change, resource depletion, ecosystem quality, and human health. Oxidation or capture of dissolved methane was shown to make anaerobic baffled reactors cost effective and beneficial to the environment.

2017 AEESP Award Nominations

Submitted by Rob Nerenberg (University of Notre Dame), AEESP Awards Committee Chair

AEESP and the AEESP Foundation confer awards that our community presents for outstanding contributions to environmental engineering and science education and research. Through the hard work and generosity of many, AEESP and the AEESP Foundation have been raising funds to endow new and existing awards.

Please consider nominating a worthy colleague or student for one of these prestigious awards. **Nominations for the 2017 AEESP awards are being accepted until March 1, 2017.** Brief award descriptions are presented below. All nomination materials must be submitted online. The submission link for each award, full instructions, and a list of prior award winners can be found on the AEESP Foundation Webpage at <http://aeespfoundation.org/awards>. Unless stated otherwise, awards will be presented at the AEESP Research and Education Conference, June 21-22, in Ann Arbor, Michigan.

Student Awards

CH2M/AEESP Outstanding Doctoral Dissertation Award

This award, endowed by CH2M, annually recognizes an outstanding doctoral dissertation that contributes to the advancement of environmental science and engineering. The award will consist of a plaque and cash prize of \$1,500 for the student and a plaque and cash prize of \$500 for the faculty advisor. Student and faculty award recipients who attend the award ceremony will receive a \$750 travel allotment. In the case of faculty co-advisors, the \$750 travel allotment must be shared. Please note that nominations for this award are automatically considered for the Paul V. Roberts Outstanding Doctoral Dissertation Award. Faculty advisors are encouraged to nominate dissertations completed under their supervision but must limit themselves to a single entry for both dissertation awards (not one entry per award)

Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award

This endowed award is given annually to recognize a rigorous and innovative doctoral thesis that advances the science and practice of water quality engineering for either engineered or natural systems. Special consideration is given to physical-chemical process research and/or research that especially supports underserved communities, environmental awareness, or sustainable solutions. The award consists of a plaque and cash prize of \$1,500 for the student, and a plaque and cash prize of \$500 for the faculty advisor. Student and faculty award recipients who attend the award ceremony will receive a \$750 travel allotment. In the case of faculty co-advisors, the \$750 travel allotment must be shared. Please note that nominations for this award are automatically for the CH2M/AEESP Outstanding Doctoral Dissertation Award. Faculty advisors are encouraged to nominate dissertations completed under their supervision but must limit themselves to a single entry for both dissertation awards (not one entry per award).

MWH/AEESP Master's Thesis Awards

This award annually recognizes the first and second most outstanding M.S. theses that contribute to the advancement of environmental science and engineering. The prize for the first place award includes a plaque and cash prize of \$1,500 for the student and a plaque for the faculty advisor. The second place award consists of a plaque and cash prize of \$500 for the student and a plaque for the faculty advisor. MWH also provides a \$750 travel allotment to student and faculty award recipients who attend the award ceremony. In the case of faculty co-advisors, the \$750 travel allotment must be shared.

William Brewster Snow Award

This award, administered in conjunction with the American Academy of Environmental Engineers and Scientists (AAEES), is given annually to recognize an environmental engineering graduate student who has made significant accomplishments in an employment or academic engineering project. Nominees for this award must be enrolled part- or full-time in an environmental engineering graduate program pursuing a Master's degree in Environmental Engineering or a closely related degree program, or have completed a Master's degree in Environmental Engineering or a closely related program one year or less from January 1 of the year in which the Brewster Snow Award is presented. The award consists of a plaque and a \$250 cash prize, which will be awarded at the AAEES Awards Luncheon in Washington D.C., April 13, 2017.

W. Wesley Eckenfelder Graduate Research Award

This AAEES award is cosponsored by HDR and recognizes a student whose research contributes to the knowledge pool of wastewater management. The award selection is based on original, innovative research of publishable quality, as well as other factors including academic program performance, professional or community service, engineering project accomplishment, and future goals. Consideration for this award is open to Master's and Ph.D. students performing research in the field of wastewater management. The recipient receives a plaque and cash honorarium of \$1,500. A travel allotment of \$500 is also available to the student for travel to Washington D.C. where the award will be presented at the AAEES Awards Luncheon, April 13, 2017. The student's faculty advisor also receives a plaque.

Innovyze Excellence in Computational Hydraulics/Hydrology Award

This AAEES award, co-sponsored by Innovyze, is given annually to recognize a student whose research contributes to the knowledge pool in the area of Computational Hydraulics & Hydrology. The award selection will be based on original, innovative research of publishable quality and other factors listed below. Consideration for this award is open to Master's and Ph.D. students. The recipient receives a plaque and a cash honorarium of \$1,500 for the student and a plaque and cash honorarium of \$500 for the major faculty advisor. A \$500 travel allotment is provided to the student recipient to

attend the AAEEES Awards Luncheon in Washington D.C. on April 13, 2017 where the award will be presented.

Education, Research, and Practice Awards

Charles R. O'Melia/AEESP Distinguished Educator Award

This endowed award is given annually to recognize the significant contributions of Professor O'Melia to environmental engineering education and will be awarded to an environmental engineering or science professor who has a record of excellence in classroom teaching and graduate student advising; significant research achievements that have contributed to environmental engineering knowledge; and an outstanding record of influence through mentoring of former students and colleagues. The recipient of this award will receive a plaque, a cash prize of \$1500, and a \$750 travel allotment to attend the awards ceremony.

AEESP Award for Outstanding Contribution to Environmental Engineering & Science Education

This award is given annually to recognize an environmental engineering or science professor who exhibits excellence in teaching scholarship and/or professional society educational initiatives. Examples of such contributions include development or authorship of educational or instructional material or a text that enhances the student learning process, demonstrated effectiveness in course and/or curriculum development; and publication of original work, through peer-reviewed publications and/or presentations at professional meetings, that enhances the engineering education process or adds value to teaching methodology literature. Additional examples can be found on the awards web page. The recipient of this award will receive a plaque and a cash prize of \$500.

AEESP Award for Outstanding Teaching in Environmental Engineering & Science

This award is given annually to recognize an environmental engineering or science professor who exhibits excellence in classroom performance and related activities. The recipient will receive a plaque and a cash prize of \$500. Although open to nomination at any rank, the award is intended primarily to recognize a demonstrated commitment to teaching early in a person's career.

Excellence in Environmental Engineering Education (E4) Award

This award, administered in conjunction with AAEEES, is given annually to recognize an educator who has excelled in the development of educational

material or text that enhances the ability of students and/or practitioners to succeed as professional environmental engineers serving as practitioners in roles such as infrastructure design and project leadership. The recipient will receive a monetary award of \$1,000 with an additional \$500 travel allotment to attend the AAEEES Awards Luncheon in Washington D.C. on April 13, 2017.

AEESP Outstanding Publication Award

This award is given annually to recognize the author(s) of a "landmark environmental engineering and science paper that has withstood the test of time and significantly influenced the practice of environmental engineering and science." At least one of the authors must be living and previous winners are ineligible for a period of three years. The recipients of this award will receive plaques in honor of their achievements.

ARCADIS/AEESP Frontier in Research Award

This award is sponsored by ARCADIS and is given annually to recognize an environmental engineering or science professor who has advanced the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area. The selected recipient will receive a plaque and a cash prize of \$4,000. The sponsor also provides a \$750 travel allotment to be used by the recipient to attend the awards ceremony.

Perry L. McCarty/AEESP Founders' Award

This award is given annually to recognize an environmental engineering and science professor who has made "sustained and outstanding contributions to environmental engineering education, research, and practice." The recipient of this award will receive a plaque, a cash prize of \$1500, and a \$750 travel allotment to attend the awards ceremony.

Steven K. Dentel AEESP Award for Global Outreach

This award is given annually to recognize outstanding contributions and leadership by a faculty member through involvement in environmental engineering and science outreach activities to the global community. The recipient of this award will receive a plaque and a cash prize of \$1500.

The Frederick George Pohland Medal

This award honors an individual who has made sustained and outstanding efforts to bridge environmental engineering research, practice, and education. This award is jointly administered by AEESP and AAEEES and members of AEESP and/or AAEEES are eligible to receive this award. The award will consist of a medal, a \$1,000 cash award, and reimbursement of travel costs of up to \$1,000 for travel to the award ceremony.



Environmental Research & Education Foundation

Lighting a path to sustainable waste management practices

The Environmental Research & Education Foundation Awards Thirteen Scholarships

The Environmental Research & Education Foundation (EREF) is the largest source of funding for scholarships and grants related to sustainable solid waste management in North America. The Scholarship Program recognizes students with academic excellence, professional involvement and an interest in sustainable solid waste management issues at the postdoctoral, doctoral, and master's levels. **The EREF Board of Directors is pleased to announce the award of thirteen scholarships in 2016:**



Vinny Anderson
The Ohio State University, MS
Carl J. Apicella Scholar



Syed Muaaz-Us-Salam
Cardiff University, Ph.D.



Riley Coulthard
Yale University, Ph.D.



Serena Pozza
Yale University, MS
GarbageMan's Invitational Master's Scholar



Shakira Hobbs
Clemson University, Ph.D.



Gomathy Radhakrishna Iyer
University of Texas at Arlington, Ph.D.
Evergreen Surety Bond Scholar



Syeed Md Iskander
Virginia Tech, Ph.D.



Amirhossein Rezaei Adaryani
University of North Carolina at Charlotte, Ph.D.



Hongyue Jin
Purdue University, Ph.D.



Danni McPherron Schaust
Indiana University Bloomington, MS



Marija Krstic
The City College of New York, Ph.D.



Jillian Treadwell
McGill University, MS
Ice River Springs Master's Scholarship for Sustainability Scholar



Caroline Larose
University of Michigan, MS
Robert P. Stearns/SCS Engineers Master's Scholar

The next scholarship deadline is May 3, 2017
More information on how to apply to the EREF Scholarship Program can be found at
<https://erefdn.org/scholarship-program/how-to-apply/>



**Environmental Research
& Education Foundation**

Lighting a path to sustainable waste management practices

The Environmental Research & Education Foundation Awards Five Research Grants

EREF's Research Grants Program is led by our Research Council, a body of volunteers consisting of technical experts in industry, academia and consulting. The work of the Council is guided by a long range strategic plan with the goal to achieve greater sustainability, good environmental stewardship, higher process efficiency and increased knowledge of the solid waste industry.

In the past, projects funded by EREF have primarily focused on landfills, but there has been a shift in funding priority in recent years to non-landfill projects that relate to sustainable solid waste management. Current funded projects include coal ash management, anaerobic digestion, recycling, waste collection, waste diversion, organics stabilization, leachate treatment, landfill fugitive emission management and modeling, and non-hazardous industrial waste management. Awards have been made over the past decade to more than 30 institutions, including: Virginia Tech, University of South Carolina, University of North Carolina Charlotte, University of Virginia, Colorado State University, Humboldt State University, University of Wisconsin, University of Massachusetts, and University of Manitoba.

Grants have been awarded by the EREF Board of Directors to support the following projects in 2016:

**Making up for Lost Time (and Space):
Quantifying Non-hazardous Industrial Waste
Output and Beneficial Use Opportunities in the
US**

Marian Chertow, Ph.D., Yale University

Award Amount: \$150,000

**Development and Assessment of Cost-Effective
Sustainable Integrated Organics Management
Strategies**

*James Levis, Ph.D., North Carolina State
University*

Award Amount: \$127,525

Developing Strategies to Recover and Treat Nutrients in the Landfill Leachate

Ramesh Goel, Ph.D., University of Utah

Debra Reinhart, Ph.D., PE, University of Central Florida

Award Amount: \$141,704

**Assessing Accuracy of Tracer Dilution Measurements
of Methane Emissions from Landfills with Wind
Modeling**

Paul Imhoff, Ph.D., University of Delaware

Fotini Chow, Ph.D., University of California, Berkley

Award Amount: \$93,069

**Mineralogy Optimization for Metal and Chloride
Immobilization in Co-Disposed Flue Gas
Desulfurization Brines and Bituminous Coal Fly Ash**

Ching-Hua Huang, Ph.D., Georgia Tech

Award Amount: \$195,917

Pre-proposals are required prior to submitting a full proposal.

The next pre-proposal deadline is June 1, 2017 at 5 pm (EST)

Submissions are accepted online and additional information on how to apply for a grant can be found at

<https://erefdn.org/research-grants-projects/how-to-apply-for-grant/>

For additional information, please contact Dr. Stephanie Bolyard (sbolyard@erefdn.org)

New Faculty Appointments

Dr. Andrea Silverman Joins the Faculty at New York University



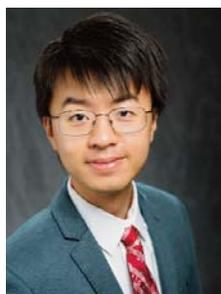
Dr. Andrea Silverman joined the Department of Civil and Urban Engineering at the New York University (NYU) Tandon School of Engineering as an Assistant Professor in September 2016; she holds an additional appointment in the Department of Environmental Health Sciences at the NYU College of Global Public Health. Dr. Silverman received a PhD (2013) and MS (2009) degree in Environmental Engineering from the University of California, Berkeley, and a BS (2005) in Environmental Engineering from the Massachusetts Institute of Technology. Her dissertation research focused on sunlight disinfection of waterborne viruses, including mechanisms of inactivation and the development of numerical models that describe disinfection kinetics. Prior to joining NYU, Dr. Silverman worked for Sanergy, a social enterprise providing reuse-oriented sanitation services in Nairobi, Kenya, and worked as a post-doctoral researcher at the University of California, Berkeley. Dr. Silverman's research interests include the detection and control of waterborne pathogens, the fate of microbial contaminants in the environment, and the development of sustainable and appropriate sanitation systems, including onsite sanitation systems, the safe reuse of human waste, and the design of natural wastewater treatment systems to meet health-related treatment targets.

Three New Faculty Join the Faculty at LSU.



Dr. Samuel Snow joined the faculty of the Department of Civil and Environmental Engineering at Louisiana State University as an assistant professor. Dr. Snow has a B.S. in Earth and Atmospheric Science and a Ph.D. in Environmental Engineering, both from the Georgia Institute of Technology. After graduation in 2014, he worked briefly at the Michigan Department of Environmental Quality prior to his appointment as a Postdoctoral Research Associate in Michigan State University's Department of

Civil and Environmental Engineering. Dr. Snow has worked in a wide variety of research projects within the broad field of water and the environment, including field studies on salmon habitats, phosphate cycling in marine systems, and evaluating new materials for drinking and wastewater disinfection applications. His current research focus is on understanding the production and quenching of reactive oxygen species in photo-disinfection of natural waters. A driving theme in Dr. Snow's research approaches the practical challenge of developing low-cost, sustainable, and robust water treatment systems by investigating the underlying science of the technologies. This research ambition extends to Dr. Snow's teaching interests, where he hopes to provide opportunities for students to apply the environmental technology taught in class to real-world challenges in developing countries.



Dr. Zimeng Wang joined the LSU Department of Civil and Environmental Engineering as an assistant professor in August 2016. He holds a B.S. degree (2009) with honors in Environmental Science from Fudan University and a M.S. (2012) and a Ph.D. (2013) in Energy, Environmental and Chemical Engineering at Washington University in St. Louis. Prior to LSU, he worked as a postdoctoral research fellow at Stanford University. In his early career, his teaching and research were recognized by the Graduate Teaching Award from Washington University and the Graduate Student Award from American Chemical Society. Dr. Wang and his group will conduct laboratory, field and modeling research to better understand the chemical processes at critical environmental interfaces in both natural and engineered aquatic systems. His interested topics include, but are not limited to, subsurface contaminant migration and remediation, water quality and supply, nitrogenous contaminant formation and control, and development of models for environmental engineering applications.



Dr. Xiuping Zhu joined the Department of Civil and Environmental Engineering at Louisiana State University as an assistant professor in August 2016. Prior to joining the CEE faculty, she worked as a postdoctoral researcher at Pennsylvania State University for almost five years. Dr. Zhu received her Ph.D. degree in Environmental Engineering at Peking University, Beijing, China, in July 2011, and her B.S. degree from Environmental Engineering Department at Beihang University, Beijing, China, in July 2005. Her research focuses on the development of electrochemical systems for sustainable environmental remediation with energy recovery from wasted sources, such as wastewater, waste heat, and salinity gradient between seawater and river water. She has investigated bioelectrochemical systems for simultaneous wastewater treatment and electricity generation, reverse electrodialysis cells for salinity gradient and waste heat energy recovery, and electrochemical oxidation for wastewater water treatment. She has published 40 peer-reviewed international journal papers in the area of environmental/ electrochemical engineering.

Drs. Cornejo and Webster join the Civil Engineering Department at California State University, Chico



Pablo K. Cornejo joined the Department of Civil Engineering at California State University, Chico as an Assistant Professor in Fall of 2016. Dr. Cornejo received his Ph.D. and M.S. in Environmental Engineering from the University of South Florida (USF) and B.S. in Civil Engineering from the University of Colorado at Boulder. His doctoral research focused on the life cycle environmental impacts of wastewater management and resource recovery strategies. After obtaining his Ph.D., he

conducted post-doctoral research at the University of Colorado at Boulder, investigating multi-criteria sustainability frameworks to aid decision-making for small drinking water treatment systems. Other research interests include greenhouse gas models for water reuse and desalination facilities; sustain-

ability metrics for integrated resource recovery systems; and water and sanitation issues in the developing world.



Jackson Webster joined the Department of Civil Engineering at California State University, Chico in Fall of 2016. He received his Ph.D. in Civil Engineering from the University of Colorado, Boulder and his M.S. and B.S. in Environmental Engineering from the University of Nevada, Reno. His specific areas of interest include the effects of wildfire on water quality, mercury cycling in forested watersheds, and natural organic matter characterization. He is currently developing a water quality laboratory for undergraduate teaching and research and will continue his research on fundamental processes governing contaminant fate and transport.

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Emily Kumpel Joins Faculty at UMASS Amherst.



Dr. Emily Kumpel joined the Department of Civil and Environmental Engineering at University of Massachusetts Amherst as an Assistant Professor in Spring 2017. Dr. Kumpel received M.S. and Ph.D. degrees in Civil and Environmental Engineering from the University of California, Berkeley, and a B.S. in Mechanical Engineering from the Johns Hopkins University. After finishing her Ph.D., she was a Senior Research Scientist at the Aquaya Institute, where she was based in Nairobi, Kenya. Dr. Kumpel uses a mixed-methods approach, combining environmental and civil systems engineering problem solving tools with methodological training in the disciplines of public health and social sciences, to study the interactions between the engineered, environmental, and human systems that enable delivery of safe and reliable drinking water and sanitation services to underserved communities. Her particular interests include intermittent water distribution

systems, water quality monitoring in low-resource settings, and use of information and communication technologies in managing water systems. She has conducted extensive field research in India, Kenya, Senegal, and Nigeria, and collaborated on research projects in more than a dozen other countries throughout Africa and Asia.

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New Faculty Hire in the Department of Civil & Environmental Engineering at Colorado School of Mines



The Department of Civil and Environmental Engineering at Colorado School of Mines is pleased to announce that **Dr. Kristoph Kinzli** has joined Colorado School of Mines as a Teaching Professor of Civil and Environmental Engineering in December 2016. He received BS, MS and Ph.D. degrees in Civil Engineering from Colorado State University. He also holds an MS in fisheries biology from Colorado State University. Prior to joining Mines, Dr. Kinzli was an associate professor at Florida Gulf Coast University.

Florida Gulf Coast University.

Dr. Kinzli has worked on research projects in Colorado with the Department of Fish and Wildlife, and in New Mexico with the Interstate Stream Commission, the Bureau of Reclamation, New Mexico Tech, and the Middle Rio Grande Conservancy District. He currently is Joint Editor for Irrigation and Drainage - Managing Water for Sustainable Agriculture. He is a member of ASCE, AWRA, USCID, Chi Epsilon, and the American Fisheries Society. Dr. Kinzli is involved in the ASCE ExCEED teaching workshop and is extremely interested in improving engineering education through active learning. His research interests include interactive teaching, open channel hydraulics, river mechanics, stream rehabilitation, groundwater, water resources, agricultural water use, fisheries biology, and ecological restoration.

Charles N Haas of Drexel University has been given the Distinguished Achievement Award of the Society for Risk Analysis for his work in developing the field of quantitative microbial risk assessment (QMRA). QMRA has been adopted by a number of agencies in the US and worldwide for protecting food, water, and other environments.

Burken named chair of civil, architectural and environmental engineering department at Missouri S&T

Dr. Joel G. Burken, Curators' Distinguished Professor of civil, architectural and environmental engineering at Missouri University of Science and Technology, has been named chair of the department, assuming the position August 1.

Burken had been the department's interim chair since December 2015 after previously serving as the department's associate chair. Although his title has changed, he says he'll still be involved in research and teaching.

"Dr. Burken was a natural choice to select as the department's chair," says Dr. John Myers, acting vice provost and dean of the College of Engineering and Computing at Missouri S&T. "He is a proven leader and steady hand at the helm who has an intimate understanding and knowledge of the past and present state of the department, as well as a deep understanding of where the department would like to be in the months and years to come.

"His experience and skill have helped the department remain on the cutting edge of research as it works to solve some of the world's great challenges. Having Dr. Burken as the permanent chair ensures that that work will continue without missing a beat."

"One of the things I hope to do is to increase our research profile and our interactions with professional organizations that serve our department's students, alumni and faculty," says Burken. "AEESP activities as a student and membership as a professional have been very important to me and my career. I want to help foster that same positive and professional experience for all our faculty and students. We also have a lot to offer to the profession, with multiple ASCE Fellows on our faculty and over 500 students that will soon enter the profession."

During his time at S&T, he has published over 70 peer-reviewed articles, including four cover features in leading journals in environmental engineering and technology. Burken joined the S&T faculty in 1997 as an assistant professor of civil engineering. He was named associate professor in 2002 and professor in 2008. In 2015, he was named as a Curators' Distinguished Professor. Burken helped establish Missouri S&T's bachelor's program in environmental engineering in 2002. He also led efforts to establish the Chester and Evelyn Baker Greenhouse as well as the S&T green roof research facilities.

Burken twice received the Rudolph Hering Medal from the American Society of Civil Engineers (ASCE). He is a National Science Foundation (NSF) CAREER recipient and was selected as a 2016 AEESP Fellow. He has received seven Faculty Excellence Awards as well as the Alumni Merit Award from Missouri S&T's Miner Alumni Association. In 2015, he received the University of Missouri System President's Award for Service.

Burken earned his bachelor of science, master of science and Ph.D. in environmental engineering at the University of Iowa in 1991, 1993 and 1996, respectively.

New Environmental Engineering Undergraduate Program At University Of Toledo

The University of Toledo recently joined the ranks of academic institutions offering a Bachelor of Science Degree in Environmental Engineering. The first cohort of Environmental Engineering students graduated in December of 2016. The program includes interdisciplinary courses that balance environmental economics and policy, environmental science, and chemical, civil and environmental engineering. Our vision is to develop environmental professionals that go beyond reducing the human impact (footprint) toward increasing the societal benefits of the engineered world (handprint). Sustainability problem solving is threaded throughout the curriculum with students working on team-based, community directed projects for several semesters before completing a senior design capstone project. We have more than 25 students currently enrolled, and we look forward to continued growth in the program.



AEESP 2017

Advancing Healthy Communities through
Environmental Engineering and Science

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Marc Edwards to Receive Borchardt-Glysson Water Treatment Innovation Prize at the University of Michigan

Marc Edwards, the Charles P. Lunsford Professor of Civil and Environmental Engineering at Virginia Tech, will receive the Borchardt-Glysson Water Treatment Innovation Prize on February 21, 2017, at the Borchardt Conference, a Triennial Symposium on Advancements in Water and Wastewater Treatment at the University of Michigan.

Dr. Edwards is recognized for his invaluable contributions to the fields of water treatment and public health and to society at large. At the conference, he will deliver a lecture, "Sustainable Water Distribution Systems of the Future: Fixing Old Mistakes and Avoiding New Ones."

This new prize consists of a \$10,000 cash award and reimbursement for travel to attend the Borchardt Conference. It was recently established through a generous gift by Tom (BSE CE '60, MSE '61) and Greta Newhof to the College of Engineering of the University of Michigan. The donors chose to recognize Professors Borchardt and Glysson in selecting the name of the prize.



Marc Edwards

Borchardt Conference Registration

Register online at the MI-AWWA website www.mi-water.org.

The fees are \$150 for a single day or \$250 for both days and include lunch and reception on the day(s) of attendance. Student attendance is complimentary but a \$15 fee is requested to contribute to lunch and reception expenses. **Registration Deadline: February 14, 2017.**

Every three years the Michigan-based Borchardt Conference brings together a diverse group of engineers, scientists, public health specialists, and students to present and discuss the latest issues and advances in water and wastewater technology. This premier event emphasizes applied research and real-life experience in environmental engineering and water-utility operations.

The conference is cosponsored by the University of Michigan Department of Civil and Environmental Engineering together with Michigan Section AWWA, MWEA, and MDEQ.

CECs and PDHs will be awarded for this conference.



CIVIL AND ENVIRONMENTAL ENGINEERING

UNIVERSITY of MICHIGAN ■ COLLEGE of ENGINEERING

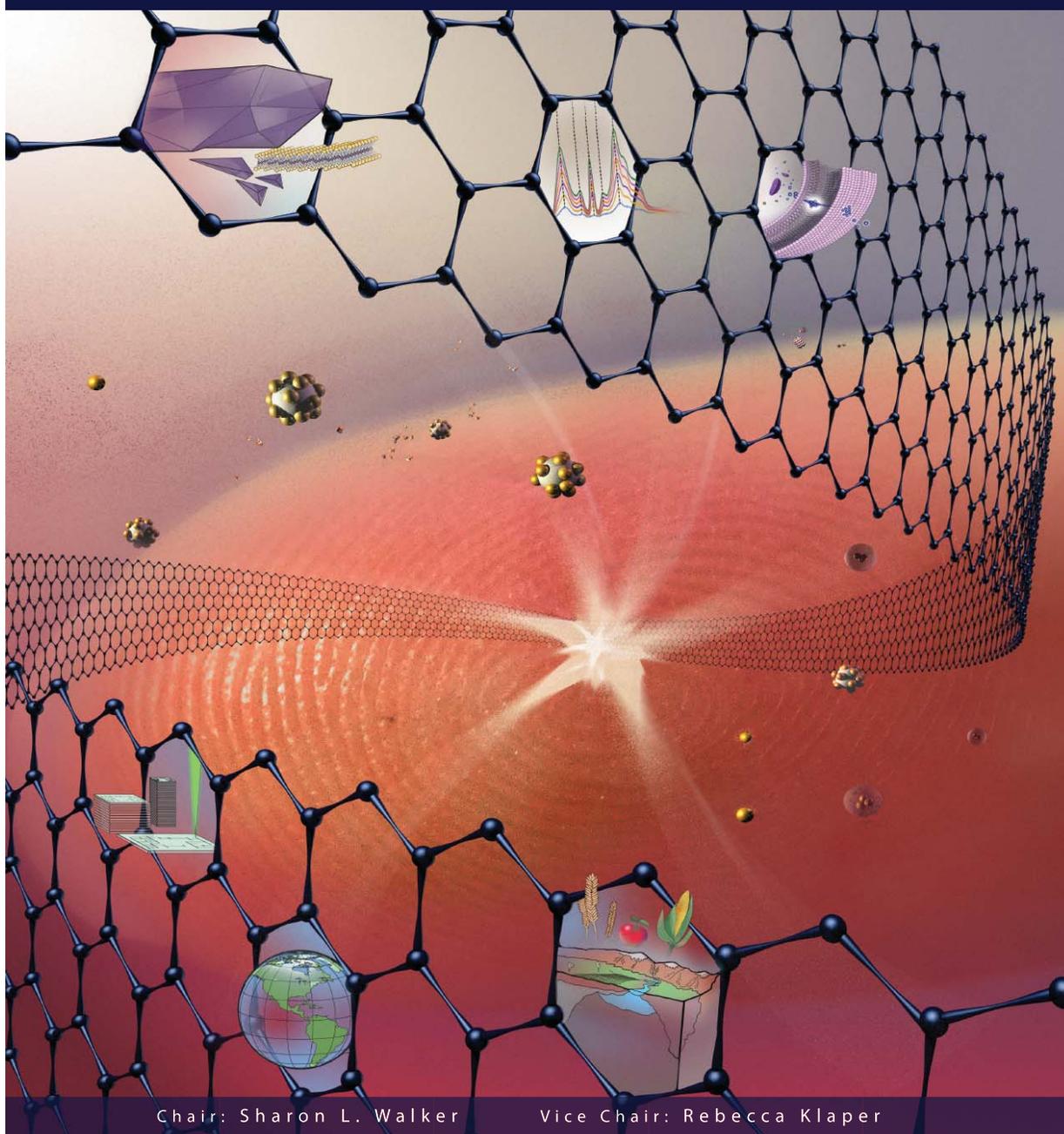


Environmental Nanotechnology Gordon Research Conference

The Next Generation of Nanotechnology: Materials, Applications, and Implications

JUNE 18-23, 2017

Stoweflake Conference Center - Stowe, VT



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Vice Chair: Rebecca Klaper

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Nanoanalytics
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Nano-Biophenomena and Processes
Nadine Kabengi / Michael Schindler

New Materials, New Directions: Smart Design, Soft Materials, etc.
Phillip Christopher / Christy Landes / Volodymyr Tarabara

New Materials, New Directions: Emerging Applications
Prashant Kamat / Vincent Rotello

Nanomanufacturing: Nano-Enabled Products: Why, Why Not, and How?
Tina Bahadori / Sara Brenner / Jacqueline Isaacs

Nanomanufacturing: Translational Issues and Design Opportunities in Manufacturing
Khershed Cooper / Nicole Steinmetz

Food and Agricultural Applications of Nano
Timothy Duncan / Ramesh Raliya / Jason White

From "Nano to Global" – Geochemistry and Nanotechnology
Roland Hischier / Melanie Kah

Power Hour – a women's networking event
Christy Haynes

This GRC will be held in conjunction with the
"Environmental Nanotechnology" Gordon Research Seminar (GRS)

AEESP Membership

Membership in AEESP offers important benefits to educators, researchers, students, professionals, corporations and organizations engaged in the environmental engineering and science profession. All who are eligible for membership are welcome to join the Association and to participate in the full range of benefits and opportunities. Membership categories and fees are described below, with complete definitions provided in the AEESP Bylaws. Applying online is easy! We welcome your participation!

Regular and Student Membership

Regular Membership in AEESP is open to persons of full-time faculty or instructional rank (instructors, lecturers, assistant, associate, full professors) in environmental engineering or environmental science at academic institutions that offer baccalaureate, diploma, or graduate degrees in environmental engineering, environmental science or related fields.

Rank	Annual Fee
Full Professors	\$100
Associate Professors	\$75
Assistant Professors	\$50
Students and Post-docs	\$15

Applying for Regular membership is made by submitting a completed application form and a brief two page curriculum vitae online with payment. Alternatively, application materials may be mailed to the Business Office with a check enclosed.

Affiliate Membership

Affiliate Membership is open to individuals who are not eligible for regular membership including:

- Individuals primarily employed outside academia who also hold academic appointments in an environmental engineering or related academic program (e.g. adjunct faculty).
- Individuals primarily employed outside academia who have made contributions to education in environmental engineering or related fields.
- Educators in environmental engineering or related fields who are employed at junior colleges or other educational institutions that do not offer the degrees specified above.
- Individuals who were members at one time and who have retired from active teaching.

Application for Affiliate membership is the same as for regular membership. The annual dues for Affiliate members are \$60.

Sustaining Membership

Sustaining Membership is open to individuals and organizations whose concern for education in environmental engineering and related fields stimulates them to assist in strengthening university programs devoted to this area. Sustaining members are often those who employ or interact closely with graduates of environmental engineering and science programs such as consultants, utilities, research foundations, professional organizations, publishers and equipment manufacturers. The financial support provided by Sustaining Members allows AEESP to carry out a variety of special programs that benefit all members of the profession. Sustaining Members have access to all AEESP publications and are invited to all AEESP events. Organizations or individuals desiring more information on Sustaining Membership should write to the Secretary, the President, or the Business Office.

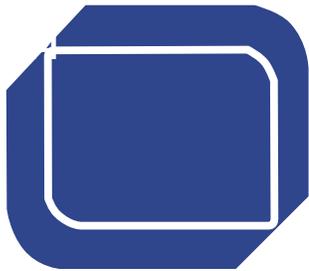
Annual dues for Sustaining members are \$500. Organizations or individuals desiring more information on sustaining membership should contact the Business Office at the phone number below.

Ready to join? You can apply for membership online!

<https://aeesp.org/user/register>

More information can also be obtained from the AEESP Business Office:

Brian Schorr
 AEESP Business Office
 1211 Connecticut Avenue, NW, Suite 650
 Washington, DC 20036
 Phone: (202) 640-6591
 Fax: (202) 223-5537
 email: bschorr@aeesp.org



Association of Environmental Engineering and Science Professors Newsletter

Steven Mylon, AEESP Newsletter Editor
Department of Chemistry
Lafayette College
Hugel Science Center
Easton, PA 18042
Phone: 610-330-5825
mylons@lafayette.edu

AEESP Officers

President

Peter J. Vikesland
Dept of Civil &
Environmental Engineering
Virginia Tech
415 Durham Hall
Blacksburg, VA 24061
Phone: (540) 231-3568
Fax: (540) 231-7916
pvikes@vt.edu

President-Elect

Linda K. Weavers
Civil, Environmental &
Geodetic Engineering
The Ohio State University
470 Hitchcock Hall
2070 Neil Avenue
Columbus, OH 43210
Ph: 614-292-4061
Fax: 614-292-3780
Email: weavers.1@osu.edu

Vice-President

Maya Trotz
Dept. of Civil &
Environmental Engineering
University of South Florida
4202 E. Fowler Avenue,
ENG 118
Tampa FL 33620
Phone: 813-974-3172
Email: matrotz@eng.usf.us

Secretary

Gregory V. Lowry
Dept. of Civil &
Environmental Engineering
Carnegie Mellon University
5000 Forbes Avenue
119 Porter Hall
Pittsburgh, PA 15213
Phone: 412-268-2948
Email: glowry@cmu.edu

Treasurer

Cindy Lee
Department of
Environmental Engineering
and Earth Sciences
Clemson University
Rich Laboratories
342 Computer Court
Anderson, SC 29625
Phone: (864) 656-1006
Fax: (864) 656-0672
lc@clemson.edu

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