AEESP Newsletter

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Highlights

Need to renew your 2024 AEESP membership? Go to "Membership > Renew My AEESP Membership" on the AEESP Website: AEESP.org

AEESP Newsletter Submissions

Please send news, conference announcements, job postings, letters to the editor, and other contributions to the newlsetter to Kyle Doudrick at *kdoudrick@nd.edu*. The next newsletter will appear in October 2024.

President's Letter: The Importance of Diversity, Equity, Inclusion, and Accessibility (DEIA) and the AEESP Community

By Debora Frigi Rodrigues, Ph.D.
University of Houston

In my visits to different Universities this past year, I've come to notice a gap in understanding regarding DEIA (Diversity, Equity, Inclusion, and Accessibility) and its profound implications for shaping the future workforce. There seems to be a prevalent misconception that DEIA solely pertains to minority groups such as Hispanics or African Americans. However, DEIA encompasses a far broader spectrum, aiming to ensure representation, support, and success for individuals from diverse identities within the workforce. DEIA encompasses identities like race, ethnicity, gender, age, national origin, religion, disability, sexual orientation, and socioeconomic status.

The roots of DEIA trace back to the mid-1960s with the advent of affirmative action and equal employment laws. Prior to this, companies and universities were notorious for discriminatory practices in hiring and promotion. The historical context of civil rights in the US reveals a narrative where only white men with property initially held sway, with others, including low-income white Americans, African Americans, women, Native Americans, non-English speakers, and young citizens, having to fight for their rights. This history of bias and discrimination spurred the need for DEIA initiatives, aimed at fostering multiculturalism and adapting to a globalized workforce.

Numerous studies have underscored the positive correlation between diversity and innovation, emphasizing the importance of diverse perspectives at the table. However, the landscape shifted after June 29, 2023, when the US Supreme Court ruled against affirmative action in college admissions, prompting several states to further dismantle DEIA efforts in publicly funded universities. As a resident of Texas, I've witnessed firsthand the repercussions of this rollback, including the dismissal of DEIA staff and a surge in bias and intolerance towards marginalized groups, both among faculty and students.

The impact is palpable, with initiatives supporting women and people of color being discontinued, and hurdles arising for fundraising efforts aimed at supporting students from minority backgrounds. Additionally, merit-based awards are now skewed towards non-minority or male recipients, disregarding the achievements of deserving individuals from marginalized groups. This regression echoes a time before the 1960s, casting a shadow on the progress made in fostering inclusivity and equality.

Amidst these challenges, I find solace and inspiration in the AEESP community, which not only embraces diversity but also translates it into meaningful action. Through my involvement in the international and outreach task forces, I've witnessed the dedication of our members to expanding representation, inclusivity, and support of these minoritized groups within our organization. Our diverse task force composition reflects our commitment to embracing voices from all corners of society, irrespective of nationality or minority status.

I remain hopeful that our collective efforts within the AEESP community will contribute to a brighter future for generations to come, where barriers based on race, ethnicity, gender, nationality, religion, disability, or sexual orientation are dismantled, ensuring a more equitable and inclusive world for all.

Debora Frigi Rodrigues

Debora F. Rodrigues, Ph.D.
AEESP President

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AEESP Board of Directors Meeting Report (June 2024)

By Kara Nelson, AEESP Vice President, University of California, Berkeley

The AEESP Board of Directors meeting was held virtually on June 18, 2024. We are excited to announce the three new Board members that will start their terms in September: Lindsay Soh (Lafayette College), W. Andrew Jackson (Texas Tech University), and Randi Brazeau (Metropolitan State University of Denver).

The Board voted to approve the formation of a new committee on Diversity, Equity, Inclusion, and Access based on the recommendation of the Liaison and Outreach Task Force that met throughout the year. Thank you to our Task Force members for your enthusiasm to launch this important new committee. The Board elected to request that the International Task Force continue its efforts for the coming year, to continue to narrow the scope and explore opportunities for AEESP to expand its international presence and provide value to members from institutions outside of North America.

The Board approved a proposal from the Awards Committee that will make it possible for two candidates to be selected as co-recipients of an award. To approve this outcome, the Chair of the Awards Committee will first meet with the AEESP President, President-Elect, and Foundation Chair to present the two candidates. The motivation for the change is to increase inclusivity among the awardees, increase representation among the nominees and awardees, and ensure communication among the award committee, AEESP Board, and AEESP Foundation Board.

The Board discussed reports from a number of other committees. Karl Linden from the University of Colorado, Boulder will be rotating out of the Chair position of the Sustaining Member Engagement Committee; if you are interested in joining this committee, please contact Karl. Baikun Li from the University of Connecticut is the new Chair of the Government Affairs Committee. The Board discussed a proposal from the American Academy of Environmental Engineers and Scientists (AAEES) to form a joint council. The Board did not approve the proposal but is highly supportive of fostering closer engagement between our two organizations through existing committees and through the AEESP Board of Trustees position, which has been held by Chuck Haas from Drexel University. Chuck will be moving into another leadership role at AAEES and we are working to identify a replacement.

The next in-person Board meeting will be held on September 4-6, hosted by U.C. Berkeley. We look forward to welcoming our new Board members and thanking our outgoing Board members for their dedicated service to AEESP.

Update on the AEESP Foundation

By Jennifer Becker, AEESP Foundation Chair, Michigan Technological University

The AEESP Foundation (https://aeespfoundation.org) is a Section 501(c)(3) tax-exempt organization that works to enhance the public outreach and education efforts of AEESP members and to bring new knowledge in environmental engineering and science to the public. The Foundation accomplishes this mission, in part, by managing and administering the financial resources needed to support the AEESP Distinguished Lecturer Series, AEESP Awards, and AEESP Foundation Educational Grants.

After a one year hiatus during which the AEESP Foundation Board evaluated the effectiveness of its educational grants program, the program was reinstated in 2023 with some changes. Most importantly, the size of the grants was increased from a maximum of $2,000 to $5,000 to increase the size of target audiences and impact of the proposed educational activities, e.g., by allowing investigators to pay project personnel and/or support project partners. Up to two awards will be given annually during a single grant cycle, and, in general, at least one of the awards will be given to an early career investigator. The RFP for the next grant cycle will be issued on August 1, 2024, and the deadline for submitting a grant proposal will be October 1, 2024.

During 2023, two AEESP Foundation grants were awarded. Dan Giammar, the Walter E. Browne Professor of Environmental Engineering at Washington University in St. Louis received a $5,000 grant in support of the project entitled "Environment and Climate Justice in St. Louis". Boya Xiong, Assistant Professor of the Department of Civil, Environmental, and Geo-Engineering at the University of Minnesota, Twin Cities received a $5,000 grant in support of the educational outreach project entitled, "EcoExplorers: Decoding the Plastic Degradation Odyssey – A novel high school science curriculum".

The Foundation Board is currently exploring ways of effectively sharing the educational resources developed via AEESP Foundation education grants to help AEESP members who are interested in conducting environmental engineering and science outreach programs of their own. We are also coordinating with the AEESP Publications Committee to determine what other types of publications or educational resources the AEESP Foundation might be able to help support and disseminate. Examples of resources that we are considering supporting are a collection of engineering project case studies and diversity, equity, inclusion, and justice (DEIJ)-related resources. If you have other suggestions regarding the types of publications or educational resources that you would like to see supported by the Foundation, please contact me or any of the Foundation Board members.

Lastly, Jim Mihelcic (University of South Florida) and Amy Childress (University of Southern California) recently completed a history of the formation and early years of the AEESP Foundation (2003-2016). The history can be found at https://aeespfoundation.org/about. This history is an invaluable document that will help AEESP members understand why the AEESP Foundation was organized and its relationship to AEESP, and it will help guide the activities of the Foundation in the future.

AEESP Thanks Professor Yuefeng Xie for Serving as This Year's AEESP Lecturer at AWWA-ACE24!

AEESP would like to extend our thanks and appreciation to Dr. Yuefeng Xie for serving as AEESP Lecturer at this year's American Water Works Association Annual Conference and Exposition (AWWA-ACE). The focus of Dr. Xie's presentation, "*Fusing Academic Insights with Industry Practices: Water, Alcohol, and Beyond*," was to link engineering education between universities and industries.

The lecture was co-moderated by Dr. Paul Westerhoff from Arizona State University and Dr. Tanju Karanfil from Clemson University and they provided Dr. Xie's introduction. Drs. Xie, Westerhoff, and Karanfil have worked closely over the years and co-edited two books in disinfection byproducts.

AEESP also thanks **Sustaining Member Hazen** for sponsoring Dr. Xie's lecture.

Hazen

Accomplishments of the AEESP Student and Postdoc Services Committee (SPSC) during the 2023-2024 Academic Year

By Fabrizio Sabba, Black and Veatch, and Nirupam Aich, University of Nebraska-Lincoln, Chair and Vice Chair respectively, Student and Postdoc Services Committee

The AEESP SPSC has remained highly active over the past year, continuing various programming activities to support Environmental Engineering and Science students and postdoctoral scholars in their job search and preparation activities. In the last three years, we have organized three large **Career Workshops**: one virtual in 2021 during the AEESP conference appetizer event and two in person in 2022 and 2023 at the AEESP conferences in St. Louis and Boston, respectively. During these events, we helped over 600 students and postdocs learn about different career paths and prepared them for success in their job search and interview processes.

In the year 2023-2024, we hosted our annual **Academic Job Application Review (AJAR)** program. This initiative connected graduate students and postdoctoral researchers interested in pursuing academic jobs with faculty members who provided tailored advice to improve their academic job applications. Participants had the opportunity to interact with professors from different institutions and receive feedback on their application documents, as well as gain insights into job expectations for various position types. The 2023 AJAR program had 23 applicants and 22 volunteer faculty reviewers. We would like to individually thank each of the faculty reviewers below. Our new call for AJAR program requesting submission of applications and the faculty volunteers will be coming soon.

AJAR program Faculty Reviewers: Christopher Olivares (U California Irvine); Phil Larese-Casanova (Northeastern U); Minjeong Suh (Hofstra U); Niveen Ismail (Smith College); Jeseth Delgado Vela (Duke U); Kaoru Ikuma (Iowa State U); Emily Garner (West Virginia U); Kaisen Lin (Michigan State U); Elizabeth Butler (U Oklahoma); Kushal Adhikari (Juniata College); Jessica Wilson (Manhattan College); Garrett McKay (Texas A&M U); Kyana Young (Wake Forest U); Kyoung-Yeol Kim (U Albany); Surajbhan Sevda (NIT Warangal); Zhiyue Wang (U Hawaii); Shilva Shrestha (John Hopkins U); Nick Tooker (U Mass Amherst); Francisco Cubas (Georgia Southern U); Kiranmayi Mangalgiri (Oklahoma State U); Sudeep Popat (Clemson U); Nirupam Aich (U Nebraska – Lincoln).

During 2023-2024, we organized the **AEESP Future Faculty Seminar Series**, which started in late Fall 2023 and ended in early Spring 2024. Through this seminar series, we aim to celebrate and highlight senior PhD students and postdoctoral researchers in environmental engineering and science, especially those who represent emerging diversity including gender, sexuality, race, ethnicity, class, national origin, disability, and educational journey. Candidates were selected from the AJAR application pool through a competitive search process. They had the opportunity to participate in a mock search committee meeting, a seminar, and a mock interview with a senior faculty member. This year's selected seminar speakers were Joseph Wassawa (Massachusetts Institute of Technology); Jeffrey Hudson (Oregon Health & Science U); Leah Weaver (North Carolina State U); Yanghua Duan (U California Berkeley); Casey Finnerty (Yale U); Kien (Kevin) Vu (U Notre Dame); Anushka Mishrra (U California Berkeley); and Kenneth Chung (U Pennsylvania). Each of these seminars was attended by 30-40 students and postdocs as well as faculty members from different universities. The seminars were organized by a group of volunteering faculties that included: Elizabeth Butler (U Oklahoma), Kiranmayi Mangalgiri (Oklahoma State U), Jessica Wilson (Manhattan College), Nicole Rockey (Duke U), Manish Kumar (U Texas Austin), Courtney Gardner (U Texas Austin), Fabrizio Sabba (Black and Veatch), Nirupam Aich (U Nebraska – Lincoln).

We have also organized the **'Navigating Jobs After Graduate School'** seminar series during March-May 2024. This is the third edition of our industry career workshop series. The series of seminars involved speakers from industrial sectors with the final goal of exposing students and postdoctoral scholars to non-academic jobs. Each of these seminars was attended by 30-40 students and postdocs. This year's industry seminars included the following speakers and company: Jake Metch (HDR), Katie Jeziorski and Shreyas Erapalli (Trinity Consultants), Francesca Cecconi (Black & Veatch), and Derek Vardon (Alder Renewables). The organizers included Fabrizio Sabba (Black and Veatch), Nirupam Aich (U Nebraska – Lincoln), Kiranmayi Mangalgiri (Oklahoma State U), Sudeep Popat (Clemson U), and Elizabeth Butler (U Oklahoma).

AEESP 2025 Research and Education Conference: Duke University Save-the-Date and Call for Session Proposals

Please save the date for **May 20-22, 2025** for the next AEESP Research and Education Conference, to held at Duke University's campus in Durham, North Carolina and hosted by the North Carolina Consortium of Universities (Duke, UNC-Charlotte, UNC-Chapel Hill, NC A&T and NC State). The NC Consortium looks forward to hosting the AEESP community for an exciting conference featuring sessions, panel discussions, and presentations on the latest research and education innovations for the environmental sciences and engineering.

The theme for AEESP2025 is ***Information and Engineering for the Public Sector: Data-driven stewardship of human-environmental systems under global change***. This theme addresses challenges in gathering, codifying, and managing information with the goal of providing data as a public good to inform public safety and environmental quality. While these objectives represent the shared values for the environmental engineering and science profession, the driving forces of global change in the human-environment interaction are making such challenges more complex and the solutions elusive.

Traditionally, information for the public sector has been applied in a wide range of forms that include building codes, standards for materials, environmental regulations, and standards on food quality to name but a few. Information as a public good also entails issues of efficient collection and interpretation of data and the associated privacy and safety issues. Advances in energy technology, the introduction of new chemicals and materials, infrastructure renewal, new tools to monitor public health, and a changing climate all increase the demand for reliable information on new products and proposed strategies for advancing a more sustainable society. With this theme, the conference will feature speakers and sessions that address the challenges in gathering, codifying, and managing information with the goal of providing data as a public good to inform public safety and environmental quality. The conference program will feature three days of concurrent panel and platform sessions, poster sessions, workshops, and plenary speakers, covering a wide variety topics within this theme as well as other research, education, and professional development topics relevant for the AEESP community.

We invite the AEESP community to host a topical session for the conference. Please see the AEESP2025 conference website for details. https://aeesp2025.duke.edu/conference-program/

Session proposals are due September 20, 2024.

AEESP 2025
DURHAM, NC
INFORMATION & ENGINEERING FOR THE PUBLIC SECTOR

2024 AEESP Award Recipients

Dr. Thanh H. (Helen) Nguyen, AEESP Awards Committee Chair, University of Illinois at Urbana-Champaign

Dear AEESP members:

This is my second year overseeing the award nomination and reviewing for AEESP and the joint AEESP/AAEES. We continue to standardize and simplify the nomination package so that it is accessible to all members of AEESP. Starting from the 2024 nomination cycle, all nomination packages will have the same format. The supporting materials will be limited to 10 pages. We will also have to move the nomination deadlines earlier to allow the committees to carefully review the growing numbers of submission. Make sure to watch out for these changes. We will send emails in fall 20025 to remind all AEESP and AAEES members.

I would like to thank all nominators and letter writers who have put so much effort into preparing last year nominations. Seven teen awards committee members (Jaehong Kim, Morton A. Barlaz, Deb A. Niemeier, Amy Stuart, Kaoru Ikuma, Shannon Capps, Mike Dodd, Binbin Wang, Antar Jutla, Chan Lan Chun, Kevin Orner, Jenna Ditto, Jeseth Delgado Vela, Ramesh Goel, Kara Nelson, Jim Mihelcic, and Robert Nerenberg) are especially acknowledged for their thoughtful and careful review of all nominations and their support and ideas for improving the nomination. Please let me know if you are interested in serving a two/three-year term on the Awards Committee.

Congratulations to all the winners. Very well deserved and, in some cases, way overdue.

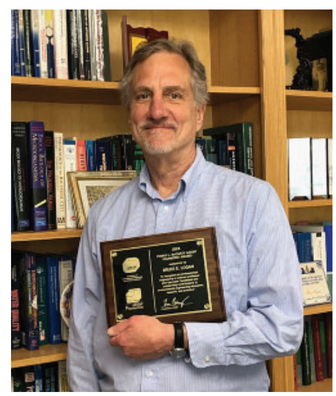
<u>Education, Research, and Practice Awards:</u>

Steven K. Dentel/AEESP Award for Global Outreach: Dr. Joseph Hughes, Distinguished University Professor, Drexel University

This award is made for Prof. Hughes' contribution to various environmental restoration projects performed in regions impacted by conflicts, including Angola, Iraq, and Syria, as well as establishment of a new discipline, Peace Engineering, to significantly expand the field of environmental engineering.

Brief statement from Prof. Hughes: "*Professor Steven Dental has been an inspiration to me throughout my academic career making this distinction particularly meaningful. Environmental challenges vary across a wide range of physical scales, and yet all environmental challenges are shared globally. Dr. Dental and past recipients of this award have demonstrated the importance of our field, globally. It is an honor to be recognized and humbling to be considered among the group that precedes me.*"

Perry L. McCarty/AEESP Founders' Award: Dr. Bruce Logan, Evan Pugh University Professor, Penn State University



Prof. Logan is being recognized for his pioneering research in bioelectrochemical systems, wastewater treatment, and renewable energy production, his educational efforts through the publication of two course-based textbooks and one research-focused book on microbial fuel cells, and his service to the profession through numerous professional organizations, including AEESP.

Brief statement from Prof. Logan: "*I'm very honored by this award. AEESP has been so important to me over the years.*"

Charles R. O'Melia AEESP Distinguished Educator Award: Dr. Chad Jafvert, Lyles Family Professor, Purdue University

Prof. Jafvert has demonstrated outstanding ability to develop numerous useful courses, while mentoring undergraduate and graduate students conducting impactful research.

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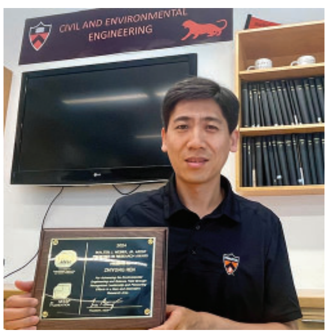
Brief statement from Prof. Jafvert: "*Having known Charlie O'Melia, it is really special to receive the Distinguished Educator Award named in his honor. As I am sure with previous winners of the award, we became good teachers, mentors, and researchers through examples set by him and our other heroes in the profession.*"

Walter J. Weber, Jr. AEESP Frontier in Research Award:
Dr. Z. Jason Ren, Professor, Princeton University



Prof. Z. Jason Ren was selected to receive the Walter J. Weber, Jr. AEESP Frontier in Research Award for his groundbreaking work in resource recovery and decarbonization and broadening environmental engineering to play a key role in climate solutions.

Brief statement from Prof. Ren: "*It is truly an honor and humbling to receive this prestigious research award. I am grateful for my nominator, supporters, and team members. I am excited to work with AEESP colleagues to advance and expand our fields of environmental engineering and science, especially in the vital contexts of climate change and circular economy.*"

AEESP Award for Outstanding Teaching in Environmental Engineering & Science:
Dr. Pawel Misztal, Assistant Professor, University of Texas at Austin

Prof. Misztal fuels and satisfies his students' hunger for discovery in a hands-on way in every class. While many assistant professors have negotiated a reduced teaching load for an extended time, Prof. Misztal was teaching even more than the standard course load. Moreover, his course evaluations were superb! When the Building Energy and Environments program was stretched quite thin in terms of teaching, he – as a third year Assistant Professor – was teaching four courses. This speaks to Prof. Misztal's dedication to his students.

Brief statement from Prof. Misztal: "*I am extremely honored and humbled to receive this award! It has been an amazing and fulfilling journey to work with all students and colleagues. It motivates me to continue learning from students and do my best to nourish their natural curiosity and support their success in fulfilling their dreams and career choices. We will continue to combine fun and seriousness to enjoy the learning process together. I am incredibly grateful to everyone who supported my nomination.*"

AEESP Outstanding Contribution to Environmental Engineering & Science Education Award:
Dr. Catherine Peters, George J. Magee Professor, Princeton University

Prof. Peters is recognized for her significant contributions to environmental engineering and science education, research, and practice, and her outstanding service and leadership to AEESP and the profession.

Brief statement from Prof. Peters: "*I am so glad to receive this news! It is an honor to be recognized by AEESP for my outstanding contributions.*"

AEESP Outstanding Publication Award:
Drs. Amy Pruden, Ruoting Pei, Heather Storteboom, and Kenneth Carlson
(*Names above appear from left to right in photos below.*)

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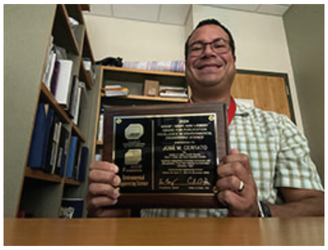
For their paper "Antibiotic resistance genes as emerging contaminants: studies in northern Colorado." *Environmental Science & Technology, Vol 40 (23),* 7445-7450 (2006).

The authors are recognized for pioneering the concept of antibiotic resistance genes as pollutants, spawning a whole new way of viewing the interaction between humans, agroecosystems, and the environment, and identifying the spread of antibiotic resistance as an environmental problem.

Brief statement from Prof. Pruden: "*Being selected for the AEESP landmark paper award is truly an honor among honors. I would have never dreamed such a recognition would be possible when our team embarked on this study, as I was only an Assistant Professor at the time. Now, looking back makes me realize just how important it is for us as scientists and engineers to consider that every manuscript we submit could be a best paper and to give it our best effort and be fully confident in the results, as you never know what kind of influence it might have: on the field, on society, on policy, and on public trust in science. I hope that the selection of our paper for this award similarly reminds young scientists out there of the importance of their work and encourages them to always give it their best shot!*"

AEESP/Mary Ann Liebert Award for Publication Excellence in *Environmental Engineering Science:*
Drs. José Cerrato Corrales, Kerry Howe, Kendra Hess, Jorge Gonzalez-Estrella
(*Names above appear from top to bottom and left to right in photos below.*)



In analyzing waters in New Mexico, this team of investigators discovered the co-occurrence of microplastics and two important toxic pollutants: uranium and arsenic. This co-occurrence drastically increases the ecosystem risk for aquatic organisms that ingest microplastics. The paper is lauded for its originality, comprehensive scope, and exceptional writing.

Brief statement from Prof. Gonzalez-Estrella: "*Our group at Oklahoma State University and collaborators at the University of New Mexico feel honored to have received this award. It is especially meaningful to see that the high-quality work of our students is recognized by AEESP and Mary Ann Liebert, Inc. This award helps us to highlight the importance of the occurrence of microplastics in freshwater bodies in underserved communities that are also affected by mining legacy.*"

Frederick George Pohland Medal 2024 Recipient: Dr. Detlef Knappe, S. James Ellen Distinguished Professor North Carolina State University

Prof. Knappe is an internationally recognized scholar, whose work has had tremendous impact on engineering practice, regulations, and public health.

Brief statement from Prof. Knappe: "I am very grateful for having been selected as the Pohland Medal recipient this year, and I would like to express my sincerest thanks to everyone involved in the selection process."

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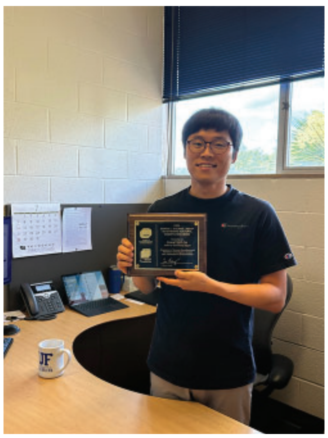
Student Awards:

AEESP Outstanding Doctoral Dissertation Awards:

The Edward J. Bouwer AEESP Outstanding Doctoral Dissertation Award: Dr. Chamteut Oh, University of Illinois at Urbana-Champaign (now at University of Florida), with Advisor Dr. Thanh H. Nguyen



Dr. Chamteut Oh

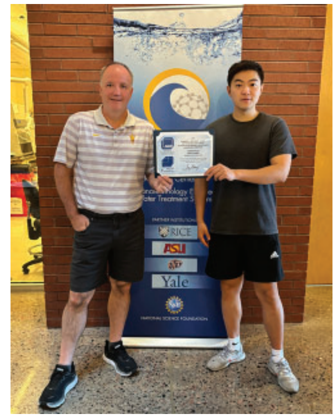
Dr. Thanh H. Nguyen

Dissertation Title: "*Development of Genomic Surveillance and Disinfection Technologies to Control Virus Transmission in the Environment.*"

Dr. Oh's thesis presented studies to overcome the following challenges in environmental surveillance of viruses: 1) differentiating between intact infectious viruses and viral genome in water and wastewater with a low concentration of viruses, 2) achieving sensitivity and specificity of the detection method, and 3) developing methods that can be used by typical water and wastewater utilities instead of highly specialized labs.

Brief statement from Dr. Oh: "*Dr. Bouwer made significant contributions to the field of Environmental Engineering and Science through his research and mentorship. The AEESP Outstanding Doctoral Dissertation Award, bearing his esteemed name, is undoubtedly one of the most prestigious awards for recent PhD graduates. I am inspired to follow in his footsteps and aspire to become an innovative researcher and considerate mentor myself. I would like to express my sincere gratitude to my advisor, Professor Helen Nguyen, as well as to all colleagues in the Nguyen's research group and the PhD program at the University of Illinois Urbana-Champaign. This award symbolizes their sincere support for me, and for that, I am truly thankful.*"

Edward J. Bouwer AEESP Outstanding Doctoral Dissertation Honorable Mention: Dr. Zhe Zhao, Arizona State University with Advisor Dr. Paul Westerhoff



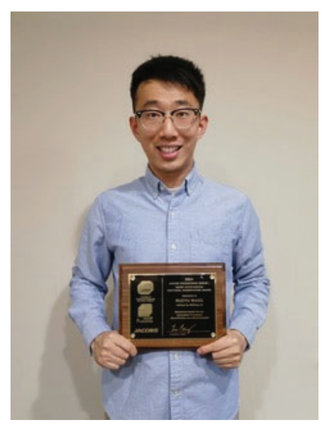
Dr. Zhe Zhao (right)
Dr. Paul Westerhoff (left)

Dissertation Title: "*Manufacturable and Physically Flexible UV-C Side-emitting Optical Fibers for Biofilm Inhibition in Pressurized Water Systems.*"

Brief statement from Dr. Zhao: *"Being chosen as an Honorable Mention for this year's Edward J. Bouwer AEESP Outstanding Doctoral Dissertation Award is truly a great honor. My dissertation has contributed to advancing novel strategies for biofilm control, and receiving this award serves as invaluable encouragement for my work and future career. I would like to extend my heartfelt thanks and appreciation to my advisor, Dr. Paul Westerhoff, for his kindness, illuminating guidance, and profound knowledge."*

Jacobs Engineering Group/AEESP Outstanding Doctoral Dissertation Award: Dr. Ruoyu Wang, Vanderbilt University (now at Yale University), with Advisor Dr. Shihong Lin

Dissertation Title: "*Membrane-based Ion-ion Separation Processes: Nanofiltration and Electrodialysis.*"



Dr. Ruoyu Wang

His dissertation comprised both experimental and theoretical work with strong intellectual merit. His work shifted the paradigm and established a more rational framework for evaluating ion-ion selectivity in membrane-based separa-

Dr. Shihong Lin

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tion, which is an important research frontier in water treatment and resource extraction and recovery. His work also provided guidance to developing new membranes and processes with enhanced performance for ion-ion separation. Globally, he is one of the top scholars in terms of understanding and contributions to the theory of aqueous separation processes.

Brief statement from Dr. Wang: "*I am deeply honored to receive the 2024 Jacobs Engineering Group/AEESP Outstanding Doctoral Dissertation Award. This award not only affirms the significance and impact of my doctoral research on membrane-based ion-ion separation processes but also highlights the invaluable support and guidance from my mentors and peers. I am deeply grateful for the recognition from the AEESP community and look forward to sharing more about my work at future AEESP conferences. This honor inspires me to further my contributions to environmental engineering with greater dedication, particularly in using membrane technologies to tackle environmental challenges like water scarcity, drinking water safety, resource recovery, and decarbonization.*"

Jacobs Engineering Group/AEESP Outstanding Doctoral Dissertation Honorable Mention:
Dr. Akash Bhat, University of Minnesota (now at University of Colorado Boulder), with Advisor Dr. William Arnold


Dr. Akash Bhat **Dr. William Arnold**

Dissertation Title: "*Photolysis of fluorochemicals: Tracking fluorine, use of UV-LEDs, and computational insights.*"

Brief statement from Dr. Bhat: "*I am extremely honored and grateful to receive this recognition. I would like to thank my advisor Dr. Bill Arnold for the independence, support, and guidance that he gave throughout my Ph.D. This honor not only acknowledges my dedication and perseverance through my Ph.D., but also highlights the importance of understanding the effects of having persistent contaminants in our water.*"

Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award:
Dr. Jessica Steigerwald, University of Washington, with Advisor Dr. Jessica Ray


Dr. Jessica Steigerwald **Dr. Jessica Ray**

Dissertation Title: "*Development of Novel Biochar-Molecularly Imprinted Polymer Composites for Targeted Adsorption of Per- and Polyfluoroalkyl Substances in Water Treatment Applications.*"

The overarching goal of Dr. Steigerwald's dissertation was to design, develop, characterize, and apply a selective and regenerable adsorbent for removal of per- and polyfluoroalkyl substances (PFAS). Furthermore, she has 3 patents for the PFAS adsorbent technologies that she developed during her thesis.

Brief statement from Dr. Steigerwald: "*I am honored to have received the 2024 Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award. The AEESP is an incredible community of researchers and innovators and I feel privileged to be recognized in this forum. I want to thank my advisor Jessica Ray for being an amazing mentor and role model, and for giving me the opportunity to complete this research in her lab. I also want to recognize my lab group and family whose friendship and support made my success possible.*"

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Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Honorable Mention:
Dr. Qian Luo, North Carolina State University (now at Princeton University), with Advisor Dr. Jeremiah Johnson

Dr. Qian Luo

Dr. Jeremiah Johnson

Dissertation Title: "*Integration of power systems and air quality models to mitigate negative health and climate impacts of electricity generation.*"

Brief statement from D. Luo: "*My dissertation tackles the challenge of mitigating greenhouse gas emissions within the power sector, with a particular emphasis on air pollution, public health, and justice implications associated with power plant emissions. Receiving this recognition from AEESP encourages me to keep pursuing a just energy transition through research in the inter-disciplinary field. I am extremely grateful to my advisors: Drs. Jeremiah Johnson and Fernando Garcia-Menendez for giving me the opportunity to learn and explore this topic and supporting me from all perspectives.*"

AEESP Master's Thesis Awards:

Danielle Angert, University of Texas at Austin, with Co-Advisors Dr. Mary Jo Kirisits and Dr. Eric Cambronne

Danielle Angert

Dr. Mary Jo Kirisits

Dr. Eric Cambronne

Thesis Title: "*Quantifying intra- and extra-cellular Legionella in first-draw and flushed drinking water samples collected across the U.S.*"

Her thesis described a smaller, preliminary study of culturable Legionella pneumophila in the drinking water of 11 cities and a larger, more comprehensive study of Legionella spp. in the drinking water of 19 cities.

Brief statement from Danielle Angert: *"Thank you to AEESP for this recognition of my thesis! I am honored to be chosen amongst an amazing community of environmental engineers and scientists. I am grateful for my advisors and lab group for their invaluable help throughout my master's degree."*

Rachel Cheong, McGill University, with Advisor Dr. Nathalie Tufenkji

Rachel Cheong

Dr. Nathalie Tufenkji

Thesis Title: "*Understanding the Toxicity of Tire-Wear Particle Leachate on a Model Amphibian.*"

Rachel made exceptional intellectual contributions to this thesis which involved novel research on the effects of tire wear particles and leachate on the amphibian, S. tropicalis.

Brief statement from Rachel Cheong: *"I am deeply honored to receive this prestigious AEESP Master's Thesis Award for 2024 and am ecstatic that my work has contributed to the advancement of environmental science and engineering! Achieving this milestone would not have been possible without the unwavering support and guidance of my advisor, Dr. Nathalie Tufenkji, co-advisor, Dr. Stacey Robinson, and collaborations with diverse, multi-disciplinary teams. I hope this award inspires the future generation of researchers and brings awareness to the impacts of tire-wear particles on the environment."*

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continued on next page

AEESP-AAEES Joint Awards:

Excellence in Environmental Engineering and Science Education (E4): Dr. Benito Marinas, Ivan Racheff Professor of Environmental Engineering, University of Illinois at Urbana-Champaign

W. Wesley Eckenfelder Graduate Research Award: Zixuan Wang, Washington University in St. Louis (Advised by Dr. Jason He)

Paul F. Boulos Excellence in Computational Hydraulics/Hydrology Awards:
Md. Fahim Salek, Auburn University (Nominated by Lauren Beckingham)

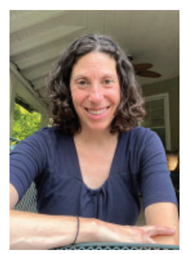
William Brewster Snow Award: Kelly Hollman, San Diego State University (Nominated by Natalie Mladenov)

AEESP 2024 Distinguished Service Awards:

Debora Frigi Rodrigues: President and Board Member
Susan Masten: Chief Information Officer and Board Member
Mira Olson: Secretary and Board Member
Heileen Hsu-Kim: AEESP Foundation Treasurer and Board Member
Willie Harper: AEESP Foundation Board Member
Courtney Gardner: Internet Resources Committee Chair
Amy Childress: Fellows Committee Chair
John Sutherland: Environmental Engineering Program Leaders Co-Chair
Fabrizio Sabba: Student and Post-Doc Services Committee Chair
Karl Rockne: AEESP-AAEES Joint Awards Subcommittee Chair
Kaoru Ikuma: AEESP Outstanding Doctoral Dissertation Awards Subcommittee
Kevin Orner: AEESP Master's Thesis Awards Subcommittee Chair
Elizabeth Edwards: AEESP Distinguished Lecturer (2023-2024)


Debora Rodrigues


Susan Masten


Mira Olson


Heileen Hsu-Kim


Willie Harper


Courtney Gardner


Amy Childress


John Sutherland


Fabrizio Sabba


Karl Rockne


Kaoru Ikuma


Kevin Orner


Elizabeth Edwards

2024 AEESP Fellows:

AEESP wishes to congratulate the following AEESP Fellows inducted year. Medals will be presented during the 2025 AEESP Awards Ceremony at the Research and Education Conference at Duke University:

William Arnold
University of Minnesota

Shannon Bartelt-Hunt
University of Nebraska-Lincoln

Daniel Giammar
Washington University in St. Louis

Lutgarde Raskin
University of Michigan

Charles Werth
University of Texas at Austin

2024 AEESP Lifetime Members:

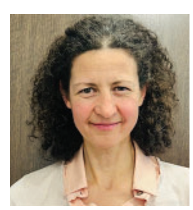
AEESP wishes to congratulate the following AEESP members on achieving Lifetime Membership Status:

- **Linda Abriola**, Brown University
- **Morton Barlaz**, North Carolina State University
- **David Dzombak**, Carnegie Mellon University
- **Benito Marinas**, University of Illinois at Urbana-Champaign
- **James Mihelcic**, University of South Florida
- **Debra Reinhart**, University of Central Florida
- **Mark Wiesner**, Duke University

Join AEESP at WEFTEC 2024!

Ernest N. Morial Convention Center · New Orleans, LA · October 5-9, 2024

WEFTEC Master Lecture: Envisioning WRRF 2040: Are We on course?
Tanja Rauch-Williams, Ph.D.
Monday, October 7; 1:30 pm CT; Room 238
Organized by WEF in collaboration with AEESP



AEESP Annual Meet and Greet
Meet incoming AEESP President Lee Blaney, Ph.D.
Monday, October 7; 10-11 am CT; Room 342
Organized by WEF
Sponsored by Carollo Engineers

*WEFTEC registration required for all AEESP events:
https://www.weftec.org/reg-and-hotel/registration/conference-registration-and-policies/

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In Memoriam

AEESP is saddened to report the passing of two Lifetime Members:

Dr. James D. Englehardt, University of Miami

Dr. Englhardt was an AEESP member since 1989. The following tribute was provided courtesy of Stanfill Funeral Home:

Dr. James "Jim" D. Englehardt was born near Philadelphia, PA on August 4,1954, growing up in nearby Berwyn, PA. He passed away from complications related to colon cancer on July 26, 2023. Jim was the oldest of three children born to William and Frances Englehardt. He was preceded in death by his parents and his younger sister.

Jim married Patricia 'Pat' Ooi in 2000 and their family expanded in 2003 with the birth of their daughter, Alysa.

Jim served as Professor of Environmental Engineering at the University of Miami for more than 30 years. Before receiving his Ph.D. from the University of California, Davis, Jim earned an MS Degree in Environmental Engineering from Colorado State University (1983) and a BS Degree in Chemistry from the University of Pittsburgh (1972).

Jim was the director of the Water Quality Engineering Laboratory at the University of Miami. Developments include net-zero water treatment, which is the first energy-positive treatment system for management of municipal water and wastewater. Jim received numerous grants to fund his research and earned numerous awards for his work over the course of his career. He greatly enjoyed working with his students and colleagues at the University of Miami in Coral Gables.

In a tribute to Jim, a friend said, "Jim was quietly brilliant. . . .he was passionate about the environment. Not vaguely 'saving it', but using his engineering skills to create a viable path for 8 or 10 billion people to have fresh water and clean air."

Jim loved music and was a drummer for the University of Miami Band, "The Lost Faculties". He also enjoyed playing the guitar and singing. Jim loved anything to do with the outdoors, nature, and camping. He enjoyed exploring the mountains of Colorado and time on the beach. Jim was involved in the Big Brothers organization for many years and was also active in St. Augustine's Catholic Parish as a chorister.

Above all, Jim was passionate about his family - his wife Pat and daughter Alysa. He loved spending time with them, sharing their interests, celebrating the daily routines of life with them and was a true family man. Their travels took them to destinations where Jim managed to share his research interests and ideas such as in Alaska, Malaysia, Singapore, Norway, and the United Kingdom.

Jim is survived by his wife and daughter, his brother Charles, sister-in-law Sheree, nephew Dustin, and niece Brandi.

Jim will be greatly missed by all who knew and loved him. His work and legacy will continue through his students' research, some of whom are currently professors in universities and researchers in the US.

Passionately concerned about the conditions in Haiti, Jim had wanted to get involved in assisting with water treatment projects to provide clean drinking water for the people of Haiti. For additional information, please click on this link: https://hopeforhaiti.info/englehardtmemorial

Donations in his memory can also be made to the James D. Englehardt Excellence Award in Research, care of the University of Miami.

In Memoriam (cont.)

Dr. Thomas M. Keinath, Clemson University
Dr. Keinath was an AEESP member since 1969. The following tribute was provided by Dr. David Freedman:

It is with a heavy heart that we mourn the passing of one of the giants of the Environmental Engineering and Science field, Dr. Tom Keinath. Dr. Keinath passed away on March 15, 2024. A news release about his legacy at Clemson University and his many contributions to research, teaching, and service made be found here.

Dr. Keinath rose through the ranks at Clemson University, serving as Head of the Department of Environmental Systems Engineering (now the Department of Environmental Engineering and Earth Sciences) and then Dean of the College of Engineering and Science (now the College of Engineering, Computing, and Applied Sciences). During his storied academic career, Dr. Keinath was very active in service to major national and international professional organizations, including as President of AEESP. Dr. Keinath also served two two-year terms as President of the International Water Association (IWA) and as Chair of its Executive Committee and Governing Board. He served the American Society of Civil Engineers as Chair of its Clarifier Research Technical Committee and as Chair of the Program Committee of the Water Environment Federation. Dr. Keinath served on several committees and panels for the National Research Council of the National Academy of Engineering and the National Academy of Science.

Dr. Keinath published extensively, including well over 100 technical papers and several books and monographs. Most of these dealt with modeling and control of water and wastewater treatment facilities and physicochemical methods of treatment. The majority of his research was focused on adsorption/exchange processes, secondary clarification, sludge treatment, and surface and aquifer soil remediation. Dr. Keinath directed the research of over 100 graduate students and postdoctoral associates.

Dr. Keinath received numerous awards, including the Founders Award from AEESP in 2002. In 1997, Dr. Keinath was conferred the Gordon Maskew Fair Medal by the Water Environment Federation for his lifetime accomplishments in the education of environmental engineering professionals. Dr. Keinath also was recognized by his alma mater, The University of Michigan, by being conferred the Alumni Society Merit Award (1996). In 1995, Dr. Keinath received the Harrison Prescott Eddy Medal for a publication that appeared in Water Environment Research. In 1985, Dr. Keinath was awarded the Walter L. Huber Civil Engineering Research Prize for his career research accomplishments. He was also named a Chapter Honor Member of Chi Epsilon, the Civil Engineering Honorary Society, and a UNESCO Expert Lecturer. He was recognized by the American Water Works Association by being conferred the Amsbury Academic Achievement Award.

A celebration of Dr. Keinath's life was held at Clemson University on May 18, 2024. It was not all that long ago that we celebrated Dr. Keinath on the 50th anniversary of when he first joined Clemson University. You can read about that wonderful event here.

Spotlight: Environmental Engineering Science, AEESP Journal

AEESP Publications Committee: Dr. Elodie Passeport, Rutgers University, Dr. Susan J. Masten, Michigan State University, and Dr. David A. Ladner, Committee Chair, Clemson University

The "Spotlight" column draws attention to selected articles in *Environmental Engineering Science (EES)*, the official journal of the Association of Environmental Engineering and Science Professors (AEESP). Spotlight articles appear three times per year in the journal as well as in the AEESP Newsletter. Through publication of high-quality peer-reviewed research, EES 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 December 2023 issue through the March 2024 issues of EES. Congratulations to all whose work is highlighted.

N.L. Fahrenfeld, Lee Blaney, Kelly D. Good, Lu Liu, Rouzbeh Tehrani, and Thinesh Selvaratnam (2023). Lessons Learned from a Cross-Institutional Environmental Engineering and Science Faculty-to-Faculty Mentoring Program. *Environmental Engineering Science* 41(2), 43-47.

Fahrenfeld et al. (2024) summarizes benefits and potential for improvements of a faculty mentoring program developed by AEESP. Mentor-mentee pairs were created and met a few times with the goal to support junior faculty in environmental engineering and science and help build a strong and inclusive community. In decreasing order, the following aspects were important to mentees in being paired with a mentor: university type, personality, research area, parental status, marital status, and race/ethnicity. Both mentors and mentees overall agreed that the program was very successful: mentees reported multiple benefits from meeting with their mentors, such as initiating new ideas, getting feedback on articles and proposals, increasing their network, and learning to balance work and life. The article further highlights potential for improvements, including the need for more structure and recognition for mentors. The authors suggest that this would encourage more mentors to participate and help mentees get the most of out the program.

Jorge L. Calabria, Armando Oliva, Piet N.L. Lens, and Daniel H. Yeh (2023). Recirculating Vertical Hydroponic Systems: Effect of Light and Nutrient Solution Composition on Nitrification Activity. *Environmental Engineering Science* 40(12), 647-656.

Growing crops in urban areas is difficult due to limited land access. Resource recovery, including water and nutrients, combined with vertical hydroponic cultivation systems has exciting potential to bring crops to urban areas. In their article, Calabria et al. (2024) demonstrate that lettuce can grow efficiently in vertical hydroponic systems irrigated and fertilized using effluents from anaerobic membrane bioreactors. The authors showed that ammonium from anaerobic membrane bioreactors can be nitrified to nitrate in hydroponic systems while supporting lettuce growth. Good light conditions were essential, with increased crop yields as photon flux increased. The article shows promising results in combining wastewater treatment and hydroponic cultivation and highlights the need for proper lighting and knowledge on input nutrient concentration to ensure efficient lettuce growth.

Yizhi Hou and Brooke K. Mayer (2023). Optimizing Water Treatment: Reverse Osmosis and Nanofiltration Membrane Performance with a Focus on the Influence of Active Layer Thickness and Porosity. Environmental Engineering Science 41(3), 95-108.

Reverse osmosis (RO) and nanofiltration (NF), both pressure-driven processes, are increasingly used for desalination of brackish and seawater and the treatment of wastewater. Hou and Mayer (2024) investigated the role of membrane thickness and porosity on sodium chloride removal and relative ion flux using two commercial RO and eight commercial NF membranes. They found strong relationships between pore size, thickness, and surface charge and membrane porosity as well as performance (ion flux and NaCl removal), regardless of membrane material. Greater sodium chloride removals and lower permeabilities were observed with thicker, more porous membranes with smaller pores. Based on results of this study, treatment goals (permeate water flux and ion removal) can be achieved by controlling membrane porosity through pore size and thickness.

Ashley Green, Zhiquan Song, Chau Tran Samuel Reifsnyder, Diego Rosso, Patricia Hsia, Nikos Melitas, Patricia A. Holden, and Sunny Jiang, (2024). Community-Scale Surveillance of SARS-CoV-2: Optimizing Sampling Strategies for Centralized Wastewater Treatment Plants. Environmental Engineering Science 41(1), 7-17.

Green et al (2024) evaluated sampling strategies for SARS-CoV-2 at wastewater treatment plants. A key driver of the research was to know the most efficient methods for using wastewater surveillance to identify community spread of COVID-19. To understand temporal variability within a wastewater collections network, grab samples are needed, as one might expect; however, to capture the overall conditions of a community, composite sampling was more effective. Data were more indicative of community spread when sampled from large wastewater plants, rather than smaller ones. The benefit of sampling smaller plants is found when seeking to identify specific locations of outbreaks. The information here will be

continued on bottom of next page

Dr. Natalie Cápiro Returns to Cornell University

Dr. Natalie Cápiro returned to her alma mater of Cornell University in Summer 2023 and joined the Department of Biological and Environmental Engineering as an Assistant Professor with a graduate field appointment in the School of Civil and Environmental Engineering. Previously, Dr. Cápiro was an Assistant Professor at Auburn University and before Auburn, she was a Research Assistant Professor at Tufts University; both appointments were in Departments of Civil and Environmental Engineering. She completed her postdoctoral studies at the Georgia Institute of Technology, M.S. and Ph.D. in Civil and Environmental Engineering at Rice University, and B.S. in Biological and Environmental Engineering at Cornell University. Dr. Cápiro's research expertise lies in the areas of environmental microbiology, fate and transport of legacy and emerging organic contaminants in natural systems, development of combined physical-chemical and biological remediation strategies, and nanotechnology-biological interactions in the environment.

Dr. Xudong Fan Joins the University at Buffalo

Dr. Xudong Fan will join the Department of Civil, Structural, and Environmental Engineering at the University at Buffalo as an Assistant Professor in Fall 2024. Dr. Fan's research focuses on developing advanced AI algorithms and computational models to understand the complex relationships among urban water systems, multi-layer urban infrastructure systems, and water-related natural hazards, towards a more sustainable, resilient, equitable, and connected community. Dr. Xudong Fan is a Postdoctoral Research Associate in the Department of Civil and Environmental Engineering at Princeton University. He received his doctoral degree in Civil and Environmental Engineering from the Case Western Reserve University, his master's degree from Tianjin University, and bachelor's degree from Central South University.

Dr. Michelle Scherer Joins Michigan Technological University as the New Dean of the College of Engineering

Michigan Technological University (Michigan Tech) welcomes **Michelle M. Scherer, Ph.D.**, as Dean of the College of Engineering and Professor of Civil, Environmental, and Geospatial Engineering. Dean Scherer is especially known for her pioneering work on redox chemistry in soils and sediments and the implications of these reactions for pollutant fate, nutrient cycling, and organic carbon partitioning. A recent focus of her research program is on assessing children's exposure to lead in drinking water. Scherer's research has been supported by the National Science Foundation (NSF), U.S. Environmental Protection Agency (U.S. EPA), Department of Energy (DOE), U.S. Department of Housing and Urban Development, and Department of Defense/Strategic Environmental Research and Development Program (DOD/SERDP).

Scherer has a long history of involvement in, and recognition by, AEESP. She is the recipient of the 2022 AEESP Outstanding Publication Award (along with Paul Tratnyek and Timothy Johnson) for their paper "Kinetics of halogenated organic compound degradation by iron metal." *Environmental Science & Technology* Vol. 30, Issue 8 (1996), pp. 2634-2640. In 2010, Scherer received the Malcolm Pirnie/AEESP Frontier in Research Award. She served on the

continued on next page

'Spotlight' (cont.)

useful as investment in wastewater surveillance decreases over time and more efficiency is needed. It will be further useful as additional diseases and indicators are evaluated (e.g. flu, respiratory syncytial virus (RSV), and enterovirus).

Her service to the broader environmental engineering and science community includes serving as Associate Editor of *Environmental Science & Technology* (2008-2012), member of the SERDP Science Advisory Board (2016 –2017), member of the Environmental Engineering Committee of the U.S. EPA Science Advisory Board (2014 –2018), and founder of the Telluride Workshop on Fe Biogeochemistry (Chair or Co-Chair 2006, 2014, 2018). She is the recipient of the NSF CAREER Award (2000) and the SERDP Cleanup Project of the Year Award (2002 and 2018).

Scherer comes to Michigan Tech from the University of Iowa, where she served as a University of Iowa Distinguished Chair Professor in the Department of Civil and Environmental Engineering (2021-2024) and held several leadership positions, including the Director of the Hanson Center for Communication (2022-2024) and Chair of the Department of Civil and Environmental Engineering (2010-2018). From 2018 to 2020, she co-chaired the University of Iowa, College of Engineering's inaugural Diversity, Equity, and Inclusion Council.

Scherer received a Ph.D. in Environmental Science & Engineering from the Oregon Graduate Institute and a M.S. in Civil and Environmental Engineering from the University of Connecticut. Scherer also received a B.S. in Systems Engineering from the University of Virginia.

Dr. Debora F. Rodrigues Joins Clemson University as the Department Chair of the Environmental Engineering and Earth Sciences

Dr. Debora F. Rodrigues has been appointed to serve as chair of Clemson University's Department of Environmental Engineering and Earth Sciences, effective Aug. 15. Her well-rounded research credentials, exceptional leadership skills and extensive experience in fostering international, multidisciplinary and translational research uniquely qualify her to lead the department.

Dr. Rodrigues joins us from the University of Houston, where she is the Ezekiel Cullen Professor of Civil and Environmental Engineering and director of the Environmental Engineering Program in the Department of Civil and Environmental Engineering. She is also the current president of the Association of Environmental Engineering and Science Professors. Her recent career milestones include service as a program officer for several National Science Foundation (NSF) initiatives, including: Partnership for Innovation, Mid-Career Advancement, BioDesign, Future of Work at the Human-Technology Frontier, and Accelerating Research Translation. She also served as a co-project director for the NSF's Engineering Research Center program.

Her multidisciplinary research encompasses environmental engineering, environmental microbiology, molecular genetics, and materials sciences and engineering. She has published more than 110 papers with over 8,733 citations and mentored numerous Ph.D. students and postdoctoral fellows. Dr. Rodrigues has received several prestigious honors, including the NSF CAREER Award and the C3E Research Award in Water-Energy Nexus from the U.S. Department of Energy. Her contributions were noted by the National Academy of Engineering, which invited her to participate in the Frontiers of Engineering program.

Dr. Rodrigues is deeply committed to mentorship. She has helped junior and mid-career faculty members secure significant research funding and students obtain scholarships from a variety of sources. She has also developed impactful outreach programs, such as the NSF-funded project for teachers recognized by President Obama's Higher Education Community Service Honor Roll. Her efforts in fostering international partnerships and industry-academia collaborations have significantly advanced research and education initiatives.

Did You Know?

All members may send messages to the AEESP membership through its Listserv. Simply log into your membership account via the Members' Only website, hover your mouse over the "News & Events" item on the navigation toolbar, then select "Listserv" on the dropdown menu. Announcements must be of interest to the AEESP community and are subject to the review and approval of the Listserv Manager prior to posting.

Additionally, if you are having difficulty receiving AEESP Listserv announcements, please email listserv@aeesp.org for assistance.

LISTSERV

Congratulations to Gordon Research Conference Environmental Sciences: Water Poster Winners

By Dr. Christina K. Remucal, University of Wisconsin-Madison

The Gordon Research Conference on Environmental Sciences: Water recognized two graduate students and two post-doctoral researchers for their excellent poster presentations at the biennial meeting held in Holderness, NH in June 2024. As a prize, the awardees had 24 hours to prepare a presentation of their work to the entire conference. Congratulations to the 2024 poster award winners:

Nora Bernet (Eawag & ETH Zürich): Oxygen Isotope Analyses of Phosphate and Organo- Phosphorus Compounds by Orbitrap High-Resolution Mass Spectrometry - New Avenues for Assessing Microbial Metabolism and Environmental Pollutants

Sarah Partanen (Eawag & University of Zürich): Towards a Streamlined Environmental Persistence Assessment for Trace Organic Contaminants: Preliminary Findings from High-Throughput Biodegradation Testing

Charbel Abou-Khalil (University of Notre Dame): Enhancing the Thermal Mineralization of Perfluorooctane Sulfonate on Granular Activated Carbon using Alkali and Alkaline-Earth Metal Additives

Phoebe Keyes (University of Minnesota): A Novel Approach to Analysis of Water-Soluble Polymer Degradation Chemistry by High-Resolution Mass Spectrometry: Understanding Polyacrylamide Degradation via Enhanced Non-Target Workflow

(Left to right):
Charbel Abou-Khalil, Nora Bernet, Sarah Partanen, and Phoebe Keyes

AEESP would also like to thank former President and Board Member Dr. Maya Trotz for providing a keynote presentation at this year's event. Additional photos below have been provided by event Chair Dr. Angela Stiegler.





Environmental Professionals are Transdisciplinary and Transnational

By Daniel B. Oerther, Ph.D., CEnv, FAAN(h), FAEESP

Convergence research is meant to solve vexing problems such as humanity's propensity to consume resources beyond planetary limits and in a manner that reinforces tribalism and intersectionality. Our new definition of environmental engineering, "solving the problems of planetary health," benefits from collaborations with the caring profession of nursing as well as working across national boundaries (Oerther et al, *Environmental Engineering Science*, 2024. doi: 10.1089/ees.2023.0301). For example, did you know that Dr. Teddie Potter, Director of Planetary Health in the school of nursing at the University of Minnesota (see: https://nursing.umn.edu/centers/center-planetary-health-and-environmental-justice/), is a leader of the Alliance of Nurses for Healthy Environments, who publish a free e-texbook entitled, Environmental Health in Nursing 3rd Edition (see: https://envirn.org/e-textbook)? Or did you know that Dr. Marion Leary, Director of Innovation in the school of nursing at the University of Pennsylvania (see: https://www.nursing.upenn.edu/our-expertise/innovation/), is a leader of the Nursing is STEM Coalition (see: https://www.nursingisstem.org), who petition the United States Government to welcome nursing science as part of the science, technology, engineering, and math (STEM) professions? And internationally, did you know that the London-headquartered Society for the Environment (SocEnv) is celebrating twenty years of registering more than 7,500 environmental professionals for the public benefit (see: https://socenv.org.uk/royal-charter/)?

In the autumn of 1998, the Board of Directors of the then Association of Environmental Engineering Professors (AEEP) recognized that breaking down the barriers in categorizing a person as a scientist or an engineer, "is a defining and inherent aspect of our [environmental] profession," (Logan, B.E., 1998, "President's Letter," AEEP, vol. 33, no. 3, p.1). The new Association of Environmental Engineering and Science Professors (AEESP) recognized that, "'quantum leaps' in our ability to protect ecological integrity and human health will be made only by greater integration with fundamental science and other engineering disciplines," (Gray, K.A., 1999, "President's Letter," AEESP, vol. 34, no. 1 p. 1). In 2024, twenty-five years later, our suggestion is that solutions to planetary health must scale-up caring (Oerther et al, *Journal of Environmental Engineering*, 2024, doi: 10.1061/JOEEDU/EEENG-7764. Caring must include life support for Gaia – our sick planet. And caring must include looking out for each other through improved social contracts. While we avoid the indiscriminate blurring of each individuals' unique contributions, our shared goal should be to converge our professional efforts on a future where flourishing – centering both people and the planet - is the aspiration of transdisciplinary and transnational environmental professionals.

AEESP's 2024-2025 Distinguished Lecturer: Professor Lynn Katz

September 2024 - April 2025

Dr. Lynn Katz is Professor and Hussein M. Alharthy Centennial Chair in Civil Engineering at the University of Texas at Austin. She has over thirty years of experience examining the application of aquatic surface chemistry to understanding the fate and transport of contaminants in the environment and toward the development of treatment technologies for contaminated water and soil. Her current research has a strong focus on improving water treatment for underserved communities.

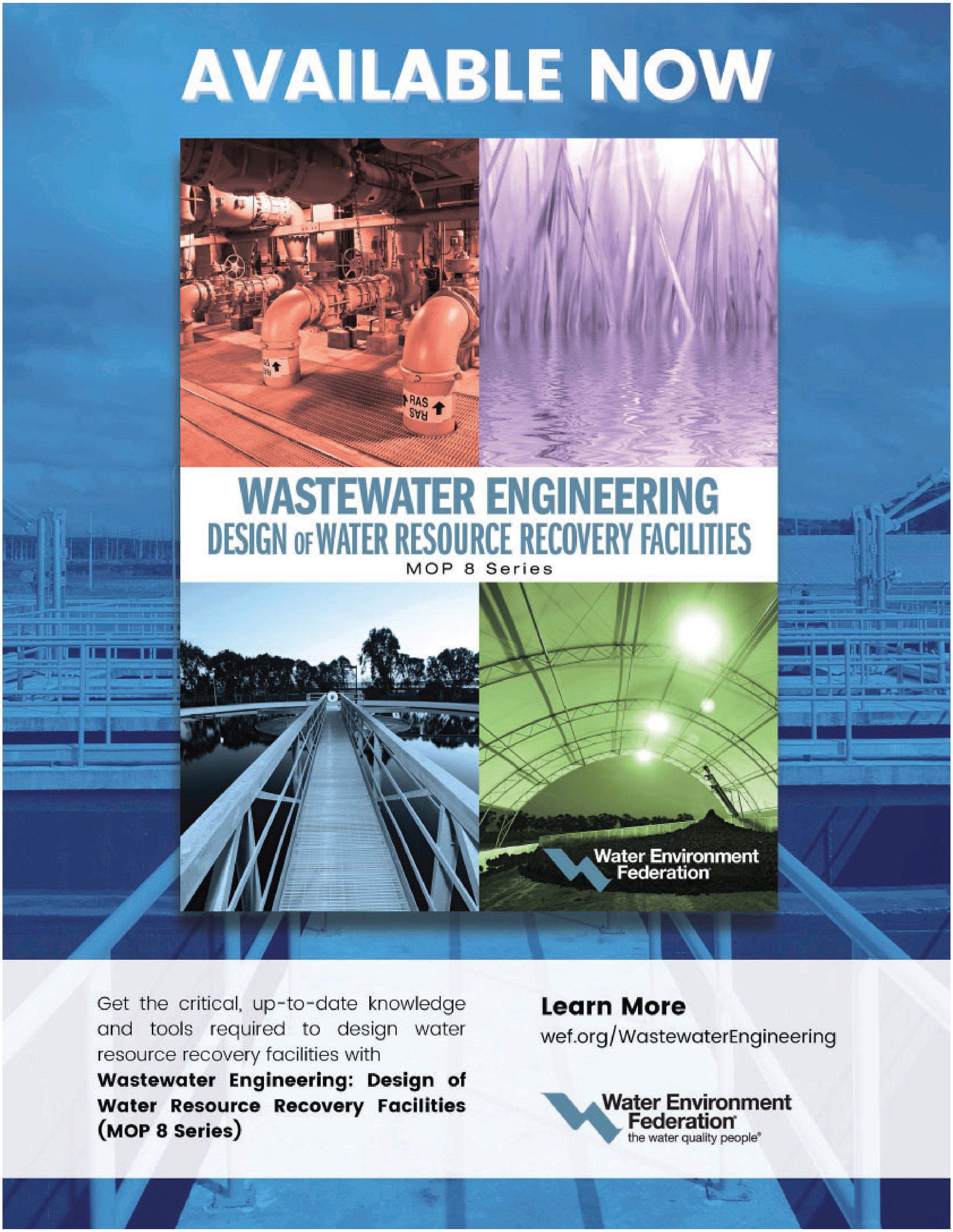
Professor Lynn Katz
University of Texas at Austin

Professor Katz will present two lectures in the 2024-2025 Tour:

Lecture 1: "*Translating Molecular Science to Practical Application in Natural Systems and Engineered Processes*"

Lecture 2: "*Drinking Water Quality in Rural Alaska: Addressing Socioeconomic Challenges from Molecular Level Insights*"

For more information, visit the AEESP Foundation's website:
https://www.aeespfoundation.org/distinguished-lecture-series/2024-25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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	$130
Associate Professors	$100
Assistant Professors	$65
Affiliate Members	$75
Students and Post-docs	$20

Members residing in low and middle income countries as identified by the World Bank may request a discount by contacting the Business Office.

Applying for regular membership is made by submtting a completed application form and a brief, 2 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 $75.

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 write the Secretary, President, or Business Office.

Ready to join? You can apply for membership online!
https://aeesp.org/membership

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

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Association of Environmental Engineering and Science Professors Newsletter

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