

AEESP Newsletter

Published three times yearly by the Association of Environmental Engineering & Science Professors

July 2023

VOLUME 58 No. 2

3 AEESP News
14 Member News

Highlights

President's Letter	Page 1
Spotlight	Page 13
Faculty Appointments	Page 16
Announcements	Page 19

Need to renew your 2023 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 newsletter to Kyle Doudrick at kdoudrick@nd.edu. The next newsletter will appear in Autumn 2023.

President's Letter

By ALLISON MACKAY
The Ohio State University



It is wonderful to close out my last letter as President after seeing so many of you in Boston at the 2023 AEESP Research and Education Conference. A huge THANK YOU! to our New England col-

leagues at Northeastern, UMass – Amherst, Tufts, MIT, UConn, URI and Maine for their thoughtful organization of so many different activities to engage with each other. I hope those of you in attendance had opportunity to dialogue about the impacts of environmental engineering and science in our changing world, to build professional skills for your success, and to strengthen old and new friendships.

I share some final thoughts from my personal activities with AEESP in this past year.

AEESP is well-positioned to achieve the cross-cutting strategic goal of a commitment to inclusion and diversity across all operational and mission areas of the organization. This past year was a time for learning as part of the ACCESS+ (Amplifying the Alliance to Catalyze Change for Equity in STEM Success) learning community. I and AEESP Vice President Lee Blaney met monthly and for a two-day convening with leaders of other STEM professional societies to learn new skills and to share notes. I was grateful to have re-affirmed the already strong attention to inclusion in our organization as we learned more about other organizations' progress.

I am excited that the ACCESS+ program was focused on transferring specific tactics that AEESP can implement to elevate inclusive practices across our operations. The first step for AEESP was a

detailed survey by the Membership and Demographics Committee to understand the characteristics of our membership. A paper is in development to expand on the survey highlights presented by Lee at the Conference. Over the next several months, AEESP will transition to action steps by engaging an ACCESS+ facilitator to develop, implement and strengthen inclusive practices as they are unique to individual AEESP committees.

A second benefit of the ACCESS+ learning community was the opportunity to compare operational notes with other, similarly-structured, professional societies. AEESP benefits greatly from the strong commitment to volunteerism in our organization. The most public manifestations are the rotating cadre of biennial conference organizers and the formal committee membership. Many others of you provide time as mentors, workshop and webinar presenters, and thought-partners to other members of the organization. These contributions allow AEESP to bring value to members at very low-cost while remaining vibrant as an organization. AEESP will continue to provide better support for organizational and member goals through insights from cross-fertilization with other professional STEM societies about governance, membership, conferences and communications.

I was honored to spend the past four years working with the AEESP Board members and Committees to sustain ongoing initiatives and to develop new initiatives that support the professional success and impact of our environmental engineering and science members. I am proud of notable outcomes in this past year for AEESP to advance the mission thrusts of:

- programming for profession success of members through a robust awards program that showed increased participation and candidate diversity un-

continued on next page



The AEESP Newsletter is published three times a year in February, July, and October by the Association of Environmental Engineering and Science Professors. Issues are published online at:

www.aeesp.org/news/newsletter-archive

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

Kyle Doudrick, AEESP Newsletter Editor
Civil and Environmental
Engineering and Earth Sciences
University of Notre Dame
156 Fitzpatrick Hall
Notre Dame, IN 46556
phone: 574-631-0305
email: kdoudrick@nd.edu

Letters to the president may be sent to:

Allison MacKay
Civil, Environmental, and Geodetic
Engineering
The Ohio State University
470 Hitchcock Hall
2070 Neil Avenue
Columbus, OH 43210
phone: 614-247-7652
email: mackay.49@osu.edu

Please send address changes to:

Brian Schorr
AEESP Business Office
P.O. Box 11074
Alexandria, VA 22312
phone: (202) 640-6591
email: bschorr@aeesp.org

AEESP Membership Application online:

www.aeesp.org/membership

der the leadership of the Awards Committee;

- increasing equitable societal impact of scholarship and creative expression through a concerted effort to advance environmental engineering and science scholars to science advisory boards under the leadership of the Government Affairs Committee and to create a learning community for best practices of community-engaged research under the leadership of an ad hoc task force and the SPACES grant team with whom AEESP is partnered, and
- reimaging skills training for environmental engineers and scientists to provide solutions to complex regional, national and global problems through examination of needed student proficiencies through the lens of the NASEM Grand Challenges in Environmental Engineering under the leadership of the Education Committee.

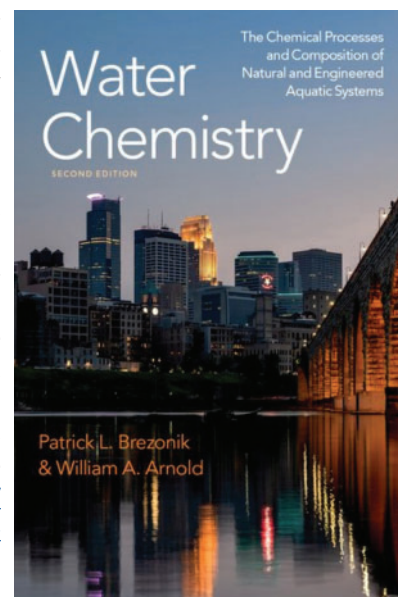
In closing, I thank everyone who provided contributions to AEESP programming and activities this past year. I welcome and provide my full support for our new AEESP Board members José Cerrato (University of New Mexico), Belinda Sturm (University of Kansas), and Huichun (Judy) Zhang (Case Western Reserve University) and the incoming executive team of Debora Rodrigues (University of Houston) and Lee Blaney (University of Maryland Baltimore County).

Sincerely,

Allison MacKay, PhD, BCEEM
AEESP President, 2022-2023

New Water Chemistry Book

The second edition of *Water Chemistry* by Patrick Brezonik and William Arnold (University of Minnesota) was published by Oxford University Press late last summer, too late for fall 2022 classes but in plenty time for 2023 classes. Unique in its broad coverage of the field, the book provides an up-to-date and thorough treatment of traditional inorganic chemical equilibrium and kinetic processes, with emphasis on using publicly available, user-friendly software to solve problems. In addition, the chemical behavior of important organic contaminants and the composition and behavior of natural organic matter are given considerable attention. The book assumes only limited knowledge of organic chemistry and covers the fundamentals that enable students to understand current research in the field. Special efforts were made to include the latest findings on chemical disinfection, aquatic photochemistry, sorption and surface complexation modeling, and mineral weathering processes. New topics include nanoparticle chemistry, coastal hypoxia, geochemical inferences from natural abundance variations in elemental isotopes, and landscape-scale chemical inferences made possible by large databases (role of “big data” in water chemistry). Climate change effects on carbonate chemistry, including ocean acidification and CO₂ sequestration by silicate minerals, are addressed in several chapters. The book is available in both hard and (much less expensive) soft-cover versions, as well as in e-book format. Finally, a publicly available companion website (check it out at <https://global.oup.com/us/companion-websites/9780197651896/>) contains much useful information for both students and instructors.



Thank You from 2023 Research and Education Conference

By Phil Larese-Casanova and Amy Mueller, Conference Chairs, Northeastern University

The Conference Organizing Team wishes to thank all volunteers, contributors, and participants who made the 2023 Research and Education Conference successful. Over 800 participants visited our campus in Boston to enjoy three and a half days of conference events. We were blessed with beautiful weather, cooperative public transportation, and an amazing community of engaged individuals which really made the week.

Following the conference theme, “Responding Together to Global Challenges”, over 700 participants shared their research insights during two days of technical talks and poster presentations. Plenary panel discussion speakers from government, investors, public policy, and social sciences gave their perceptions on how environmental engineers and scientists can further engage in multidisciplinary research within an increasingly interconnected world. Our keynote speaker, Prof. Paul Anastas of Yale University, gave an inspiring message of how society and industry can operate under new paradigms of environmental and global stewardship.

Students and faculty were treated to 21 workshops spread across the three conference days. Students also benefited from connect-

ing with industry during the Career Fair, after hearing career advice in the Student & Postdoc Services Committee’s workshop “Careers in Environmental Engineering & Science after Graduate School”. We would like to thank NSF representatives Mamadou Diallo, Jeanne VanBriesen, and Branfi Schottel for giving us their time and guidance throughout the week in their luncheon, workshop, and office hours. At Wednesday’s Gala at the New England Aquarium, Debora Rodriguez and Allison MacKay acknowledged many AEESP members for their distinguished careers and service. Participants also enjoyed their choice of five field trips on an extra day across a variety of green infrastructure, energy, air quality, and water quality projects.

Thank you to all volunteers from our partner institutions UMass Amherst, MIT, Tufts, University of New Hampshire, The University of Rhode Island, The University of Maine, and University of Connecticut. Finally, we would like to take one last chance to thank our sponsors including Geosyntec, Aerodyne Research, and Wilbur Technical Services (Silver level); ACS Environmental Science & Technology, RSC Environmental Sciences, Tetra Tech, and The Water Research Foundation (Bronze level); grant funding from NSF and NIEHS; and Northeastern University. This support was vital to making our conference a success!



Report from the Summer 2023 AEESP Board Meeting

Dr. Lee Blaney AEESP Vice President, University of Maryland Baltimore County

The AEESP Board of Directors held an in-person meeting at Northeastern University (Boston, MA) on June 19, 2023. Most Board members were present on site for the 2023 AEESP Research & Education Conference, which commenced the following day. The meeting began with Mira Olson (Secretary) leading the review and approval of minutes from our virtual Board meeting on February 24, 2023.

Brian Schorr (Executive Administrator) provided the Business Office report. He confirmed that our general membership has remained steady in the 12 months between the 2022 conference at Washington University in St. Louis and the 2023 conference at Northeastern University. We have 880 members in good standing. The Board discussed the need to recruit more Sustaining Members from industry and consulting firms. We will work with AEESP committees to develop the value proposition for Sustaining Members and reach out to young industry professionals with recent connections to AEESP. If you collaborate with or know potential industrial partners that we could attract as new Sustaining Members, we encourage you to reach out to Debora F. Rodrigues (President-Elect; dfrigiro@central.uh.edu) or Karl Linden (Chair of the Sustaining Members Committee; karl.linden@colorado.edu).

Treavor Boyer (Treasurer) reported on the financial position of AEESP. While we are in a good position right now, our management costs have increased. In our next Board meeting, we will consider options to balance the increasing operational costs with revenue from memberships and our biannual conference. These discussions will aim to ensure the long-term financial sustainability of AEESP.

Before our meeting, the Board reviewed committee reports. We thank the committee chairs for their efforts over the past quarter. With guidance from Allison MacKay (President), committee chairs were asked to report on (i) the progress made by their committee throughout the 2022-23 academic year, (ii) committee activities at the 2023 AEESP Research & Education Conference, and (iii) their ideas and plans for next year. In particular, the Board noted the exceptional efforts of the Government Affairs Committee, led by Colleen Naughton (University of California, Merced) and Zhiyong Jason Ren (Princeton University), to assist with 12 nominations of AEESP members to the EPA Science Advisory Committee on Chemicals and EPA Science Advisory Board.

The information in the committee reports helps us to evaluate progress towards the goals outlined in our Strategic Plan. To bet-



*Left to right: Lee Blaney, Donna Fennell, Susan Masten, Claudia Gunsch, Kara Nelson, Junko Munakata Marr, Mira Olson, Debora Frigi Rodrigues, Allison MacKay, Brian Schorr
Not pictured: Treavor Boyer*

ter communicate those efforts to all members, the Board decided to ask committee chairs to write a Newsletter article on committee activities once per year. We also formed a taskforce, comprised of Debora F. Rodrigues (President-Elect), Mira Olson (Secretary), and Susan Masten (Chief Information Officer), to develop a standard framework for recruiting new members to AEESP committees. This effort will complement other recent changes to set member terms and develop succession plans within each committee.

Mira Olson (Secretary) reported that 260 members voted in the recent AEESP Board election. We are excited to welcome new Board members, José Cerrato (University of New Mexico), Belinda Sturm (University of Kansas), and Huichun (Judy) Zhang (Case Western Reserve University), at our next meeting. We also thank Andres Clarens (University of Virginia), Liv Haselbach (Lamar University), and W. Andrew Jackson (Texas Tech University) for their continued contributions to AEESP. We also discussed opportunities to improve Board representation of the full membership. A taskforce of Lee Blaney (Vice President), Donna Fennell (Board member), and Kara Nelson (Board member) will explore this issue before our next meeting.

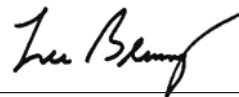
Phil Larese-Casanova and Amy Mueller, both from Northeastern University, joined us to give an update ahead of the 2023 AEESP Research and Education Conference. We thanked them for their extraordinary efforts to put together an exciting program of workshops, mentoring sessions, keynotes, NSF office hours, panels, presentations, and social gatherings throughout the three-day conference. We can't wait for the next conference in 2025!

Allison MacKay (President) and Lee Blaney (Vice President) provided a brief report on their participation in the recent ACCESS+ Convening at Duke University. ACCESS+ is funded by an NSF ADVANCE Partnership grant to support professional societies with efforts to improve diversity, equity, and inclusion. AEESP joined ACCESS+ in 2022, and we have benefitted from the instructional programming, expert guidance and training, and comradery and lessons learned from other professional societies. In particular, our participation in ACCESS+ influenced recent changes to the demographics survey deployed during the membership renewal process. We reported on that effort during the Convening and appreciated that many other societies were pursuing similar activities.

Debora F. Rodrigues (President-Elect) described her vision and plans for the 2023-24 academic year and solicited input from the Board. She plans to focus on addressing Strategic Plan Goals centered on "developing resources for members to effectively communicate their creative expression to our stakeholders and communities" and "increasing our reach to those that do not currently participate in the development of innovative solutions in environmental engineering and science". Stay tuned for updates on her vision and plans in upcoming Newsletter articles.

Our next Board meeting is scheduled for September 6-8, 2023, at Drexel University. Special thanks to Mira Olson (Secretary) for hosting us in Philadelphia, PA.

Respectfully reported by Lee Blaney,



Join AEESP at WEFTEC 2023!

McCormick Place · Chicago, IL · September 30 – October 4, 2023

WEFTEC Master Lecture: Embracing the Imposter Among Us: How Interdisciplinary and Intersectional Identities Are an Asset

Dr. Belinda Sturm

Monday, October 2; 1:30 pm CT

Organized by WEF in collaboration with AEESP and AAES



AEESP Annual Meet and Greet

Meet incoming AEESP President Dr. Debora Frigi Rodrigues

Innovation Pavilion

Tuesday, October 3; 4 pm CT

Sponsored by Carollo Engineers

Organized by WEF

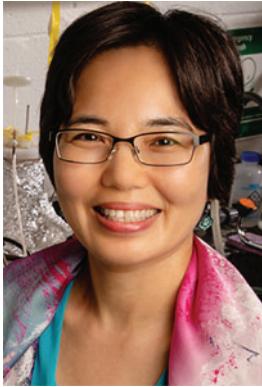


*WEFTEC registration required for all AEESP events:

<https://www.weftec.org/attend/2023-attendee-registration/>

2023 AEESP Award Recipients

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



Dear AEESP members:

In summer of 2022, I was asked to oversee a large and diverse portfolio of AEESP recognition for ALL members. I reflected on 16 years ago when I was among the two recipients of the Outstanding Doctoral Dissertation Award. I still remember how this award gave me tremendous confidence in starting my independent career at the University of Illinois. I never thought that one

day, I would succeed Nancy Love, the Chair of the Awards Committee at that time. Now it is my turn to serve our evolving profession. With extensive discussion among the committee members and AEESP members from various institutions and backgrounds, we decided that diversity and inclusion can only be achieved through democratizing the nomination process. For many AEESP faculty members, the previous nomination process was out of reach due to its complexity and lack of mentoring. The Awards Committee has started to implement standardization and simplification of the nominations. Please pay attention to the instructions for each nomination. We also established an Award Mentoring Committee, whose membership will be posted on the AEESP website. If you need guidance on the nomination process, please contact members of this committee.

In a year, our committee has made terrific progress. For the 2023 nomination cycle, we have received the highest number of excellent nominations since 2015, when we tracked the data. We also doubled the number of nominations for the 2022 nomination cycle. The nominations were not only of exceptional quality but also reflected the diverse contribution of AEESP members. I would like to thank all nominators and letter writers who have put so much effort into preparing these nominations. Twenty-one Awards Committee members (David Ladner, Morton Barlaz, Jacimaria Batista, JoAnn Silverstein, Deb A. Niemeier, Gregory Characklis, Natalie Capiro, Kaoru Ikuma, Na Wei, Kay Millerick, Shannon Capps, Mike Dodd, Binbin Wang, Ro Cusick, Kevin Orner, Jeseth Delgado Vela, Karl Rockne, Debra Reinhart, Glen Daigger, Charles Bott, and Lynn Katz) 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.

Education, Research, and Practice Awards:

Steven K. Dentel/AEESP Award for Global Outreach:

Evan Thomas, Professor, University of Colorado Boulder

In recognition of the impact of educational programming as Director of the University of Colorado Mortenson Center in Global Engineering that has supported over 200 students working in 20 countries, including Rwanda, Ethiopia, Kenya, and the Democratic Republic of Congo, and the life-saving interventions he has brought to millions of East African people through public health programming and his company Virridy (formerly SweetSense Inc.)



Perry L. McCarty/AEESP Founders' Award:

Richard (Dick) Luthy, Silas H. Palmer Professor of Civil and Environmental Engineering, Stanford University

In recognition of Dr. Luthy's distinguished career that includes an outstanding record of contributions to the profession with highlights of being a former Chair of the National Academies Water Science and Technology Board and member of many advisory boards and councils for academic departments and the Water Environment Research Foundation and Water Research Foundation. Dr. Luthy has provided sustained leadership to the AEESP organization through service as a past AEESP President, the inaugural Chair of the AEESP Foundation Board, and an AEESP Distinguished Lecturer.



**Charles R. O'Melia AEESP Distinguished Educator Award:
Dr. Alan Stone, Professor of Environmental Engineering, Johns Hopkins University**



In recognition of seminal contributions to the field of environmental aquatic chemistry using equilibrium speciation to understand the mechanisms and rates of organic reactions on mineral surfaces. Dr. Stone's inspirational mentoring has influenced the professional careers of his students and postdocs,

with ten currently holding faculty positions. His dedication as a science educator has extended to the public for more than 10 years through his monthly "Science Demonstrations" at Rawlings Conservatory in Baltimore.

**Walter J. Weber, Jr. AEESP Frontier in Research Award:
Dr. Jaehong Kim, Henry P. Becton Sr. Professor of Chemical Engineering, Yale University**



In recognition of his highly innovative, break-through research on the environmental implication of carbon nanomaterials, application of photo/electrocatalytic nanomaterials and single-atom catalysts for advanced oxidation, self-healing membranes, and solar-based water

treatment technologies for the developing world applications, in addition to visionary perspective articles that reshaped the field of environmental engineering.

**AEESP Award for Outstanding Teaching in Environmental Engineering & Science:
Dr. Erin Surdo, Teaching Assistant, Professor and Director of Undergraduate Studies in Environmental Engineering, University of Minnesota**

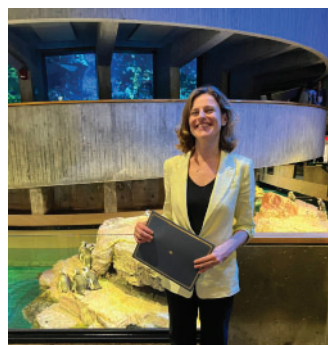
Dr. Erin Surdo, Teaching Assistant Professor & Director of Undergraduate Studies in Environmental Engineering, University of Minnesota.



In recognition of Dr. Surdo's contributions as a teacher, academic advisor, and advocate of environmental engineering education. She ensures that all students in the University of Minnesota program are welcomed, supported, and fully understand the opportunities and requirements in our department. Her presence and contributions to curriculum development elevate the Environmental Engineering Program at the University of Minnesota.

**AEESP Outstanding Contribution to Environmental Engineering & Science Education Award:
Dr. Marisa Chrysochoou, Professor of Civil and Environmental Engineering, University of Connecticut**

In recognition of Dr. Chrysochoou's leadership in starting the Brownfields Initiative that connects students with local municipalities, state agencies, and consulting companies to help communities develop EPA Brownfields grant proposals and, in her leadership, to make civil and environmental engineering education more inclusive for neurodiverse learners by leading an NSF RED grant.



**AEESP Outstanding Publication Award:
Drs. Chenyang (Sunny) Jiang, Rachel Noble, and
Weiping Chu**



Sunny Jiang

For their paper "Human adenoviruses and coliphages in urban runoff-impacted coastal waters of Southern California." *Applied and Environmental Microbiology*, Jan. 2001, Vol. 67 (1), 179-184. DOI: 10.1128/AEM.67.1.179-184.2001.

In recognition of the impacts of findings on the research field, policy, and human health protection from research that showed coliphage

to be a better indicator of human virus contamination in recreational waters, thereby challenging the EPA recreational water quality policy that uses fecal indicator bacteria as the primary parameter for monitoring marine recreational water quality and for the assessment of human health risks.

**AEESP/Mary Ann Liebert Award for Publication
Excellence in Environmental Engineering
Science:**

**Drs. Marcos Miranda, Jeffrey Bielicki, Soomin
Chun, and Chin-Min (Jason) Cheng**



Jeffrey Bielicki (left) and
Marcos Miranda (right)

For their paper, "Recovering Rare Earth Elements from Coal Mine Drainage Using Industrial Byproducts: Environmental and Economic Consequences." *Environmental Engineering Science*, 2022, Vol. 39, Issue 9.

In recognition of a novel technological approach to recover valuable elements from industrial waste streams that couples a comprehensive experimental study with a complete

life cycle assessment, a pairing that is rarely seen in research papers and yet powerful in far reaching implications. The paper is exceptionally well written, clearly conveying the significance of the work and the broader impacts.

**Frederick George Pohland Medal 2023 Recipient:
Dr. Berrin Tansel, Professor of Environmental
Engineering, Florida International University**

In recognition of advancing knowledge and skillsets for practicing engineers through book authorship, advancement of women in STEM, and service to professional societies, including ABET and the National Council of Examiners for Engineering and Surveying. Dr. Tansel's research advances are widely known in the areas of solid and hazardous waste management, oil spill response, contaminant fate, wastewater treatment, desalination, and drinking water treatment.



Student Awards:

**AEESP Outstanding Doctoral Dissertation
Awards:**

**The inaugural Edward J. Bouwer AEESP
Outstanding Doctoral Dissertation Award:
Dr. Stephany Wei, University of Washington with
Advisor Dr. Mari Winkler**

Dissertation Title: "Applications of Aerobic Granular Sludge and Source-Separated Urine for Enhanced Nutrient Removal and Recovery"

In recognition of dissertation research that provides a roadmap for intensifying existing wastewater infrastructure with granular sludge and the option to recover phosphorus without anaerobic digestion. Through several professional outreach activities, this dissertation also provided technology transfer to the scientific communities, local utilities, and engineering practices.



Mari Winkler (right) pictured
with Pat Bouwer (left)
(Stephany Wei absent)

**Jacobs Engineering Group/AEESP Outstanding Doctoral Dissertation Award:
Dr. Cody Ritt, Yale University with Advisor Dr. Menachem Elimelech**



Cody Ritt (right) pictured with Menachem Elimelech (left)

Dissertation Title: "Elucidating the Mechanisms of Water and Ion Transport Under Nanoconfinement"

In recognition of advances in transport phenomena unique to extremely confined environments that demonstrate the innate importance of electrostatic interactions toward the selectivity and intrinsic properties of nanoporous materials while also elucidating the role of defects in novel material-based membranes.

These findings, relevant to real-world water purification technologies, are reported in the Proceedings of the National Academy of Sciences (PNAS), Science Advances, and ACS Nano.

**Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award:
Dr. Weiyi Pan, Washington University in St. Louis with Advisor Dr. Dan Giammar**



Weiyi Pan (left) pictured with Dan Giammar (right)

Dissertation Title: "Using Aquatic Chemistry to Understand Lead Concentrations in Drinking Water"

In recognition of advances in lead chemistry regarding the formation and stability of lead corrosion products in the +4 oxidation state that are important to predict and control lead concentrations in drinking water. This work also advanced point-of-use water filters as passive monitoring devices, and reasons for their poor performance for particular water compositions.

**Two Outstanding Doctoral Award Honorable Mentions:
Dr. Jinyu Gao, University of California, Riverside
Advised by Dr. Jinyong Liu**

Dissertation entitled: New Mechanistic Insights into Per- and Polyfluoroalkyl Substances (PFASs) Degradation with UV/Sulfite Treatment

**Dr. Ting Wang, Georgia Tech
Advised by Dr. Xing Xie**

Dissertation entitled: Operando Investigation on Locally Enhanced Electric Field Treatment (LEEFT) for Bacteria Inactivation Using Lab-on-Chip Devices.

**AEESP Master's Thesis Awards:
Alma Rocha, San Diego State University
Co-Advised by Drs. Natalie Mladenov and Matthew Verbyla**

Thesis Title: "Detection and persistence of SARS-CoV-2 in wastewater and natural waters."



In recognition of strategies to advance wastewater surveillance in underserved communities that lack sewer connections. The use of a viral fecal indicator, pepper mild mottle virus, to normalize coronavirus loadings in the Tijuana River receiving untreated sewage was validated as an alternate monitoring technique, when compared with the number of reported COVID-19 cases in the local Tijuana population.

Kartik Bhagat, Arizona State University, Advised by Dr. François Perreault

Thesis Title: "Elucidating the Role of Ultraviolet Weathering and Biofilm Formation on the Adsorption of Micropollutants onto Microplastics."



In recognition of advances to simulate environmental aging of microplastics using an accelerated UV aging protocol. Additional studies showed that UV aging increased the adsorption of organic contaminants by microplastics and that biofouling can also lead to increased organic contaminant adsorption by microplastics, particularly for cationic contaminants.

Virginia Tech Student Travel Award:

This year's award recipient is Tolulope Odimayomi.

**Best Student Poster Award:**

Congratulations to Md. Arafat Ali Shagor (University at Buffalo) for winning this year's Best Student Poster Contest on the National Institute of Environmental Health Sciences-funded work on PFAS treatment using graphene-iron nanohybrids.

AEESP-AAEES Joint Awards:

Excellence in Environmental Engineering and Science Education (E4): Yuefeng Xie, Professor of Environmental Engineering, Penn State University

W. Wesley Eckenfelder Graduate Research Award: Anna Kogler, Stanford University (Advised by William Tarpeh)

Paul F. Boulos Excellence in Computational Hydraulics/Hydrology Awards:

Tom Willem Postma, Princeton University (Nominated by Catherine Peters and Michael Celia); and Zhaocheng Wang, Arizona State University (Nominated by Enrique Vivoni)

William Brewster Snow Award: Josh Fuchs, The Ohio State University (Nominated by Linda Weavers)

AEESP 2023 Distinguished Service Awards:

Allison MacKay: President and Board Member

Junko Munakata Marr: Chief Technology Officer and Board Member

Treavor Boyer: Treasurer and Board Member

Phil Larese-Casanova: Chair of the AEESP Research and Education Conference Organizing Committee

Amy Mueller: Co-Chair of the AEESP Research and Education Conference

Stephanie Bolyard: AEESP Foundation Secretary and Board Member

Karl Rockne: AEESP Foundation Board Member



Left to right: Allison MacKay, Cliff Davidson, Junko Munakata Marr, Mary Jo Kirisits, Natalie Cápiro, Nicole Fahrenfeld, Karl Rockne, Debora Frigi Rodrigues

continued on next page

William Ball: AEESP Foundation Investment Advisory Committee Chair

Brooke Mayer: AEESP Master's Thesis Sub-Committee Chair (2022)

Ro Cusick: AEESP Master's Thesis Sub-Committee Chair (2023)

Natalie Cápiro: AEESP Outstanding Doctoral Dissertation Sub-Committee Chair

Nirupam Aich: Internet Resources Committee Chair

Mark Krzmarzick: Publications Committee Chair

W. Andrew Jackson: AEESP Environmental Engineering Program Leaders Co-Chair

Mary Jo Kirisits: Lecturers Committee Chair

Jeffrey Cunningham: Conference Site Selection Committee Chair

Nicole Fahrenfeld: Membership and Demographics Committee Chair

Cliff Davidson: AEESP Distinguished Lecturer (2022-2023)



Nirupam Aich



William Ball



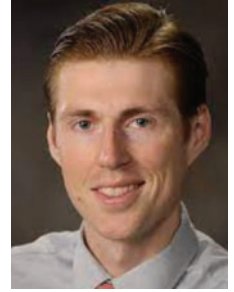
Stephanie Bolyard



Trevor Boyer



Jeffrey Cunningham



Ro Cusick



W. Andrew Jackson



Mark Krzmarzick



Phil Larese-Casanova



Brooke Mayer



Amy Mueller

2023 AEESP Fellows:

AEESP Wishes to congratulate the following AEESP Fellows inducted at this year's Awards Ceremony:



Dr. Joel J. Ducoste
North Carolina State University



Dr. Karl G. Linden
University of Colorado Boulder



Dr. Richard G. Luthy
Stanford University

2023 AEESP Lifetime Members:

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

- **Thomas Holsen**, Clarkson University
- **Clinton Richardson**, New Mexico Tech
- **David Sabatini**, University of Oklahoma
- **Chikashi Sato**, Idaho State University
- **John Tobiason**, University of Massachusetts, Amherst

Remarks made at the presentation of the inaugural Edward J. Bower/AEESP Outstanding Doctoral Dissertation Award at the AEESP Awards Reception in Boston - June 21, 2023

By Patricia G. Bower



[Note from Jennifer G. Becker, AEESP Foundation Chair: Patricia (Pat) G. Bower is the widow of Edward (Ed) J. Bower. It was a great honor to have Pat present the inaugural Edward J. Bower/AEESP Outstanding Doctoral Dissertation Award at the 2023 AEESP Awards Gala. Because many AEESP members could not attend the 2023 AEESP Research and Education Conference, and others were in attendance but may not have

been able to hear the entire awards presentation, we are sharing Pat's remarks here.]

Thank you for the privilege of being invited here tonight to present this award. I feel like a fish out of water however, as this is Ed's place, not mine. He should be out there, and I shouldn't be up here. It's just wrong... but I am grateful for the honor, and it has been a pleasure to see many familiar faces that I haven't seen in a very long time.

Forty years ago (in 1983), Ed was here on this stage receiving an Outstanding Doctoral Dissertation Award of his own, alongside his faculty advisor, Dr. Perry McCarty. It meant a lot to him. It was an affirmation of the quality of his graduate work; it was a level of national recognition that was so important; and it was a tremendous boost of confidence as he started his career as an academician.

Since then, Ed shared this stage three times as the faculty advisor to PhD students of his own. Then, in 2013, one of Ed's students was the faculty advisor for one of the Doctoral Dissertation Award student recipients. So goes the academic family tree, and after a successful 36-year career, Ed has an extensive one.

It's the very nature of this 'family tree' and Ed's influence in the field that helped me to formulate the idea of a legacy award in his name. I must give credit to Bill Ball as well, as he was the one who suggested this particular organization [AEESP] to me. This organization transcends any particular institution and supports the objectives and betterment of Ed's specific professional and

technical community.

What better place to promote research and recognize his contributions to the field?

So, eighteen months ago, I reached out to Bill Arnold (a Johns Hopkins alumni) - then AEESP President, and he referred me to Jennifer Becker and Brian Schorr. Together, they worked with me over the last year and a half to establish this award and raise funds toward its endowment.

I wanted it to be a student award/recognition, as Ed was so dedicated to his students. There are three main tasks as a professor - Teaching, Research, and Mentoring. About a month before he died, Ed was asked what he was most proud of during his career, and he said it was mentoring students - helping them navigate the rigors of academia and helping them prepare for professional careers of their own. He mentored not only his PhD students, but hundreds of Masters students, and also junior faculty members that he served with on his numerous advisory committees, professional publications and conferences.

After he passed away, I was literally overwhelmed with cards, letters, emails, and phone calls from dozens upon dozens of students and other faculty members whom Ed had influenced or supported in positive ways. It was a facet of his professional life that I was not fully cognizant of, but people wanted to express their thanks and make the family aware.

I want to thank Jennifer and Brian for all the behind-the-scenes work and fund-raising efforts to make this award a reality. I also want to thank all the members of this special community who made personal donations. Without your help, the award would not have been possible. And (I've confirmed this with Jennifer), contrary to what was shown on the AEESP Foundation awards website last night, the Edward J. Bower Outstanding Doctoral Dissertation Award is fully funded!

My congratulations to Stephanie Wei, and to her adviser, Dr. Mari Winkler. May this award be a steppingstone toward a long and successful professional career.

Spotlight: Environmental Engineering Science, AEESP Journal

Mengyan Li (Member of the AEESP Publications Committee), David A. Ladner (Chair of the AEESP Publications Committee)

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 the 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 ([Mid-2023](#)) we shine the spotlight on selected articles from the December 2022 through March 2023 issues of EES. Congratulations to all whose work is highlighted.

[Peng Wan, Xuanning Yang, Qinhua Feng, Shuyu Shi, Baolin Deng, & Lina Zhang \(2022\)](#). Biodegradable Chitosan-Based Membranes for Highly Effective Separation of Emulsified Oil/Water. *Environmental Engineering Science*, 39(12), 907-917. Some plastic materials can be problematic for the environment and society because of pollution created during their manufacture and because of the need for proper end-of-life disposal. Interestingly, many of the devices we use to clean air and water (and thus improve the built and natural environment) are themselves made of plastic components (which may cause harm). Polymeric membranes are a

class of materials that often require toxic solvents during manufacture and then are difficult to recycle or degrade after disposal. Wan et al. (2022) took a step toward more sustainable polymeric membranes by using chitosan as the base material. Chitosan is derived from shrimp and other crustacean shells and is more biodegradable than many petrochemical-derived polymers. It was formed into a membrane using an aqueous alkaline/urea solvent, which is safer than many other solvents. The chitosan membrane flux and fouling performance were less than desirable, but modification with dopamine and tannic acid improved its performance in separating an oil emulsion from water. While still not capable of water fluxes as high as commercial membranes, the chitosan membrane boasts the benefit of being more environmentally friendly and may be cheaper to produce. The stage is set for further development of this promising technology.

[Fei Zhao, Anaïs Gaunin, Matthew E. Verbyla \(2022\)](#). Decay of Viral Indicator T7 Bacteriophage After Repeated Exposures to Chlorine and Heat Treatments. *Environmental Engineering Science*, 39(12), 918-927.

Disinfection is a pivotal procedure safeguarding human and animal health. Re-

cent research has shown that certain RNA viruses and bacteriophages can evolve to develop increased resistance to common disinfection methods like free chlorine and thermal treatment. Zhao et al. (2022) expanded our knowledge about the adaptability of DNA bacteriophages to these same processes using T7 coliphage as a representative species. Batch assays with consecutive exposures to thermal treatment revealed increased resistance as compared to the unexposed strain. This was not the case for parallel tests exposed to free chlorine, suggesting that chlorine-based disinfection may be more reliable than previously thought for inactivating certain types of bacteriophages. While T7 coliphage has traditionally been used as an indicator for enteric viruses in water treatment processes, its adaptability to thermal treatment challenges the suitability of using T7 and other somatic coliphages as sole viral indicators and surrogates for human pathogens in water treatment and other processes.

[Richard J. Weisman, Kirin E. Furst, Celso M. Ferreira \(2023\)](#). Variations in Disinfection-By-Product Precursors Bromide and Total Organic Carbon Among U.S. Watersheds. *Environmental Engineering Science*, 40(3), 85-94.

continued on next page

In Memoriam: Dr. Perry L. McCarty

Silas H. Palmer Professor Emeritus, Stanford University, and AEESP Lifetime Member



Perry L. McCarty, Professor Emeritus and Lifetime AEESP Member Perry McCarty passed away on June 4, 2023. Professor McCarty received a B.S. Degree in civil engineering from Wayne State University (1953), and M.S. (1957) and Sc.D. (1959) degrees in Sanitary Engineering from MIT. He joined Stanford University in 1962. He was one of the world's leading environmental engineers, having created a scientific approach for the biological treatment of water for purification, wastewater reclamation and groundwater treatment that is used worldwide. He pioneered scientific principles for anaerobic digestion in wastewater treatment and contaminant control in aquifers. His outstanding research contributions have formed the basis for significant improvements in water quality, wastewater treatment and reclamation, and groundwater decontamination. Prof. McCarty served as AEESP Distinguished Lecturer in 1984-1985 and the AEESP Master Lecturer at WEFTEC in 2011. In honor of his impact on the field of environmental engineering, the AEESP Founders Award was named in his honor. As such, Prof. McCarty's influence and legacy will live on within AEESP for years to come.

["Spotlight" \(cont.\)](#)

On one hand, disinfection can eliminate microbial pathogens and purify water. On the other hand, this process may produce unintended chemicals, namely disinfection by-products (DBPs), which may pose negative ecological and health effects. Brominated DBPs are of particular concern given their potent toxicity and lack of control measures. Through data mining with nation-wide water quality surveys, Weisman et al. (2023) investigated the occurrence of two important brominated DBP precursors, bromide and total organic carbon (TOC), in public water system (PWS) source waters. Particularly, surface water sources in multiple midwestern and western watersheds (e.g., Texas-Gulf and Rio Grande water-

sheds) had a combination of elevated bromide and dTOC, raising the possibility of brominated DBP formation and thus risk to drinking water consumers in these regions. Temporal differences were also observed and can be attributed to the influence of climate change and other anthropogenic effects. The study highlights the need for PWSs to consider source water type and the specific watershed characteristics when developing DBP control strategies. The findings of this study may also inform policy decisions related to water quality and safety regulations, and could potentially lead to changes in the way that PWSs monitor and manage DBP precursors in their source waters.

Three Environmental Engineering Professors Elected to the U.S. National Academy of Engineering

Dr. Kyle Doudrick AEESP Newsletter Editor, University of Notre Dame

Professors Linsey Marr, John W. Sutherland (AEESP Member), and Paul Westerhoff (AEESP Member) have been elected to the 2023 class of the U.S. National Academy of Engineering (NAE). Election to the NAE is one of the highest professional honors accorded to an engineer. Members have distinguished themselves in business or academic management, in technical positions, as university faculty, or as leaders in government or private engineering organizations.



Linsey Marr has been elected to the NAE "for advancing fundamental knowledge of fate, transport, removal and mitigation of airborne pathogenic viruses." She is a University Distinguished Professor and the Charles P. Lunsford Professor of Civil

and Environmental Engineering at Virginia Tech.

Marr has studied airborne transmission of pathogens since 2009 and helped lead a paradigm shift in our understanding of respiratory virus transmission during the pandemic. Her research blends aerosol science, environmental chemistry, and virology to build fundamental knowledge about the movement and inactivation of viruses in the air. Her

findings, combined with a massive outreach effort, helped overturn 60 years of dogma about pathogen transmission in favor of a more physically accurate understanding. Additionally, her studies on the sources and transformations of engineered nanomaterials in the air have provided the information needed to guide regulatory decisions about nanotechnology.

Marr received her B.S. in engineering science from Harvard University and her M.S. and Ph.D. in civil and environmental engineering from the University of California at Berkeley.



John W. Sutherland has been elected to the NAE "for pioneering research contributions to environmental sustainability in manufacturing and their implementation in industry." Sutherland is professor and Fehsenfeld Family Head of Environmental and Ecological Engineering at Purdue University.

This honor is the culmination of a distinguished career for Sutherland, whose awards include an AEESP/AEES Frederick George Pohland Medal (2022) for

sustained and outstanding efforts to bridge environmental engineering research, education, and practice.

Beginning in the early 1990s, Sutherland pioneered the establishment of the field of sustainable manufacturing, which seeks to maximize the effective use of resources while minimizing environmental impacts. Since then, he has helped to make the environment a well-recognized consideration in the design of products and manufacturing processes and systems. This has enabled leading manufacturers to produce less waste and consume less energy and resources, all while being more economically competitive.

In addition to making environmental sustainability a critical manufacturing consideration, Sutherland has made substantial contributions to engineering education. He has instructed thousands of students in engineering courses and mentored over 100 graduate students. He has published more than 400 papers in various journals and conference proceedings and co-authored a textbook titled, *Statistical Quality Design and Control: Contemporary Concepts and Methods*.

Sutherland received his B.S., M.S., and Ph.D. degrees from the University of Illinois at Urbana-Champaign.

"I am honored and humbled to be elected to the National Academy of Engineering," says Sutherland. "This recognition would not have been possible without my supportive family, fantastic mentors, and amazing students and colleagues. I have also significantly benefited from being in one of the most distinctive academic departments in the country—Purdue EEE. The unique character of EEE has helped many of us make innovative impacts, and in just over ten years we have grown to be one of the largest environmental engineering programs in the nation."

Learn more about EEE's first decade of achievements at bit.ly/eeenews2023.



Paul Westerhoff has been elected to the NAE for "leadership and pioneering research on emerging contaminants assessment and water purification technologies." Westerhoff is Regent Professor and Fulton Chair of Environmental Engineering in the School of Sustainable Engineering at Arizona State University.

Westerhoff has made pioneering advances and key insights at the interface between natural and engineered water systems. His accomplishments have been instrumental in advancing characterization and treatment of organic nitrogen in the environment plus drinking and waste water systems, along with developing methods and providing realistic exposures and emerging applications of engineered nanomaterials in water systems. He developed fluorescence and dialysis techniques to detect and quantify bulk organic nitrogen in water, pioneered fractionation of unique organic nitrogen speciation methods that advanced fundamental understanding of reactive species in base and protein fractions that can form carcinogenic disinfection by-products (DBPs) upon application of chemical oxidants, and worked with treatment plants to identify sources and control strategies to minimize DBP formation and exposure to the public in drinking water or ecosystems in discharged wastewater. He developed analytical strategies to quantify and characterize engineered nanomaterials (ENM) and by applying these techniques to water samples, food, commercial products, and biological tissues, which advanced exposure science to establish baseline human and ecological exposure ENM levels.

Westerhoff's leadership and advisory roles have involved fostering collaborations and partnerships among diverse stakeholders, including academia, industry, and government agencies. Through these collaborations, he has facilitated the exchange of knowledge, resources, and expertise, driving advancements in the field of water research. Furthermore, serving as a department chair, founding school director, vice dean for research, and vice provost for academic affairs, Westerhoff has demonstrated his commitment to academic excellence and institutional growth. His leadership has contributed to the development of dynamic academic programs, research initiatives, and strategic planning efforts within the institution.

Westerhoff received his B.S., M.S., and Ph.D. degrees from Lehigh University, University of Massachusetts at Amherst and University of Colorado at Boulder, respectively.

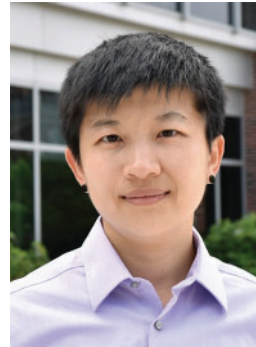
Dr. Wensi Chen Joins Texas A&M University



Dr. Wensi Chen will join Zachry Department of Civil and Environmental Engineering at Texas A&M University in January 2024. Her research group will focus on the design, development, and applications of advanced functional materials to address global challenges related to water, energy, and health. The mission of Chen Group is to combine theoretical insights, material innovation, and process engineering for providing clean drinking water, redefining wastewater as a resource, monitoring environmental health risks, and eventually enabling sustainable communities and circular economies. Before joining Texas A&M, Dr. Chen is a Postdoctoral Associate in the Department of Chemical and Environmental Engineering at Yale University. She obtained her Ph.D. in Environmental Engineering at Georgia Institute of Technology in 2022, where she was awarded Jean-Lou Chameau Research Excellence Award, Best CEE Ph.D. Thesis Award, and Georgia Tech Sigma Xi Best Ph.D. Thesis Award. Prior to that, she received her B.S. in Chemistry at Tsinghua University in China (2017). Dr. Chen is the recipient of the American Chemical Society Environmental Chemistry Graduate Student Award, Georgia Tech Convergence Innovation Competition First Place, and 2021 ES&T Best Paper Award for her research innovation and accomplishments.

Dr. Chen is the recipient of the American Chemical Society Environmental Chemistry Graduate Student Award, Georgia Tech Convergence Innovation Competition First Place, and 2021 ES&T Best Paper Award for her research innovation and accomplishments.

Dr. Yalin Li to Join Rutgers



Dr. Yalin Li will join the Department of Civil and Environmental Engineering at Rutgers University-New Brunswick as an Assistant Professor in Fall 2023. Prior to joining Rutgers, Dr. Li was a Research Scientist in the Institute for Sustainability, Energy, and Environment at the University of Illinois Urbana-Champaign (UIUC)

and affiliated with the Center for Advanced Bioenergy and Bioproducts Innovation. Dr. Li received B. Eng. from Tongji University, M.S. from UIUC, and Ph.D. from Colorado School of Mines, all in Environmental Engineering. With an experimental background on the development of thermochemical and catalytic technologies for resource recovery from wastewater, Dr. Li is interested in advancing the sustainability of water and energy infrastructure through experimentation and sustainable design. Recent research projects span sanitation and resource recovery systems, field-to-market bioeconomy value chain, and the development of open-source platforms for process design, sustainability analyses, as well as decision-making.

University of Southern California Welcomes Three Faculty Members



Dr. Adam Simpson will be joining the Sonny Astani Department of Civil and Environmental Engineering in the Viterbi School of Engineering at the University of Southern California (USC) in Fall 2023. His research will investigate chemical exposures to people through food and water and hopes to study how socioeconomic, race, and ethnicity may interplay with levels of exposures. He has particular interest in 1) the transformation of food biomolecules and biopolymers by chemical disinfection and chemical processing as potentially toxic contaminants, 2) using cellular assays as screening tools to identify major drivers of toxicity found in food and water, and 3) the detection of agrochemicals and their transformation products in foods as potentially toxic contaminants. He received his BS (2016) in Chemi-

cal Engineering from Carnegie Mellon University, and his MS (2018) and PhD (2022) in Civil and Environmental Engineering from Stanford University. Before joining USC, Dr. Simpson was an IDEAL Provostial Fellow for Studies in Race and Ethnicity at Stanford University.

cal Engineering from Carnegie Mellon University, and his MS (2018) and PhD (2022) in Civil and Environmental Engineering from Stanford University. Before joining USC, Dr. Simpson was an IDEAL Provostial Fellow for Studies in Race and Ethnicity at Stanford University.



Dr. Kandis Leslie Gilliard-AbdulAziz will be joining the Sonny Astani Department of Civil and Environmental Engineering in the Viterbi School of Engineering at the University of Southern California (USC) in Fall 2023. Before joining USC, she directed the Sustainable Lab at the University of California, Riverside, between 2018 – 2023. She earned her

Ph.D. in Chemistry from the University of Illinois at Urbana-Champaign and was a Provost postdoctoral fellow in Chemical Engineering at the University of Pennsylvania. She worked previously as a Forensic scientist for the Philadelphia police department and as a Refinery chemist at Sunoco Chemicals in Philadelphia. Dr. Gilliard-AbdulAziz directs the Sustainable Lab, which primarily focuses on developing novel materials for sustainable catalytic processes for waste mitigation. Her primary research focus is novel catalyst development for CO₂ capture and utilization using interdisciplinary expertise from physical chemistry, material science, chemical, and environmental engineering. She is a 2021 Scilog Negative Emissions Science and National Academy Frontiers of Engineering fellow. She was awarded an NSF Career Award in 2022 for developing sorption-enhanced bifunctional catalysts for carbon capture and utilization.



Dr. Jiachen Zhang will be joining the Sonny Astani Department of Civil and Environmental Engineering in the Viterbi School of Engineering at the University of Southern California (USC) in Spring 2024. Her research group will investigate the interactions of air quality, climate, and society, quantifying the impacts of strat-

egies aimed at mitigating climate change and air pollution. Dr. Zhang holds a Ph.D. in Environmental Engineering from USC and a B.S. in Atmospheric Sciences from Peking University. During her doctoral and postdoctoral studies, she utilized and enhanced various climate and air quality models to assess the environmental impacts of adopting solar reflective cool surfaces and promoting the adoption of renewable energy. Currently, Dr. Zhang is the manager of the Mobile Source Technology Assessment and Modeling Section at the California Air Resources Board, where she leads a team of scientists and engineers to conduct original research projects, develop emissions inventory, and inform first-of-their-kind policies aimed at promoting electric vehicles and reducing air pollution emissions. Dr. Zhang has also served as a part-time lecturer at USC, teaching *Air Pollution Fundamentals*. Additionally, she chairs the Entrepreneurship and Innovation Committee of the Chinese-American Engineers and Scientists Association of Southern California and serves as the secretary of the Air & Waste Management Association West Coast Section.

North Carolina State University Department of Civil, Construction, and Environmental Engineering (CCEE) Welcomes Two New Faculty



Dr. Jorge E. San Juan joined NC State in Fall 2023 as an Assistant Professor of CCEE. He will be a part of the Coastal Engineering team within the Environmental, Water Resources, and Coastal Engineering group. Dr. San Juan received his Ph.D. in Civil Engineering from the University of Illinois Urbana-Champaign in 2021. He has a B.Sc. (2012) and M.Sc. (2016) in Civil Engineering from the Universidad de Cartagena (Colombia).

He completed postdoctoral research in the Department of Civil, Environmental, and GeoEngineering at the St. Anthony Fall Lab at the University of Minnesota Twin Cities. His research focuses on the physical and engineering role of coastal ecosystems altering water currents, sediment transport, and the geomorphological evolution of coasts. He seeks to develop nat-

ure-based solutions to improve management, restoration, and conservation practices to build more resilient coastal communities.

Dr. Jacelyn Rice-Boayue also joined NC State CCEE in Fall 2023 as an Assistant Professor. Dr. Rice-Boayue received her Ph.D. from Arizona State University in Civil, Sustainable and Environmental Engineering. She completed postdoctoral research at Duke University within the Center for the Environmental Implications of Nanotechnology. During that time, she also served as a Fulbright Scholar at the International Institute of Water and Environmental Engineering in Burkina Faso. Her research group aims to provide new understanding and solutions to foster sustainable water resource management through modeling, laboratory analysis, and integrated environmental assessment.



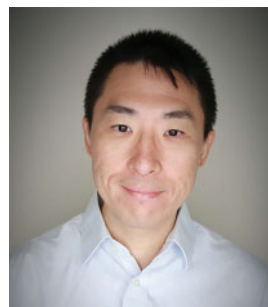
Dr. Yinuo (Noah) Yao to Join Texas A&M University



Dr. Yinuo (Noah) Yao will be joining the Zachary Department of Civil and Environmental Engineering at Texas A&M University as an assistant professor in August 2023. Prior to his position at Texas A&M, he was a Postdoctoral Researcher in the Department of Energy Science and Engineering at Stanford University. He holds his Ph.D. from the Department

of Civil and Environmental Engineering at Stanford University. He received two M.S. degrees in Civil and Environmental Engineering and Computational and Mathematical Engineering from Stanford University. He earned his B.Eng. with First Class Honors in Environmental Engineering from the National University of Singapore. Dr. Yao's research focuses on using a multiscale approach that combines modeling, experiments, and simulations to develop and optimize novel technologies from the lab- to commercial scales, particularly in water and resource recovery, and energy storage.

Dr. Ben Ma to Join University of Nevada, Reno



Dr. Ben Ma will be joining the Department of Civil and Environmental Engineering at University of Nevada, Reno as an Assistant Professor in Fall 2023. His research will focus on understanding and addressing various challenges in water and sanitization services, such as pathogen outbreaks and exposures of chemical contaminants, using innovative technologies and advanced research methods in environmental chemistry and microbiology, molecular biology, and bioinformatics. He worked as a Postdoctoral Associate at the University of Colorado, Boulder to understand the performance and mechanisms of emerging UV technologies for pathogen control, which has been widely recognized within academia and industry and by public health officials in supporting efforts to control the COVID-19 pandemic. Dr. Ma holds a Ph.D. in Environmental Engineering from the University of Minnesota, Twin Cities, a M.S. in Biotechnology from Northwestern University, and a B.E. in Bioengineering from Shanghai Jiao Tong University.

Dr. Florentino De la Cruz will Join the University of North Florida



Dr. Florentino De la Cruz will join the University of North Florida as an Assistant Professor of Environmental Engineering in August 2023. With a research focus on the intersection of Environmental Chemistry and Waste Management, Dr. De la Cruz investigates the chemical and biological processes involved in solid waste treatment and disposal systems. His research contributes to achieving a sustainable built environment,

addressing the crucial role of waste management. One of his current projects involves the compound-level characterization of chemicals, including PFAS, found in leachate and landfill gas, with implications for human health from exposure to contaminated water and air emissions. Additionally, Dr. De la Cruz examines the impact of waste management on climate change, particularly methane emissions from landfills and biomass carbon removal and storage (BiCRS). He holds a B.S. and M.S. in Chemical Engineering with a minor in Environmental Science from the University of the Philippines Los Baños, and a Ph.D. in Environmental Engineering with a minor in Forest Biomaterials from North Carolina State University. Prior to joining the University of North Florida, he served as a Visiting Assistant Professor at Purdue University Environmental and Ecological Engineering. Outside of academia, Dr. De la Cruz enjoys engaging in outdoor activities such as whitewater kayaking, backpacking, and skiing.

Dr. Laura Pincus has Joined George Washington University



Dr. Laura Pincus has joined the George Washington University Department of Chemistry as an Assistant Research Professor (Assistant Professor effective August 2024), bringing to the department her expertise in environmental and green chemistry. Dr. Pincus conducts research at the intersection of chemistry, environmental engineering, and geosciences. Her research examines the complexation of inorganic pollutants by natural and engineered solids using advanced synchrotron spectroscopy techniques in order to understand and control the fate of inorganic pollutants in the environment, develop novel sustainable and selective materials for aqueous contaminant removal, and design new technologies for climate change mitigation.

Prior to joining the faculty at GW, Dr. Pincus was a NSF Earth Sciences Postdoctoral Fellow and a Harry H. Hess Postdoctoral Fellow at Princeton University. Dr. Pincus received her Ph.D. from Yale University and her B.A. in Chemistry and Geology from Middlebury College.



About the Clarke Prize

In October 2023, the Clarke Prize will once again be awarded to a leader in water research, science, technology, or policy in the United States. Clarke Prize laureates come from wide-ranging disciplines including civil and environmental engineering, water science, biological science, health science, political science, physical and chemical science, and public planning and policy.

National Water Research Institute is proud to join the Joan Irvine Smith and Athalie R. I. Clarke Foundation in presenting the 30th Athalie Richardson Irvine Clarke Prize for Outstanding Achievement in Water Science and Technology. To learn about the history of the prize and past laureates, go to <https://www.nwri-usa.org/clarke-prize>.



The National Water Research Institute Proudly Presents the 2023 Clarke Prize Award Ceremony on Saturday, October 21, 2023, at the Beckman Center of the National Academies of Sciences and Engineering in Irvine, California. For information on attending, please scan the QR code below.

A 501c3 nonprofit organization and California Joint Powers Agency, the National Water Research Institute (NWRI) was founded in 1991 by a group of leading Southern California water agencies in partnership with the Joan Irvine Smith and Athalie R. Clarke Foundation. NWRI collaborates with water utilities, regulators, and researchers in innovative ways to help develop new, healthy, and sustainable sources of drinking water.



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 submitting 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.

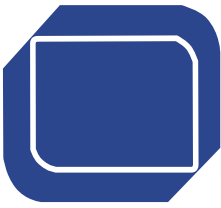
Annual dues for Sustaining Members are \$500. Organizations or individuals desiring more information on Sustaining Membership should write the Secretary, President, or Business Office.

Ready to join? You can apply for membership online!

<https://aeesp.org/membership>

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

Brian Schorr
 AEESP Business Office
 P.O. Box 11074
 Alexandria, VA 22312
 Phone: (202) 640-6591 ext. 309
 email: bschorr@aeesp.org



Association of Environmental Engineering and Science Professors Newsletter

Kyle Doudrick, Newsletter Editor
c/o AEESP Business Office
P.O. Box 11074
Alexandria, VA 22312
Phone: 574-631-0305
Email: kdoudrick@nd.edu

AEESP Officers

President

Allison MacKay
Civil, Environmental, and Geodetic
Engineering
The Ohio State University
470 Hitchcock Hall/2070 Neil Avenue
Columbus, OH 43210
Amherst, MA 01003
Phone: 614-247-7652
Email: mackay.49@osu.edu

President-Elect

Debora Frigi Rodrigues
Civil and Environmental
Engineering
University of Houston
4726 Calhoun Road
Houston, TX 77204
Phone: 713-743-1495
Email: dfrigi@uh.edu

Vice-President

Lee Blaney
Chemical, Biochemical, and
Environmental Engineering
University of Maryland Baltimore
County
1000 Hilltop Circle
Baltimore, MD 21250
Phone: 410-455-8608
Email: blaney@umbc.edu

Secretary

Mira Olson
Architectural and Environmental
Engineering
Drexel University
3141 Chestnut Street
Curtis Hall 251
Philadelphia, PA 19104
Phone: 215-895-2987
Email: mso28@drexel.edu

Treasurer

Treavor Boyer
Sustainable Engineering
and the Built Environment
Arizona State University
P.O. Box 873005
Tempe, AZ 85287
Phone: 480-965-7447
Email: thboyer@asu.edu

Chief Information Officer

Susan Masten
Civil and Environmental Engineering
Michigan State University
3546 Engineering Building
428 S. Shaw Lane
East Lansing, MI 48824
Phone: 517-899-4487
Email: masten@egr.msu.edu

Chief Technology Officer

Junko Munakata Marr
Civil and Environmental Engineering
Colorado School of Mines
Golden, CO 80401
Phone: 303-273-3421
Email: jmmarr@mines.edu

AEESP Board of Directors 2022-23

Lee Blaney, University of Maryland Baltimore County
Treavor Boyer, Arizona State University
Donna Fennell, Rutgers University
Claudia Gunsch, Duke University
Allison MacKay, The Ohio State University
Susan Masten, Michigan State University
Junko Munakata Marr, Colorado School of Mines
Kara Nelson, University of California, Berkeley
Mira Olson, Drexel University
Debora Frigi Rodrigues, University of Houston

AEESP Committee Chairs

Awards - Helen Nguyen, University of Illinois
Conference Planning - Phil Larese-Casanova, Northeastern University
Conference Site Selection - Jeffrey Cunningham, University of South Florida
Education - Karl Rockne, University of Illinois, Chicago
Environmental Engineering Program Leaders - W. Andrew Jackson, Texas Tech University and John Sutherland, Purdue University
Fellows - Amy Childress, University of Southern California
Government Affairs - Jason Ren, Princeton University and Colleen Naughton, University of California, Merced
Internet Resources - Courtney Gardner, Washington State University

Lecturers - Mary Jo Kirisits, University of Texas at Austin
Membership & Demographics - Nicole Fahrenfeldt, Rutgers University
Newsletter - Kyle Doudrick, University of Notre Dame
Nominating - Bill Arnold, University of Minnesota
Publications - David Ladner, Clemson University
Student Postdoc Services - Fabrizio Sabba, Black and Veatch
Sustaining Members Engagement - Karl Linden, University of Colorado, Boulder

AEESP Sustaining Members

Carollo Engineers, P.C., Anton Dapcic, Dallas, TX
[AEESP Meet and Greet Reception at WEFTEC](#)
Hazen and Sawyer, PC, Erik Rosenfeldt, Richmond, VA
[AEESP Lecture at AWWA ACE](#)
Corona Environmental Consulting, LLC, Chad Seidel, Louisville, CO
[AEESP Lecture at AWWA WQTC](#)
Mary Ann Liebert, Inc., Cathia Falvey, New Rochelle, NY
[Publisher, Environmental Engineering Science](#)
ACS ENVR, Xiaoping Pan, Greenville, NC
American Water Works Association, Nancy Sullivan, Denver, CO
Black & Veatch, Bob Hulsey, Kansas City, MO
Environmental Research & Education Foundation, Bryan Staley, Raleigh, NC
Geosyntec Consultants, Julie Konzuk, Toronto, ON, Canada
Jacobs Engineering Group, Russell Ford, Morristown, NJ
National Water Research Institute, Kevin Hardy, Fountain Valley, CA
PEER Consultants, Inc., Lilia A. Abron, Washington, DC
Royal Society of Chemistry, Hannah Kerr, Cambridge, UK
Water Environment Federation, Susan Merther, Alexandria, VA