

#EWRI2025 @ASCE_EWRI

Cool Solutions

TO HOT TOPICS

Welcome to the World Environmental & Water Resources Congress 2025



It is my pleasure to welcome everyone to the 2025 EWRI Congress, Anchorage. I am Sheila Carpenter-vanDijk, Conference Chair. I live in Tampa, Florida so I bring a bit of sunshine from the Sunshine State. Twenty years ago, my husband and I attended this Anchorage Congress. I did not imagine that 20 years later I would be the Conference Chair. The Congress was a success then, and this year promises to be an even greater success. I may be the Conference Chair, but it's just a title. My job was to communicate, come up with ideas, to delegate, and help wherever is needed. Our Congress Organizing Committee as a whole, started planning a year ago. Each of our Committees took on their specific duties and carried them to fruition to make

this Congress a success. I am looking forward to meeting all of you this week during the conference. If you feel so inclined, please find me to say hello. I return all smiles.

This year, we are pleased to have participated with the students at Clark Middle School in an Outreach Event. In this event, many students in seventh and eighth grades had their first introduction as to "what is engineering...what is environmental engineering and what is water resources engineering?" Our committee, as experienced professionals, were happy to share our knowledge and love of our profession with the young folks, some of whom may decide to explore more of what engineering is all about and even choose it as their career.

This year's conference theme is "Cool Solutions to Hot Topics." Climate change is impacting society and the natural and built environment. The 2025 EWRI Congress will foster ideas to develop new strategies to solve interdisciplinary and strategically challenging problems. You can participate in discussions related to the application of science and engineering in complex environments, materials, and processes for all seasons and climates, with unique core competencies related to the Earth's cold regions.

We have more than 500 abstracts scheduled for oral presentation, six Technical Workshops on Sunday, and four Technical Tours. You can view the full conference program at **alaska2025.eventscribe.net** to organize your week. We hope that you will share your ideas and feedback about the EWRI 2025 Anchorage Congress. Be sure to join us at the Sunday night Welcome Reception to mingle and enjoy the local Native Dance Troupe "Yuraq".

In addition to our workshops, tours and presentations, there a lot to do in and around Anchorage. The conference website is a great resource for outings including a Chapter & New Professional Brewery Social on Tuesday evening, May 20. It's free to attend and everyone is welcome. This event is hosted by the Local Activities Council & the New Professionals Council & ASCE Anchorage Younger Members Group. Whether you are new to EWRI or a seasoned member, come get to know fellow members and explore opportunities to get involved with EWRI Committees and Local Chapters. This gathering is all about fun with no official sponsors. It's a bring-your-own-wallet party!

The EWRI Congress features distinguished keynote speakers. The keynote speakers will share their expertise and visions in current water resources and environmental issues at the local, national, and international levels. The keynote speakers include:

Ronald "Ronny" McPherson, P.E.

HDR, Inc. | Alaska Water Business Group - Coastal Lead, Northwest, US and **Eric Adams, P.E., PMP** Program Manager, Jacobs Engineering

"Port of Alaska Modernization Program – Overcoming Extreme Challenges for Critical Infrastructure Renewal"

Thomas Ravens, Ph.D.

Professor, Civil Engineering Department | The University of Alaska Anchorage "Changes in Arctic Coastal Erosion Mechanism and Implications for Coastal Resilience"

Michele Yatchmeneff, Ph.D.

Professor, The University of Alaska Anchorage | Alaska Native Education & Outreach Executive Director "Indigenous Elder, Knowledge Keeper, and Leader-in-Residence Program"

Edmond "Eddie" Packee

Environmental Superintendent, Kinross Fort Knox "Environmental Compliance at the Fort Knox Gold Mine – Building and Maintaining a Compliance Culture"

Sheila Carpenter-vanDijk, M.ASCE, F.EWRI Conference Chair, 2025 EWRI Congress, Anchorage

Conference Organizing Committee



Conference Chair Sheila Carpenter-vanDijk, EI, F.EWRI, M.ASCE



Conference Vice-Chair Karen Kabbes, P.E., ENV SP, BC.WRE, F.ASCE



Technical Co-Chair Scott Struck, Ph.D., F.EWRI, M.ASCE



Technical Co-Chair Sajjad Ahmad, Ph.D., P.E., F.EWRI, F.ASCE



Technical Co-Chair Chad Drummond, P.E., BC.WRE, M.ASCE



Technical Workshop Chair Jianpeng "Jim" Zhou, Ph.D., P.E., F.EWRI

Habib Ahmari, P.E., M.ASCE Eli Araj, P.E., C.Eng, BC.WRE, M.ASCE Rob Chirnside Troy Dorman, Ph.D., P.E., CFM, ENV SP, M.ASCE



Sponsorship Co-Chair Kathlie Jeng Bulloch, Ph.D., P.E., CFM, BC.WRE, F.ASCE

Marsia Geldert-Murphey, P.E., F.ASCE Donald "Greg" Kinney, P.E., PMP, M.ASCE Ronny McPherson, P.E.



Sponsorship Co-Chair Bill Bulloch, P.E., BC.WRE, M.ASCE

Ori Miller, P.E., M.ASCE Daniel Nichols, P.E., CCCA, M.ASCE Stephen Niemeyer, P.E., M.ASCE Thomas O'Connor, P.E., F.ASCE



Local Arrangements Chair Anastasia Chirnside, Ph.D., A.M.ASCE

Charles Penlad, P.E., M.ASCE Greg Scott, P.E., PMP, F.ASCE Zhuping Sheng, Ph.D., HG, P.E., F.ASCE Jennifer Sloan Ziegler, Ph.D., P.E., ENV SP, BC.WRE, M.ASCE Jos van Dijk Vivek Venishetty, Ph.D., Aff.M.ASCE

Schedule-at-a-Glance

Saturday, May 17

8:00 a.m. - 12:00 p.m. 1:00 - 4:00 p.m. 4:00 - 8:00 p.m.

Sunday, May 18

8:00 a.m. - 12:00 p.m. 8:00 a.m. - 5:00 p.m. 10:30 a.m. - 6:00 p.m. 12:00 - 6:30 p.m. 4:00 - 6:00 p.m. 6:30 - 8:00 p.m. 8:30 - 10:30 p.m.

Monday, May 19

7:00 - 8:00 a.m. 7:00 a.m. - 4:00 p.m. 8:00 - 8:30 a.m. 8:30 - 9:00 a.m. 9:00 - 9:45 a.m. 10:00 - 11:30 a.m. 11:30 a.m. - 12:45 p.m. 1:15 - 2:45 p.m. 3:00 - 4:30 p.m. 4:45 - 6:15 p.m. 6:30 - 7:30 p.m.

Tuesday, May 20

7:00 - 8:00 a.m. 7:00 a.m. - 4:00 p.m. 8:15 - 9:45 a.m. 9:00 a.m. - 12:00 p.m. 10:00 - 11:30 a.m. 11:30 a.m. - 12:45 p.m. 1:00 - 4:00 p.m. 1:15 - 2:45 p.m. 3:00 - 4:30 p.m. 4:45 - 6:15 p.m. 6:00 - 9:00 p.m.

Wednesday, May 21

7:00 - 8:00 a.m. 7:00 a.m. - 3:00 p.m. 8:15 - 9:45 a.m. 10:00 - 11:30 a.m. 11:30 a.m. - 12:45 p.m. 1:00 - 2:30 p.m. 1:00 - 5:00 p.m. 2:45 - 4:15 p.m. EWRI Governing Board Meeting EWRI Operations s Manual - Strategic Planning Meeting Joint Meeting of the Tech ExCom & Member Services ExCom

EWRI Strategic Meeting Technical Workshops Social Tour: Summer Dog Sledding Adventure Registration EWRI Governing Board Meeting Welcome Reception WDSA Graduate Students Task Committee Social Event

Coffee and Conversation with the Women-Water Nexus Registration (Closed for lunch from 11:30 a.m - 12:45 p.m.) Welcome & Morning Announcements Recognition of Institute Award Winners Keynote Lecture Concurrent Technical Session I Luncheon with Lunch Keynote Concurrent Technical Session II Concurrent Technical Session III Concurrent Technical Session III Concurrent Technical Session IV AAWRE 20th Anniversary Board-Certified Water Resources Engineer Induction Ceremony & Meet and Greet

Council Awards & Breakfast Registration (Closed for lunch from 11:30 a.m. - 12:45 p.m.) Concurrent Technical Session V Technical Tour: University of Alaska Anchorage - Arctic Wave Flume Project Tour Concurrent Technical Session VI Luncheon with Lunch Keynote Technical Tour: William Jack Hernandez Sport Fish Hatchery Tour Concurrent Technical Session VII Concurrent Technical Session VIII Concurrent Technical Session VIII Concurrent Technical Session IX Chapter & New Professional Brewery Social

Council Awards & Breakfast Registration (Closed for lunch from 11:30 a.m. - 12:45 p.m.) Concurrent Technical Session X Concurrent Technical Session XI Luncheon with Lunch Keynote Concurrent Technical Session XII Technical Tour: AWWU Ship Creek Water Treatment Facility & Energy Recovery Station Concurrent Technical Session XIII While we do not anticipate any issues, in the event of activity from Mount Spurr, we have N95 masks available at the registration desk. Some helpful tips to consider during a volcanic event:

During Volcanic Ash event:

- If possible, stay indoors until local health officials advise it is safe to go outside.
- Wear long-sleeved shirts and long pants.
- Use goggles to protect your eyes and eyeglasses instead of contact lenses.
- Use a dust mask or hold a damp cloth over your face to assist in breathing.
- If possible, do not drive, ash is very hard on vehicles.
- Keep windows and doors closed as much as possible.
- Listen to local officials for important information.

After a Volcanic Ash event:

- When outside, protect yourself from the fine, glassy particles of volcanic ash.
- Cover your mouth and nose.
- Wear goggles to protect your eyes.
- Wear eyeglasses instead of contact lenses.
- Keep skin covered to avoid irritation from contact with ash

ASCE-EWRI will follow the safety recommendations provided by government officials; the safety of our members is our top priority!

ASCE-EWRI Staff

Managing Director, EWRI ASCE Chief Sustainability Officer Brian Parsons, ENV SP, M.ASCE

Senior Conference Manager Mark Gable, Aff.M.ASCE

Senior Manager Jenn Jacyna, Aff.M.ASCE

Conference & Member Community Manager Erika Haldi, Aff.M.ASCE Manager, Technical Program Brandy Adams, Aff.M.ASCE

Coordinator, Technical Institutes Adrienne Yeh, Aff.M.ASCE

Sponsorship Sales Manager Sean Scully, Aff.M.ASCE

ASCE Registrars Candi Hoffman, Aff.M.ASCE



General Session (Upper Level)



Breakout Rooms (Lower level)



2025 World Environmental & Water Resources Congress

Conference App Download Instructions

https://cdmcd.co/PnJQqw

- 1.) Follow URL link or QR code and search for the ASCE Events App.
- 2.) Install and Open the Event App.
- 3.) Find the Event in the Upcoming Events (bottom row)
- 4.) Tap the Event Icon to Launch the Event App
- 5.) Create a Profile / Log In to your Profile
- 6.) You can Create a Personal Schedule by Tapping on

the Star Next to the Presentation Titles.





Sunday | May 18

Social Tour: Summer Dog Sledding Adventure (ticketed event)

10:00 a.m. - 6:00 p.m.

Dog sledding is on everyone's bucket list when you come to Alaska. Just because the snow may be gone, that doesn't mean you can't experience dog sledding in the summer. This pre-season training gives you a behind-the-scenes look at how mushers and dogs prepare for the winter season.

Welcome Reception (ticketed event) 6:30 - 8:30 p.m. |Cook Hall



Whether it's "welcome back" or "it's a pleasure to meet you", we are thrilled to see you in Anchorage! We hope you can join us for the welcome reception and take the opportunity to reunite with old friends or create new memories. Special welcome remarks will be made by **Tor Anderzen**, **P.E., F.ASCE, ASCE Region 8 Director.**

Monday | May 19

Join us for BC.WRE Day! All day



Board-certified water resources engineers are encouraged to proudly wear their AAWRE or CEC attire and lapel pins, showcasing their credentials in style and promoting the certification program to colleagues. Don't miss this opportunity to celebrate your achievements and inspire others!

Coffee and Conversation with the Women-Water Nexus

7:00 - 8:00 a.m. | Cook Hall

Join the Women Water Nexus (WWN) committee for an early morning networking session focused on Mentoring at All Levels. We will be discussing the benefits of establishing mentor relationships throughout the many phases of career and life. Light refreshments will be provided. All are welcome!

Welcome, Institute Awards & Keynote Session 8:00 -9:45 a.m. | Arteaga Hall / La Perouse Hall

Lifetime Achievement: John W. Labadie, Ph.D., P.E., F. ASCE; Perry L. McCarty, Dist.M. ASCE; Lindell E. Ormsbee, Ph.D., P.E., BC.WRE, F. EWRI, F. ASCE Jeffrey B. Bradley Service to the Institute: Eric Loucks, Ph.D., P.E., BC.WRE, M. ASCE

EWRI Outstanding Achievement Award: Adel Abdallah, P.E. **Outstanding Chapter:** EWRI St. Louis (Large Chapter); EWRI Dallas (Small Chapter)

Margaret S. Petersen Award: Jennifer Guohong Duan, Ph.D., P.E., M.ASCE, F. EWRI, Diplomat AAWRE

ASCE Codes and Standards Committee Merit Award EWRI Certificates of Appreciation EWRI Fellows and Visiting International Fellows





Eric Adams, P.E., PMP Program Manager,

Program Manager, Jacobs Engineering

Port of Alaska Modernization Program – Overcoming Extreme Challenges for Critical Infrastructure Renewal

This presentation will provide an in-depth overview of the Port of Alaska Modernization Program, a multi-phase, multi-billion-dollar initiative crucial to the state's infrastructure and economic vitality. The program's design and construction have faced formidable challenges, including some of the world's largest tides, harsh cold-region conditions that limit construction seasons, the necessity of maintaining uninterrupted port operations, and stringent environmental protections for the endangered Cook Inlet Beluga Whale.

Despite these complexities, significant progress has been made. The Port has successfully completed a seismically resilient Petroleum Cement Terminal, stabilized the North Extension, and soon to break ground on the new container terminal, T1. This presentation will highlight key insights, lessons learned, and the path forward for this critical infrastructure endeavor.

Monday Luncheon & Keynote (ticketed event) 11:30 a.m. - 12:45 p.m. | Arteaga Hall / La Perouse Hall



Thomas Ravens, Ph.D. Professor, Civil Engineering Department |

The University of Alaska Anchorage

Changes in Arctic Coastal Erosion Mechanism and Implications for Coastal Resilience

The Arctic coast is subject to several interdependent hazards which are exacerbated by the rapid

warming of the environment. These include the thawing of coastal permafrost and subsidence, increased wave action, increased storm surge and coastal flooding, salinity intrusion, and coastal erosion. Arctic coastal processes are distinct due to the predominance of both thermal and mechanical processes. Coastal sediments are locked in place by permafrost or seasonal ice and thawing of that permafrost/ice is a prerequisite for later mechanical removal.

Thermal abrasion (also called niche erosion / block collapse) is a relatively rapid erosion mechanism with erosion rates up to 20 m/year. In contrast to thermal denudation, thermal abrasion is driven by oceanic heat transfer. Thermal abrasion is predominant in locations lacking significant quantities of coarse sediments (sand and gravel), and lacking a high elevation beach. Thermal abrasion proceeds via a 4-step erosion mechanism. First, a storm surge event raises the elevation of the coastal waters enabling direct contact between the sea and the base of the bluff. Second, waves and currents thermally and mechanically cut a niche at the base of the bluff. Third, the undermined bluff suffers block collapse due to an overturning failure. Fourth, the collapse block is thermally and mechanically eroded.

There is evidence that some locations (e.g., Barter Island, Alaska) have recently experienced erosion mechanism "flipping" from the slower thermal denudation to the more rapid thermal abrasion. Preliminary calculations suggest that the flipping may have resulted from the warming of the environment. Between 1980 and 2020, the open water period increased from 40 days to 140 days, and the coast has been subject to an increasingly hazardous wave and storm surge climate. Barter Island locations that experienced thermal denudation and slow erosion rates prior to 2007 abruptly started experiencing rapid erosion rates (of order 10 m/year). We hypothesize that the flipping of the erosion mechanism resulted from a decadal lowering of the elevation of the beach face.

The erosion flipping is likely to have significant impacts on coastal resilience. Certainly, coastal communities and infrastructure will be more vulnerable with a more rapidly erosion coastline. Further, mitigating erosion from thermal abrasion driven by oceanic heat transfer may be more challenging than mitigating erosion from denudation.

AAWRE 20th Anniversary Board-Certified Water Resources Engineer Induction Ceremony & Meet and Greet

6:30 - 7:30 p.m. | Cook Hall

The AAWRE welcomes all EWRI Congress attendees to celebrate with the latest class of AAWRE Diplomates being inducted and the recipients of the 2023 AAWRE Award. Please join us for a beverage to toast your colleagues at this special free event!



Tuesday | May 20

Concurrent Award Lecture & Breakfast

7:00 - 8:00 a.m. | See website for room assigments

Urban Water Resources Research Council / Municipal

Water Infrastructure Council (MWIC) Awards & UWWRC Outstanding Service Award: Jane Clary, P.E., F. EWRI

UWWRC Founders' Award and Lecture: Allen P. Davis, Ph.D., D.WRE., P.E., F. ASCE, F. EWRI.

Irrigation & Drainage Council Awards & Royce J. Tipton Lecture: Stuart Styles, Ph.D., P.E., BC.WRE, M.ASCE Watershed Council Awards & Ven Te Chow Award and Lecture: Paul Bates, Ph.D.

Technical Tour: University of Alaska Anchorage Arctic Wave Flume Project Tour (ticketed event) 9:00 a.m. - 12:00 p.m.

The Arctic flume is a wave fume for lab testing of Arctic coastal erosion, and strategies for slowing that erosion that is currently being built at the University of Alaska Anchorage. The specific erosion mechanism addressed is thermal abrasion, which involves niche erosion followed by block collapse. The wave flume is about 30 feet long, with a width of 1.5 feet wide. We expect the water depth to be on the order of 6 to 8 inches.

Tuesday Luncheon & Keynote (ticketed event) 11:30 a.m. - 12:45 p.m. | Arteaga Hall / La Perouse



Michele Yatchmeneff, Ph.D.

Professor, The University of Alaska Anchorage | Alaska Native Education & Outreach Executive Director

Indigenous Elder, Knowledge Keeper, and Leader-in-Residence Program

Native peoples have inhabited the Arctic from time immemorial and continue to live in harmony with their environment today. Working in the Arctic means working with the peoples of the Arctic, including the 228 federally recognized tribes in Alaska. This program prepares and assists those engaged in ADAC-ARCTIC activities to conduct their research, transition, educational and workforce development activities using culturally responsive strategies.

The Residence Program is a transformative initiative designed to foster cultural exchange, strengthen community ties, and enhance the educational experience within ADAC-ARCTIC and the DHS Homeland Security Enterprise. This program uniquely embeds Indigenous wisdom, perspectives, and teachings by inviting respected Elders, Knowledge Keepers, and leaders to serve as invaluable resources for students, faculty, staff and DHS

Conference Highlights

components. Through a combination of one-on-one sessions, group workshops, and community events, participants gain a deeper understanding of Indigenous histories, languages, and worldviews, contributing to a more culturally competent and enriched educational environment.

The program not only respects and values Indigenous knowledge but also actively integrates it into the fabric of our academic community, fostering a more inclusive and holistic learning experience for all.

Technical Tour: William Jack Hernandez Sport Fish Hatchery Tour (ticketed event) 1:00 - 4:00 p.m.

The 141,000 square-foot William Jack Hernandez sport fish hatchery is the heart of Alaska's sport fish stocking program and the largest indoor recirculating sport fish hatchery in North America. The facility includes more than 100 fish-rearing tanks to rear over 4 million fish of 5 species. Water recirculation technologies use approximately 5% of the water required in a conventional hatchery allowing the Alaska Department of Fish and Game to meet its' mission in a cost-effective and sustainable manner. Through integrating the building and aquaculture systems in design significant reductions of energy and water were achieved.

Chapter & New Professional Brewery Social 6:00 - 9:00 p.m.

Everyone is welcome to attend this event hosted by the Local Activities Council & the New Professionals Council & ASCE Anchorage Younger Members Group.

Whether you are new to EWRI or a seasoned member, come get to know fellow members and explore opportunities to get involved with EWRI Committees and Local Chapters. See more on page 10.

Wednesday | May 21

Concurrent Award Lectures & Breakfast

7:00 - 8:00 a.m. | See website for room assigments

Environmental Council Awards & Simon W. Freese Award & Lecture: Arup K. SenGupta, Ph.D., P.E., F.ASCE Hydraulics & Waterways Council Awards & Hunter Rouse Hydraulic Engineering Award & Lecture: Yong G. Lai, Ph.D., A.M.ASCE

Planning & Management Council, Groundwater Council & Julian Hinds Award & Lecture: Dragan A. Savic, Ph.D.,

Wednesday Luncheon & Keynote

11:30 a.m. - 12:45 p.m. | Arteaga Hall / La Perouse

Edmond "Eddie" Packee

Environmental Specialist, Kinross Fort Knox

Environmental Compliance at the Fort Knox Gold Mine – Building and Maintaining a Compliance Culture



The Fort Knox Gold Mine is as an example

of how to build and maintain a culture of environmental excellence. From the very beginning 30 years ago, Fort Knox has built a culture of environmental stewardship. The commitment to environmental stewardship has been successfully transmitted through the work force and across generations of miners. The cultural environment that is used to maintain Fort Knox's remarkable environmental compliance history will be presented and discussed.

Technical Tour: AWWU Ship Creek Water Treatment Facility & Energy Recovery Station (ticketed event) 1:00 - 4:00 p.m.

This tour of the Ship Creek Water Treatment Facility & Energy Recovery Station is hosted by the Anchorage Water and Wastewater Utility (AWWU).

A unique project of this scale has never been accomplished by any other municipal water system in the United States. AWWU serves the Municipality of Anchorage (MOA) with approximately 20 million gallons of water per day from Eklutna Lake through the Ship Creek Energy Recovery Station.

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Hosted By Local Activities Council & New Professionals Council & ASCE Anchorage Younger Members Group

Everyone is Welcome! Whether you are new to EWRI or a seasoned member, come get to know fellow members and explore opportunities to get involved with EWRI Committees and Local Chapters. This gathering is all about fun with no official sponsors. It's a bring-your-own-wallet party!

Margaret S. Petersen Award

For an outstanding woman in environmental and water resources.



Jennifer G. Duan, Ph.D., P.E., F.EWRI, A.M.ASCE

Jennifer G. Duan, PhD, PE, is a Professor of Hydraulic Engineering in the Department of Architectural and Civil Engineering and Mechanics at the University of Arizona. She has over 32 years of experience in hydraulics and sediment transport engineering analysis and modeling. She began her career as a lecturer at Tsinghua University, China, where she contributed to experimental studies of sediment management for the Three Gorges Reservoir. As an academic researcher, Dr. Duan has led many federally, state, and locally funded projects, including a Faculty Early Career Grant from the National Science Foundation. Her research has advanced the development of twodimensional hydrodynamic and sediment transport models for simulating meandering channel evolution processes,

quantifying surface runoff and soil erosion form arid watersheds, assessing the impact of climate change on flood frequency analysis, and estimating scour depth around multiple piers. She has authored over 100 papers in journals and conferences. She is a registered professional engineer in Arizona, Dr. Duan served as a World Bank consultant, contributing to water resource project for the Kingdom of Saudi Arabia. She also worked as a consultant for the Pima County Department of Transportation, assisting in the design of the Sunset Bridge across the Santa Cruz River in Tucson, Arizona. Beyond her research and professional contributions, Dr. Duan has been a dedicated mentor and advocate for women in engineering. Since 2007, she has served as the faculty advisor for the Women in Civil and Architectural Engineering club at the University of Arizona.

Lifetime Achievement Award

The Lifetime Achievement award is presented to members who are judged to have advanced the profession, exhibited technical competence, and significantly contributed to public service, research, or practice in the environmental and water resources profession.



John W. Labadie, Ph.D., P.E., F.ASCE

John W. Labadie, Ph.D., P.E., F.ASCE, D.WRE, was Professor of Civil and Environmental Engineering at Colorado State University, serving as Coordinator of the Water Resources Planning and Management Program. He received his B.S. and M.S. degrees in Engineering at the University of California, Los Angeles, and Ph.D. in Industrial Engineering and Operations Research from the University of California, Berkeley. Dr. Labadie specialized in application of decision support systems, artificial intelligence, machine learning, and knowledge-based systems to complex problems in water resources and environmental systems management. He was developer and instructor of the graduate courses: GIS in Civil and Control, Engineering Optimization, and Engineering Decision Support Systems, with all courses offered through CSU Online. He served as Principal and Co-Principal investigator for over

50 research projects totaling over \$8 million in funding from sponsors at the federal, state, local, and international levels. He served as Senior Editor of the Journal of Water Resources Planning and Management, with his 2004 review on optimal operation of multi-reservoir systems one of the top five most cited articles published by any of the EWRI journals to date. Dr. Labadie is a Fulbright Research Scholar, has won two annual Best Paper awards from scholarly journals, and was the 2015 Online Innovative Educator. In 2017, he was awarded the Warren A. Hall medal for lifetime achievement in water resources from the UCOWR.



Lindell Ormsbee, Ph.D., P.E., P.H., D.WRE, F.ASCE, F.EWRI

Dr. Lindell Ormsbee is the Earl Parker Robinson Chair for Sustainability and the Environment at the University of Kentucky. Over his 40 plus year career he has served in various research administration roles, including serving as the director of the Kentucky Water Research Institute. He is a licensed professional engineer in the state of Kentucky, a licensed professional hydrologist with the American Institute of Hydrology, and a board-certified expert in water resources engineering with the American Academy of Water Resource Engineers. He is also a fellow of the American Society of Civil Engineers and a fellow of the Environment and Water Resources Institute. He is a recipient of numerous ASCE awards, including the Service to the Profession Award and the Julian Hinds Award.

Dr. Ormsbee's past research efforts have focused on the application of systems analysis methods to complex problems in water resources and environmental systems with a particular focus on water distribution, watershed management, and water treatment. During the early part of his career, Dr. Ormsbee partnered with Dr. Don J Wood in translating water distribution research into commercial software (KYPIPE). He has now taught hundreds of classes, workshops, and short courses dealing with water distribution system operations, ultimately training thousands of students and engineers. These efforts have led to the application of water distribution system research to thousands of water distribution systems both in the US and around the world. Today, he continues to work to provide technical assistance to economically and operationally distressed water systems in Appalachia.



Perry L. McCarty, Ph.D., D.M.ASCE (Awarded posthumously)

L. McCarty, Silas H. Palmer Professor Emeritus of Civil and Environmental Engineering, Stanford University, was presented in 2007 with the Stockholm Water Prize by His Majesty King Carl XVI Gustaf of Sweden. The Prize Citation states Professor McCarty received this major international award, "...for pioneering work in developing the scientific approach for the design and operation of water and wastewater systems. He established the role of fundamental microbiology and chemistry in the design of bioreactors. Professor McCarty defined the field of environmental biotechnology that is the basis for small-scale and large-scale pollution control and safe drinking water systems." Of equal significance, Prof. McCarty was awarded the John and Alice Tyler Prize for

Environmental Achievement in 1992 and the Athalie Richardson Irvine Clark Prize for Outstanding Achievement in Water Science and Technology in 1997. No other individual has won all three of these major international water and environmental science related prizes.

Professor McCarty was elected to membership in the U.S. National Academy of Engineering in 1977 and to the American Academy of Arts and Sciences in 1996, as well as election as a Fellow with the American Association for the Advancement of Science and the American Academy of Microbiology. He was active with several professional groups, especially the National Academies with memberships since 1971 and service on three Councils, two Boards, and 19 Committees. He was selected by the National Academies to be their 2001 Abel Wolman Distinguished Lecturer.

Prof. McCarty joined the Stanford University faculty in 1962 when he came to develop its environmental engineering and science program, which was rated number one in the United States every year since 1989 when such evaluations were started by the U.S. News and World Report. From 1980 to 1985 he was Chairman of Stanford's Department of Civil and Environmental Engineering, and from 1989 to 2002 served as Director of the Western Region Hazardous Substance Research Center. He had B.S. Degree in civil engineering from Wayne State University (1953), and M.S. (1957) and Sc.D. (1959) degrees in sanitary engineering from M.I.T.

Prof. McCarty has over 350 publications, and is coauthor of the textbooks, Chemistry for Environmental Engineering and Science, and Environmental Biotechnology - Principles and Applications. He was recognized by ISI HighlyCited.com as a Highly Cited Researcher in both the fields of engineering and of ecology/environment. Among his other major recognitions are an honorary Doctorate from the Colorado School of Mines; Honorary membership in the American Water Works Association and the Water Environment Federation; the Harrison P. Eddy Award for Noteworthy Research (1964 and 1977) and the Thomas Camp Award for Unique Application of Engineering Research (1975) of the Water Environment Federation; the A. P. Black Research Award of the American Water Works Association (1989); and the Walter L. Huber Research Prize (1964), the Simon W. Freese Environmental Engineering Lecture Award (1979), and J. James R. Croes Medal (1995) of the American Society of Civil Engineers.

Perry McCarty, a pioneer in the field of environmental biotechnology, died June 4, 2023 in Stanford, CA. He was 91 years old.

Jeffrey B. Bradley Service to the Institute Award

The Jeffrey B. Bradley Service to the Institute Award is given in recognition of extensive and outstanding service to the Institute.



Eric Loucks, Ph.D., P.E., BC.WRE, M.ASCE

Eric D. Loucks, P.E., PhD, BC.WRE recently retired from the City of Austin Watershed Protection Department where he worked as a Supervising Engineer for nine years. The position with the City followed 27 years engaged in Water Resources Engineering practice for various consulting firms. Throughout his career, Eric was pleased to collaborate with his network of ASCE colleagues on numerous professional endeavors. From the very start of his career, Eric was active in the Illinois Section and elected to chair the Illinois Section EE&WR Committee in 1992 and served as Section Finance Officer in 1996. Eric shined at planning ASCE technical programs starting with local training seminars, daylong multi-speaker workshops and eventually, national conferences. He assembled the

program for the 25th Specialty Conference on Water Resources Planning and Management held in Chicago in 1998.

Then, with establishment of EWRI, Eric participated in the development of EWRI Congress programs at various levels for twenty years. At first, he organized Congress Tracks at the Committee and Council level and ultimately was selected to lead the Technical Program Committee for the 2012 Congress in Albuquerque. He also served as General Chair of the 2015 Congress in Austin. Eric proudly served on the EWRI Planning and Management Council from 2005 to 2009, the EWRI Technical Executive Committee from 2010 to 2020, and as EWRI Treasurer from 2015 to 2017. His down-to-earth perspective on this award is unsurprising to colleagues who know him well, "It's humbling that one can get such high recognition for doing something so personally enjoyable and widely beneficial."

EWRI Awards Program 2025

Visiting International Fellows

This fellowship is granted annually to increase the participation of water resources and environmental professionals from developing countries in EWRI conferences, and to promote sustained professional and cultural exchange.



Dr. Muhammad Tariq Bashir Pakistan



Shaurya Varendra Tyagi India



Salim Ahmed Lossindilo Tanzania



Dr. Yifan Yang China

To apply for the 2026 Visiting International Fellowship, visit: bit.ly/40T2vH2

EWRI Fellows

EWRI Fellowship is granted to those who have been a member of EWRI for 10 or more years and have demonstrated accomplishments that have contributed significantly to the advancement or application of water resources or environmental engineering, science, and technology. Please join us in congratulating the 2025 Class of EWRI Fellows:

Class of 2025 EWRI Fellows



Ebrahim Ahmadisharaf, Ph.D., F.EWRI



Hugo Loaiciga, Ph.D., P.E.,

David Dee, P.E., F.ASCE, M.EWRI, BC.WRE, F.EWRI



B.C.WRE, P.H., F.EWRI





Jason Vogel, Ph.D., P.E., M.ASCE, F.EWRI

Sudhindra Nath Panda,

Ph.D., F.NAAS, F.ISAE,

F.IASWC, F.IWRS, F.IE, M.ASABE, F.EWRI



Frank Tsai, Ph.D., P.E., P.G., F.ASCE, F.EWRI



Louis Motz, Ph.D., P.E., BC.WRE, F.EWRI





Suresh Sharma, Ph.D., P.E., M.ASCE, F.EWRI



Harry Zhang, Ph.D., P.E., F.EWRI



Rosanna La Plante, P.E., F.ASCE, F.EWRI



Saurav Kumar, Ph.D.,

F.EWRI

EWRI Outstanding Achievement Award

The EWRI Outstanding Achievement Award recognizes an individual for their exceptional contributions to advancing the Environmental and Water Resources Institute.



Adel Abdallah, Ph.D.

Adel Abdallah is the Water Data Program Manager leading the modernization of water use data management efforts at the Utah Division of Water Rights. He joined the Division in May 2024 as part of the newly established Data Services Section. Previously, Adel served for five years as the Water Data Exchange (WaDE) Program Manager at the Western States Water Council, where he spearheaded the development of the Western States Water Access and Analysis Tool (WestDAAT), a platform that streamlines access to and analysis of water rights and water use data across the eighteen Western states.

Adel earned his Ph.D. in Hydroinformatics from Utah State University, where his primary research focused on developing the Water Management Data Model (WaMDaM) and accompanying software tools. WaMDaM and its tools provide a generalized approach to data management for modeling water systems, enabling systematic data and model comparisons and reuse across various models and datasets. His approach to water data management emphasizes holistic use cases driven by user personas and promoting user-centered design that often requires balancing technical expertise with practical, user-focused solutions.

Originally from Palestine, Adel is married to Allia Abdallah, and they have two sons, Kareem and Waseem. Beyond his passion for making sense of complex water data, Adel enjoys cooking Palestinian, Mexican, and Indian dishes, smoking salmon, baking sourdough, pulling espresso shots, and getting creative with latte art.

Royce J. Tipton Award & Lecture

The Royce J. Tipton Award recognizes outstanding contributions to the advancement of water and soil aspects of irrigation by software development, promoting application of new technologies and through public and professional service.



Stuart Styles, Ph.D., P.E., BC.WRE, M.ASCE

Over 40 years of experience in irrigation system design and management on both domestic and international projects. He has been involved with projects related to most aspects of agricultural irrigation projects. Dr. Styles' experience includes a wide range of projects relating to irrigation system modernization, flow measurement, and SCADA system design. He is one of the authors of the Drip and Micro Irrigation Design and Management for Trees, Vines, and Field Crops design manual. This text is currently in the 5th edition and published in several languages. His latest research projects a detailed assessment of the use of magnetic and transit-time flow meters for agriculture. He was heavily involved with World Bank modernization training that required travel to Azerbaijan, India, Vietnam,

China, Kyrgyzstan, Philippines, Iran, Turkey, Thailand, Egypt, Malaysia, and New Zealand. He married his high school sweetheart in 1980 -Marcy Styles. He has 2 children, one grandson, and lots of grand dogs.

Journal of Irrigation and Drainage Engineering Best Reviewer

Jose Carrillo, Ph.D.

Best Associate Reviewer

Songhao Shang, Ph.D.

Best Discussion

Zubayed Rakib, Ph.D.; Jie Zeng, Ph.D.; Seyed M. Hajimirzaie, Ph.D.; Matahel Ansar, Ph.D.

For the Discussion of "Steady Flow through Gated Circular Culverts: Hydraulic Operation and Experiments." Journal of Irrigation and Drainage Engineering, Volume 150, Issue 3, June 2024

Best Technical Note

Pankaj Singh; Dhrubajyoti Sen, Ph.D.

"Flow-Through Short-Crested Trapezoidal Weirs: Effect of Downstream Slope." Journal of Irrigation and Drainage Engineering, Volume 149, Issue 8, August 2023

Best Paper Award

Seyed Hamid Ahmadi, Ph.D.; Shahin Solgi; Simin Mashouqi

"Sprinkler Irrigation System Performance in Winter Wheat Fields: A Comprehensive Study", Journal of Irrigation and Drainage Engineering, Volume 150, Issue 2, April 2024

Best Seminal Paper

Richard G. Allen, Ph.D.; Masahiro Tasumi, Ph.D.; Simin Mashouqi; Ricardo Trezza, Ph.D.

"Satellite-Based Energy Balance for Mapping Evapotranspiration with Internalized Calibration (METRIC)—Model", Journal of Irrigation and Drainage Engineering, Volume 133, Issue 4, August 2007. Pages: 380 – 394

Hunter Rouse Hydraulic Engineering Award and Lecture

The Hunter Rouse Hydraulic Engineering Award is presented, upon recommendation of the Executive Committee of the Environmental & Water Resources Institute Hydraulics & Waterways Council, to a distinguished person in the field of hydraulic engineering.



Yong G. Lai, Ph.D., A.M.ASCE

Yong Lai is a specialist hydraulic engineer at the Technical Service Center, U.S. Bureau of Reclamation. He obtained his Ph.D. in 1990 in Aerospace Engineering, Arizona State University, and has since involved in a wide range of research, development and engineering projects. His professional career includes working at a consulting company, a research institute, University of Iowa, and federal government.

Dr. Lai is the lead developer of SRH-2D - a community software for 2D hydraulic, sediment and watershed modeling; he was also one of the lead developers of CFD-ACE - a commercial 3D CFD software. SRH-2D model presently has

over 3,000 users, with its theory and User's Manul generated hundreds of scientific citations. Dr. Lai has published more than 60 journal papers and more than 100 conference papers and reports – these works have been cited in scientific journals more than 4,000 times.

Dr. Lai was the recipient of 2017 Karl Emil Hilgard Hydraulic Prize (ASCE), serves currently as an associate editor of the Journal of Hydraulic Engineering (ASCE), an Advisory Board member at the IIHR-Hydroscience and Engineering at the University of Iowa, as well as a few international conferences, and a member of the Technical Review Panel for some large projects such as the Klamath Dam Removal study and FHWA Engineered Log Jam Study in Large Rivers. He recently received the Superior Service Award (2024) - a Department of Interior (DOI) high-honor award.

Karl Emil Hilgard Hydraulic Prize

The Karl Emil Hilgard Hydraulic Prize is presented to the author or authors of the paper that is judged to be of superior merit in dealing with a problem of flowing water, either in theory or in practice.

Duy Nguyen; Michael Kirkpatrick, Ph.D.; Steven Armfield, Ph.D.; Nicholas Williamson, Ph.D.; Wenxian Lin, Ph.D.

"Effect of Thermal Stratification in Meandering Turbulent Open-Channel Flow with Varying Sinuosity," Journal of Hydraulic Engineering, September 2023

Hydraulic Structures Medal

The Hydraulic Structures Medal is awarded to an individual or individuals for significant contributions to the advancement of the art and science of hydraulic engineering as applied to hydraulic structures.



Peter Lagasse, Ph.D., P.E., F.ASCE

As Vice President for Applied Technology and Senior Hydraulic Engineer with Ayres Associates, Dr. Lagasse has been responsible for hydraulics, erosion, and river engineering studies, as well as sedimentation and river stabilization studies. He has 20 years of engineering experience with the Army Corps of Engineers and more than 40 years of experience with various consulting firms. His assignments with the Corps of Engineers included serving as Chief of the Port Construction Section, U.S. Army Engineer Command, Vietnam. Over a 10-year period he had assignments of increasing responsibility at the U.S. Military Academy at West Point, including Assistant Professor (1968-1970) and Associate Professor of Fluid Mechanics and Assistant Dean for Academic Research (1975-1981).

As Chief of the Army Port Construction Section in Vietnam (1968-1967), Captain Lagasse was responsible for the \$50 Million Delong prefabricated pier installation contract and siting, design, and construction of all ancillary pier and port facilities. As a result of this effort, a serious logistical backlog created by limited port facilities in Vietnam was resolved by the installation of eighteen deep draft piers at four port locations along the coast of Vietnam to support the U.S. Army's force build up.

As a consultant, he supported the National Transportation Safety Board (NTSB) for the analysis of the 1987 Schoharie Creek bridge failure in up-state New York. This failure, a major disaster in which 10 people lost their lives, focused national attention on hydraulic issues such as bridge scour and stream instability. He provided expert technical advice to the NTSB staff during hearings investigating the causes of the failure and assisted in the development of NTSB's findings and recommendations as reported to Congress.

Since then, Dr. Lagasse has been responsible for three five-year task order contracts for the Federal Highway Administration's, National Highway Institute.

Hans Albert Einstein Award

The Hans Albert Einstein Award acknowledges significant contribution to the engineering profession in the areas of erosion control, sedimentation, and/or waterway development either in teaching, research, planning, design, or management.



Bruce W. Melville, Ph.D., M.ASCE

Bruce Melville is Professor of Civil Engineering at the University of Auckland. His academic career spans 43 years, prior to which he spent 6 years working for civil engineering consultants in NZ and overseas on water-related projects. He is an active researcher with an international reputation in the field of fluvial sediment transport and a particular focus on scour at hydraulic structures, including bridge foundations and offshore windfarm monopile foundations. He has been an Associate-Editor of several journals, including the (ASCE) Journal of Hydraulic Engineering and the International Journal of Sediment Research. He has supervised more than 50 PhD students and published over 220 refereed journal papers. He received the 2002 ASCE Hydraulic Structures Medal, in

recognition of his contributions in the field and was elected to fellowship of the Royal Society of New Zealand in 2006. In 2007, he received the R.J. Scott Medal from RSNZ for his research contributions and in 2012 he received the Dobson Supreme Technical Award in Transportation Infrastructure. In 2011, he was promoted to Distinguished Fellowship of EngNZ. He received the Henderson Oration Award in 2014.

He was made an honorary professor of the Nanjing Hydraulic Research Institute in 2023 and served two terms as an IAHR Council member. He has been a council member of the World Association for Sedimentation and Erosion Research (WASER) since 2017 and

EWRI Awards Program 2025

received an IAHR-APD Distinguished Member Award in 2020. His publications have been cited more than 16,600 times and he has an h-index of 40 (Web of Science). His research monograph, 'Bridge Scour", published in 2000 has sold many copies and remains in strong demand. It has been cited 1746 times.

Journal of Hydraulic Engineering Best Paper Award

Please refer to the Karl Emil Hilgard Hydraulic Prize above.

Best Case Study

Uthra Sreekuma; Ioan Nistor, Ph.D., M. ASCE; Colin Rennie, P.E., M. ASCE; Abdolmajid Mohammadia

Numerical Modeling of Downstream Morphological Evolution during Mount Polley Tailings Dam Failure", Journal of Hydraulic Engineering, Volume 150, Issue 1, 2024

Best Technical Note

Jens M. Turowski, Ph.D.; Gunnar Pruß; Markus Reich

Experimental Design and Protocol for Standardized Measurements of Rock Erodibility in Fluvial Impact Erosion", Journal of Hydraulic Engineering, Volume 149, Issue 12, 2023

Best Discussion

Please refer to the J.C Stevens Award below.

Best Reviewer

Robin Meurice; Chris Rehmann, Ph.D.

Best Associate Editor

Rui Ferreira, Ph.D; Scott Socolofsky, Ph.D., M. ASCE

J.C. Stevens Award - Best Discussion



Gaetano Crispino

Gaetano Crispino earned his Master's degree in Civil Engineering at the Seconda Universita degli Studi di Napoli, Italy, in 2011, with an experimental thesis on the supercritical sewer siderweirs. In 2014 he started the doctorate study at the Universita degli Studi della Campania, Italy, during which he investigated the hydraulic behaviour of supercritical junction manholes and vortex drop shafts. A part of his PhD program was carried at the Laboratory of Hydraulic Constructions (LCH) of EPFL, Switzerland, as a guest PhD Student. After the attainment of the PhD title, he was appointed as a Research Associate at the Department of Engineering of Universita degli Studi della Campania, at which he held the Master's Degree course of river restoration techniques from 2019 to 2023 and the Bachelor's Degree course of Hydraulics from 2024 up to the present.

The main research activities of Gaetano Crispino concern the physical and numerical analysis of the both ordinary and special hydraulic structures installed across the urban drainage systems, with implication of the assessment of the urban pluvial hydraulic risk. Gaetano Crispino has published several peer-reviewed papers and he currently gives his service as expert reviewer for several journals covering all

the aspects of the hydraulic engineering.

Corrado Gisonni

Corrado Gisonni received a honors MS degree in Hydraulic Engineering at the Universita di Napoli 'Federico II' in 1989 and his Ph.D. title in Hydraulic Engineering from the Italian Ministry of University and Scientific Research in 1994. Since 2012, he is Full Professor of Hydraulic Engineering at the Engineering Department of Universita della Campania 'Luigi Vanvitelli', Italy, where he was engaged as Research associate in 1995 and committed as ViceDirector of the Engineering Department (2012) and Chair of the BS and MS Programs in Civil Engineering.



Since 1995 he has been invited several times as visiting scientist/professor at the 'Laboratory of Hydraulics' of the Swiss Institute of Technology (VAW-ETHZ) and at the 'Laboratoire deConstructions Hydrauliques' of the

Ecole Polytechnique Federate de Lausanne (LCH-EPFL). His central research interests include sewer hydraulics, water supply systems, river engineering, beside history of hydraulics. He has published papers and books on these topics, including the "Italian Handbook for Sewer System Design" (1997, in Italian) and Wastewater hydraulics (2012, in Italian). He serves the Journal of Applied Water Engineering and Research as Associate Editor. In 2016, he was elected as Chair of the European Regional Division of the International Association for Hydro-Environment Engineering and Research (I.A.H.R.), being in charge until 2022.

Beside his academic activity, Corrado Gisonni is also involved as specialist hydraulic engineer for Governmental Institutions, such as the Italian President of the Council of Minister, River Authorities and Water Agencies in Southern Italy.



Willi H. Hager

Willi H. Hager was educated at ETH Zurich, including the civil engineering degree (1976), the Ph.D. degree (1981), the habilitation degree (1994), and professorship of hydraulics (1998-2016). He was research associate at ETH Lausanne (1983-1988), returning in 1989 to Versuchsanstalt fur Wasserbau, Hydrologie und Glaziologie (VAW) as scientific head. He was interested in hydraulic structures, wastewater hydraulics, high-speed flows, impulse waves, scour and erosion, and in the history of hydraulics. He has published papers and books on these topics, including Dam hydraulics (1998), Constructions hydrauliques (2009), Wastewater hydraulics (2010) or Hydraulicians. He served the Journal of Hydraulic Engineering (ASCE) as Associate Editor, and the Journal of Hydraulic Research (IAHR) as Editor. He was awarded the 1997 Ippen Lecture (IAHR) becoming its Honorary

Member in 2013, and was the recipient of the Hydraulic Structures Medal (ASCE), among other distinctions.

Michael Pfister

Michael Pfister graduated in Civil Engineering from ETH Zurich, Switzerland, in 2002. He then joined the Laboratory of Hydraulics, Hydrology and Glaciology (VAW) at ETH Zurich. In 2007, he obtained a Doctorate in Sciences, based on his research on chute aerators. In 2010, he joined the Laboratory of Hydraulic Constructions (LCH) of EPFL, Switzerland, as a Research and Teaching Associate. There, he initiated research axes and advised PhD students, was a lecturer and a project manager for hydropower-related model studies. The Haute ecole d'ingenierie et d'architecture Fribourg (HEIA-FR, HES-SO), Switzerland, appointed him in 2016 as Professor for Hydraulic Engineering.



During his activities, Michael was responsible for research projects on high-speed two-phase flows, on Piano Key weirs, on urban drainage structures, and on wave dynamics. He was active in consulting and supervised several applied physical model studies conducted for dam owners. Michael has published several peer-reviewed journal papers and is the editor or coauthor of some books in the above-mentioned topics. He is a member of serval national and international committees and associations.

The J.C. Stevens Award is awarded for the discussion of "Design Considerations for High-Speed Flow in Sewer Systems," by Y. Qian, D.Z. Zhu, and B. van Duin (2023), ASCE Journal of Hydraulic Engineering, Volume 148, Issue 9, 2022

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Urban Water Resources Research Council Founders' Award

The UWRRC Founders' Award may be made annually to an individual for notable contributions that have served to advance engineering and science in the field of urban water resources research. This award was established to honor the Founders of EWRI's Urban Water Resources Research Council, pioneers in the fields of urban water management and stormwater research.

The award may be made annually to an individual for notable contributions that have served to advance engineering and science in the field of urban water resources research.



Allen P. Davis, Ph.D., D.WRE, P.E., F.ASCE, F.EWRI

Allen P. Davis is Professor and Charles A. Irish Sr. Chair in Civil Engineering in the Department of Civil and Environmental Engineering and Affiliate Professor in Plant Science and Landscape Architecture at the University of Maryland. For over three decades, he has been investigating sources and treatment of pollutants in urban stormwater with a focus on nature-based practices, particularly bioretention. He is author or co-author of over 150 peer-reviewed journal articles, and two texts: Stormwater Management for Smart Growth (2005) and Green Stormwater Infrastructure, Fundamentals and Design, Wiley 2022). From 2001 to 2010, he was Director of the Maryland Water Resources Research Center. From 2017-2019 he chaired a National Academies of Science,

Engineering, and Medicine committee on Improving the Next-Generation EPA Multi-Sector General Permit for Industrial Stormwater Discharges. He is currently Editor-in-Chief of the ASCE Journal of Sustainable Water in the Built Environment. Prof. Davis has been the major advisor/co-advisor to 23 Ph.D. students and 56 MS students. In 2010 he was awarded the A. James Clark School of Engineering Faculty Outstanding Research Award and is a 2022-2023 University of Maryland Distinguished Scholar-Teacher, an award that honors senior tenured members of the faculty who combine outstanding scholarly accomplishment with excellence in teaching and personify the University of Maryland image of the professoriate. He is a Licensed Professional Engineer in Maryland, Fellow of the American Society of Civil Engineers, Fellow of the ASCE Environmental and Water Resources Institute, and a Diplomate, Water Resources Engineer.

Urban Water Resources Research Council Outstanding Service Award

This award recognizes people who have made significant contributions to the field of urban water resources research.

Jane Kees Clary, F.EWRI, LEED AP, CPESC

Simon W. Freese Environmental Engineering Award & Lecture

The Simon W. Freese Environmental Engineering Award and lecture is awarded to a distinguished person in the field of environmental engineering.



Arup K. SenGupta, Ph.D., P.E., F.ASCE

Professor Arup K. SenGupta is the P.C. Rossin Professor in the Department of Civil and Environmental Engineering at Lehigh University. For well over three decades, SenGupta's research has encompassed nearly every aspect of water science and technology: from drinking water treatment to desalination to municipal wastewater reuse to resource recovery. SenGupta is internationally recognized for advancing and expanding the field of ion exchange science and technology, and applying it for development of sustainable technologies and new materials. He is the inventor of the first reusable, arsenic-selective hybrid anion exchanger nanomaterial (HAIX-Nano). Over two million people around the globe currently drink arsenic-safe water through use of HAIX-Nano. SenGupta is the author of the book

'Ion Exchange in Environmental Processes' published by Wiley & Sons. The book was recently translated in Chinese.

For his research and scholarly contributions, SenGupta received many national and international awards including: 2004 International Ion Exchange Award at the university of Cambridge, England; 2009 Lawrence K Cecil Environmental Award from the American Institute of Chemical Engineers (AIChE); and 2012 Intel Environmental Award for 'technology benefiting humanity' to name a few. SenGupta is a fellow of AIChE, ASCE and NAI (National Academy of Inventors).

Rudolph Hering Medal

This award recognizes outstanding papers that contribute to the advancement of the environmental branch of the engineering profession.

David A. Chin, Ph.D., P.E., F.ASCE

"Separation of Infiltration and Inflow in Sanitary Sewers," Journal of Environmental Engineering, Vol. 149, No. 11, November 2023

Wesley W. Horner Award

The Wesley W. Horner Award recognizes papers that have contributed to the areas of hydrology, urban drainage, or sewerage.

Luis Huizar; Sarai Diaz; Kevin Lansey, Ph.D., A.M.ASCE; Robert Arnold

"Economic Impacts of the 2019 Drought Contingency Plan in the Lower Colorado River Basin: Water, Energy, and Recreation," Journal of Environmental Engineering, April 2024

Samuel Arnold Greeley Award

The Samuel Arnold Greeley Award is presented for excellence in papers on the design, construction, operation, or financing of water supply pollution control, storm drainage, or refuse disposal projects.

Dennis G. Grubb, F.ASCE; Dusty R.V. Berggren, M.ASCE; Brian K. Schroth, M.ASCE; Mark D. Whalen

"EPA LEAF Testing of a Powdered Ladle Slag to Support pH Neutralization and Stabilization/Solidification Applications," Journal of Hazardous, Toxic, and Radioactive Waste, Vol. 27, No. 4, October 2023

Journal of Hazardous, Toxic and Radioactive Waste Best Research Oriented Paper

Rupam Bandyopadhyay; Sanket Dey Chowdhury; Puspendu Bhunia; Rao Y. Surampalli, Ph.D., P.E., BCEE, BC.WRE(Hon.), NAC, F.EWRI, Dist.M. ASCE

"Impact of the Organic Strength of Dairy Wastewater and Vermibed Depth on the Performance of Macrophyte-Assisted Vermifilters". Journal of Hazardous, Toxic and Radioactive Waste, Volume 27, Issue 3, 2023

Best Practice Oriented Paper

Hiroshan Hettiarachchi; Erfan Irandoost; Joseph Patrick Hettiarachi; Dinesh Pokhrel

"A Field-Verified Model to Estimate Landfill Methane Flux Using Surface Methane Concentration Measurements under Calm Wind", Journal of Hazardous, Toxic and Radioactive Waste, Volume 27, Issue 4, 2023

Best Associate Editor

Anumita Mishra, Ph.D.

EWRI Awards Program 2025

Journal of Sustainable Water in the Built Environment Best Paper

Khalid K. Osman; Miriam E. Hacker; Kasey M. Faust

"Conceptualizing equity for onsite non-potable water reuse systems in the United States," Journal of Sustainable Water in the Built Environmen Journal of Sustainable Water in the Built Environment, Volume 9, Issue 2, 2022

Best Case Study

Isam Alyaseri; Jianpeng Zhou; Azadeh Bloorchian-Verschuy; Susan Morgan

"Impact of green infrastructures for stormwater volume reduction in combined sewers: A statistical approach for handling field data from paired sites containing rain gardens and planter boxes," Journal of Sustainable water in the Built Environment, Volume 9, Issue 3, 2023

Ven Te Chow Award & Lecture

The Ven Te Chow Award recognizes lifetime achievement in the field of hydrologic engineering.



Paul Bates, Ph.D.

Paul Bates CBE FRS is Professor of Hydrology at the University of Bristol where he specialises in the science of flooding. He develops new numerical solutions to the Shallow Water equations and combines these with satellite and airborne data to advance our fundamental understanding of flood dynamics and reduce threats to life and economic losses worldwide. His work is used by multiple researchers, NGOs, multi-national companies and insurers to manage flood hazard and risk.

Previously, he was Director of the Cabot Institute and Head of the School of Geographical Sciences at Bristol and has spent sabbatical periods at Laboratoire National d'Hydraulique et Environnment in Paris, the EU Joint Research Centre, Princeton University and the NASA Jet Propulsion Lab at CALTECH. He is a Fellow of the American Geophysical Union and of the Royal Society of London, the UK's national academy of sciences. He is a double winner of the Lloyd's of London Science of Risk prize and a recipient of the European Geosciences Union John Dalton medal in 2024. In 2019 was made a Commander of the British Empire by Queen Elizabeth II for services to flood risk management.

Arid Lands Hydraulic Engineering Award

The Arid Lands Hydraulic Engineering Award recognizes original contributions in hydraulics, hydrology, planning, irrigation and drainage, hydroelectric power development, navigation applicable to arid or semi-arid climates, or contributions to the understanding and development of new technology in river basins.



Enrique R. Vivoni, Ph.D., P.E., M.ASCE

Enrique R. Vivoni is the Fulton Professor of Hydrosystems Engineering and the Director of the Center for Hydrologic Innovations in the School of Sustainable Engineering and the Built Environment at Arizona State University. He received a B.S. in Environmental Engineering, an M.S. in Civil and Environmental Engineering, and a Ph.D. in Hydrology from the Massachusetts Institute of Technology. His research is focused on the interactions of climate, hydrology, and ecosystem processes in natural and build environments of the arid southwestern U.S. and northwestern Mexico. His work has advanced integrative watershed studies that link spatially explicit sensor networks, satellite remote sensing, and process-based hydrologic modeling. His team also develops and applies

hydrologic innovations for improved decision making by water management and environmental agencies in Arizona, for which they were awarded the Governor's Award for Arizona's Future in 2023. Prof. Vivoni has also won several national awards including being named Fellow of the American Association for the Advancement of Science, American Meteorological Society, and Mexican Academy of Sciences. He received the Walter L. Huber Civil Engineering Research Prize from the American Society of Civil Engineering in 2014 and participates in the ASCE-EWRI Watershed Management Technical Committee.

Groundwater Council Certificate of Appreciation

The Groundwater Council Certificate of Appreciation honors an individual who has been critical to enhancing the visibility of the EWRI Groundwater Council.



Paul Mathisen, Ph.D., P.E., M. ASCE

Paul Mathisen is a faculty member in the Department of Civil and Environmental Engineering (CEE) and is also the Director of Sustainability at Worcester Polytechnic Institute (WPI) in Worcester, MA. He is a licensed professional engineer in Massachusetts and his background includes more than 30 years of experience in the environmental engineering and water resources field, including teaching, research, project advising and consulting. Professor Mathisen's teaching areas include undergraduate and graduate courses in fluid mechanics and hydraulics, hydrology, groundwater flow and pollution, contaminant transport, and water resources management. His research interests include the areas of water quality modeling, stormwater control, contaminant transport in groundwater

and surface-water, and sustainability. He co-directs WPI's Water Resources Outreach Center (WROC), Energy Sustainability Center, and Boston Project Center, all of which engage students in sustainability-related projects. These centers, along with a number of other WPI's sustainability programs, are aligned to encourage and advance sustainability and resilience initiatives both on and off campus through student project-work and research. Professor Mathisen enjoys collaborating with colleagues on various committees and activities in EWRI, including the Groundwater Council, Interdisciplinary Council, and Sustainability Committee.

Journal of Hydrologic Engineering Seminal Paper

Christian Genest; Anne-Catherine Favre

"Everything You Always Wanted to Know about Copula Modeling but Were Afraid to Ask," Journal of Hydrologic Engineering, Volume 12, Issue 4, 2007

Best Technical Paper

Manotosh Kumbhakar; Christina W. Tsai, Ph.D., A.M.ASCE; Vijay P. Singh, D.Sc, P.E., BC.WRE(Hon.), F. EWRI, Dist.M. ASCE

" Improved Velocity Profile in Open Channels Using Incomplete Information–Based Entropy Theory," Journal of Hydrologic Engineering, Volume 28, Issue 3, 2023

Best Case Study

Yingchun Liang; Xi Chen; Jianzhi Dong; Jiarong Wang

"Impact of Progressive Reservoir Construction on Nonstationary Sediment Load Response to Streamflow in the Upper Yangtze River, China," Journal of Hydrologic Engineering, Volume 29 Issue 2, 2024

Best Discussion

David A. Chin, Ph.D., P.E., F. ASCE

"Discussion of "NRCS Curve Number Method: Comparison of Methods for Estimating the Curve Number from Rainfall-Runoff Data," Journal of Hydrologic Engineering, Volume 28, Issue 8, 2023

Best Associate Editor

Alessia Flammini, Aff.M.ASCE

Best Technical Note

Gerhard Schoener; Sara Rassa; Matthew Fleming; David Gatterman; Jacob Montoya

"Infiltration Model Parameters from Rainfall Simulation for Sandy Soils," Journal of Hydrologic Engineering, Volume 29, Issue 1, 2024

Julian Hinds Award and Lecture

The Julian Hinds Award recognizes the author or authors of a paper that is judged to make the most meritorious contribution to the field of water resources development. The award may also be made to an individual for notable performance, long years of distinguished service, or specific actions that advanced engineering in the field of planning, development, and management of water resources.



Dragan A. Savic, Ph.D., C.Eng, M.ASCE

Dragan Savić is a Professor of Hydroinformatics at the University of Exeter in the UK, a Global Advisor on Digital Sciences and a former Chief Executive Officer at KWR Water Research Institute based in the Netherlands. He is a founder and former director of the Centre for Water Systems at the University of Exeter, an internationally recognised group for excellence in water and environmental science research. With over 40 years of experience in engineering technology, academia and consultancy, he is an internationally recognized expert in water engineering and hydroinformatics. He has influenced the water sector through research, mentoring, leadership roles in international organizations, and advisory positions in water technology companies and government bodies. Known for his

innovation and leadership, he advocates for applying science in the broader water sector and utilities. Dragan is an elected Fellow of the UK Royal Academy of Engineering, a Member of the European Academy of Sciences and a Distinguished Fellow of the International Water Association.

Water Resources Planning and Management Council Service to the Profession

This award recognizes and honors a person for outstanding leadership, activities, and achievement in service to the profession in the field of water resources planning through the institute, councils, local sections, or other organizational units of the society.



Emmanuel Nzewi, Ph.D.

Emmanuel is Professor and Interim Department Head in the Department of Civil & Environmental Engineering, College of Engineering at Prairie View A&M University Prairie View, TX (PVAMU).

He joined PVAMU as Professor and Department Head and served as Interim Associate Dean of the College of Engineering at PVAMU. Before PVAMU, Emmanuel was faculty at North Carolina A&T, Greensboro, NC and Southern University, Baton Rouge, LA. Emmanuel earned his BSCE from Michigan Tech, Houghton, MI; and Masters and Ph.D. degrees from Purdue University. He has conducted research on reservoir operations, low

impact development and rainwater harvesting. Emmanuel's interest in engineering education led him to purse an investigation of learning (engineering) through natural language processing models. Emmanuel is a registered Professional Engineer in 2 States.

He has served (serving) on multiple occasions as the faculty advisor of ASCE student chapters. Other service in ASCE include membership in EWRI, in which he is an active member of the Emerging & Innovative Technologies and Environmental and Water Resources Systems committees; service on ASCE Committee on Accreditation (COA), and the ASCE Department Heads Coordinating Council (DHCC) from 2019 to 2021. He is also a member of American Water Resources Association. Emmanuel's recognitions include the 2011 Louisiana Engineering Foundation Faculty Professionalism Award (Louisiana Engineering Foundation) and the 2007 Service Award from ASCE Environmental and Water Resources Institute. In 2023, Emmanuel was inducted as a member of the Academy of Civil and Environmental Engineers by the Civil, Environmental, and Geospatial Engineering faculty at Michigan Tech.

Journal of Water Resources Planning and Management Best Research Oriented Paper

Antonia Durán; Marcel Favereau; Sebastián Vicuña; Óscar Melo; Matías Negrete-Pincetic

"Evaluation of Multipurpose Reservoir Operating Policies at Basin and Electric Power System Scales" Journal of Water Resources Planning and Management, Volume 150, Issue 1, 2024

Outstanding Efforts to Reproduce Results

Omar Abdelazeem, S.M.ASCE; David D. J. Meyer, Ph.D., A.M.ASCE

"How to Model an Intermittent Water Supply: Comparing Modeling Choices and Their Impact on Inequality" Journal of Water Resources Planning and Management, Volume 149, Issue 1, 2023

Quentin Martin Best Practice Oriented Paper

Pooja Patle, S.M. ASCE; Ashutosh Sharma

"Evaluation of Water Resources in a Complex River Basin Using Water Accounting Plus: A Case Study of the Mahi River Basin in India," Journal of Water Resources Planning and Management, Volume 149, Issue 12, 2023

Best Policy Oriented Paper

Brian D. Richter; Enrique Prunes; Ning Liu; Peter Caldwell; Dongyang Wei; Kyle Frankel Davis; Samuel Sandoval-Solis, Ph.D.; Gabriela Rendon Herrera; Ramon Saiz Rodriguez; Yufei Ao, Ph.D.; Gambhir Lamsal, S.M.ASCE; Maria Amaya; Natalie Shahbol; Landon Marston

"Opportunities for Restoring Environmental Flows in the Rio Grande–Rio Bravo Basin Spanning the US–Mexico Border," Journal of Water Resources Planning and Management, Volume 150, Issue 2, 2023

Seminal Paper

Avi Ostfeld, Ph.D., BC.WRE, F.EWRI, F.ASCE; James G. Uber; Elad Salomons, Ph.D.; Jonathan W. Berry; William E. Hart; Cindy A. Phillips; Jean-Paul Watson; Gianluca Dorini; Philip Jonkergouw; Zoran Kapelan, Ph.D.; Francesco di Pierro; Soon-Thiam Khu; Dragan Savic; Demetrios Eliades; Marios Polycarpou; Santosh R. Ghimire; Brian D. Barkdoll, P.E., BC.WRE, F.EWRI, F.ASCE; Roberto Gueli; Jinhui J. Huang; Edward A. McBean, Ph.D., P.Eng; William James, Ph.D., P.E., F. ASCE; Andreas Krause; Jure Leskovec; Shannon Isovitsch; Jianhua Xu; Carlos Guestrin; Jeanne VanBriesen; Mitchell Small; Paul Fischbeck; Ami Preis; Marco Propato; Olivier Piller, Ph.D., Aff.M.ASCE; Gary B. Trachtman, P.E., M. ASCE; Zheng Yi Wu, F.EWRI, M.ASCE; Tom Walski, Ph.D., P.E., F.EWRI, F.ASCE

"The battle of the water sensor networks (BWSN): A design challenge for engineers and algorithms," Journal of Water Resources Planning and Management, Volume 134, Issue 6, 2008

Best Associate Editor

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