2021 AWARDS PROGRAM

Margaret S. Petersen Award

For an outstanding woman in environmental and water resources.

Dr. Berrin Tansel, Ph.D., P.E., BCEE, D.WRE, F.EWRI, F.ASCE, F.WEF

Dr. Berrin Tansel is a professor in the Civil and Environmental Engineering Department at Florida International University (FIU). Dr. Tansel received her PhD and MS degrees in environmental engineering from University of Wisconsin-Madison. Before joining FIU, she was a project manager at Massachusetts Water Resources Authority in Boston, Massachusetts; project engineer with private consulting firms and a research scientist at Center for Environmental Management at Tufts University. Dr. Tansel's areas of expertise include water quality management, water treatment process, drinking water treatment, physical and chemical treatment processes, infrastructure system reliability, water supply, water conservation, contaminant transport, fate and transport modeling of contaminants in water environments. Dr. Tansel is the recipient of Edmund Freidman Professional Achievement Award from American Society of Civil Engineers (ASCE), Engineer of the Year Award from ASCE Miami-Dade Chaper, Public Education Award from Florida Water Environment Foundation, Science Award from American Academy of Environmental Engineers and Scientists, and technology development research recognition from Kennedy Space Center, NASA. She is a Diplomate of American Academy of Water Resources Engineers, and Board Certified Environmental Engineer by the American Academy of Environmental Engineers. She is a registered professional engineer in Florida, USA. She has published over 200 journal papers, book chapters, technical reports and three books. Dr. Tansel is the editor in chief of the Journal of Environmental Management and Journal of Environmental Challenges and serves on the editorial board of ASCE Journal of Natural Hazards Review. She is an elected fellow of the American Society of Civil Engineers, the Environmental & Water Resources Institute, and the Water Environment Federation.

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.

Paul Boulos, Ph.D., BCEE, Hon.D.WRE, Dist.D.NE, Dist.M.ASCE, NAE

Dr. Boulos is a highly dynamic engineering and technology business leader and philanthropist, and a world's leading authority in computational hydraulics and water resources and navigation engineering. He has held several executive leadership roles in multi-million- and multi-billion-dollar companies including MWH Global, Stantec, Innovyze, and Digital Water Works. Dr. Boulos has authored ten authoritative textbooks and more than 200 technical papers on issues critical to the water and wastewater industry. He was elected to the grade of Distinguished Member of the American Society of Civil Engineers, the Society's highest honor; to the National Academy of Engineering (NAE), the highest professional distinction accorded to an engineer; and was inducted into the University of Kentucky College of Engineering Hall of Distinction, the most prestigious honor given by the university to its alumni. He was also awarded Honorary Diplomate status from the American Academy of Water Resources Engineers (AAWRE) and Distinguished Diplomate status in Navigation Engineering from the Academy of Coastal, Ocean, Port & Navigation Engineers (ACOPNE), the highest honors for both academies; and was recognized with the ASCE Parcel-Sverdrup Civil Engineering Management Award, the ASCE Simon W. Freese Environmental Engineering Award and Lecture, and the U.S. Island Medal of Honor. Dr. Boulos holds bachelor, master and doctorate degrees in civil engineering from the University of Kentucky and an MBA from Harvard University.

Darryl Davis, Ph.D., P.E., D.WRE, M.ASCE

Dr. Darryl W. Davis worked a half-century in the water resources field; thirty-six years as a permanent employee with the U.S. Army Corps of Engineers Hydrologic Engineering Center, Davis, CA; the last seventeen years as the Director. Prior employment was with California DWR during development of the State Water Project, and by a private consultant working in Asia, Africa, and the Middle East. Darryl has an MS degree in Civil Engineering from Stanford University. He is a registered PE in California and a founding Trustee of the American Academy of Water Resources Engineers. In 2005, he was selected by ASCE for the Julian Hinds award. Career highlights include advising on numerous projects, serving on many committees, shepherding development of the HEC-Next Generation family of software, and incorporation of risk-informed analysis in decisions. After Desert Storm, assisted Iraqi engineers in recovering operation of the Tigris and Euphrates reservoirs. Responsible stewardship of HEC and its fine staff for near 20 years. Retired after 36 years with HEC, Darryl joined the USACE Institute for Water Resources staff as a re-hired annuitant. For the next ten years, he worked part-time on national issues associated with dam and levee safety and flood risk management. As a member of the dam and levee safety teams, developed new policy and methods to transform the standards-based approach to safety to that of a risk-informed portfolio management process. Darryl retired for good in 2015.

Jose Salas, Ph.D., Dist.M.ASCE

Professor Emeritus Jose D. Salas taught at Colorado State University (CSU) for over 30 years. He advised 37 Ph.D. and 43 M.S. students and served as External Committee Member for doctoral students at universities in Canada, Korea, Spain, and Perú. Salas has been principal investigator of basic and applied research on hydrological and water resources projects. They were sponsored by national organizations, such as National Science Foundation, Geological Survey, Bureau of Reclamation, NOAA, USDA, AID, and Colorado Water Institute. Likewise, Salas has been lecturer and consultant in several countries sponsored by UNESCO, FAO, IICA, NATO, and the World Bank. Salas has written over 250 scientific and technical papers and reports, he is main author of the book, "Applied Modeling of Hydrologic Time Series", WRP, Littleton, Colorado, Chapter 19, McGraw Hill Handbook of Hydrology, 1993, and authored, co-authored, and co-edited several chapters of Books & Handbooks. Salas, served in Editorial Boards of: Journal of Hydrologic Engineering, Journal of Hydraulics Division of American Society of Civil Engineers (ASCE), Revista del Agua (Spain), Ingeniería Hidráulica (México), and Journal of Hydrology (Elsevier). He was honored with: 1996 ASCE Arid Lands Hydraulic Engineering Award; 1998 CSU's Abell Engineering Research Award; 2003 CSU/AGU Hydrology Days Award; 2005 National University of Engineering Antorcha-Habich Award (Perú); 2009 US Department of Interior Conservation Service Award; 2010 ASCE/EWRI V.T. Chow Award; 2015 ASCE Norman Medal; 2016 IAHS Commission on Statistical Hydrology, Best Paper Award; 2018 ASCE Distinguished Member, Member Engineering Academies of México and Perú.

Service to the Institute Award

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

Shirley Clark, Ph.D., P.E., D.WRE, F.EWRI, M.ASCE

Shirley E. Clark, Ph.D., P.E., has impacted the field of water resources engineering through the integration of her research, teaching, and service in order to foster stronger relationships between higher education and society. She serves on the faculty of the Pennsylvania State University Harrisburg, where she was the first female faculty member in the School of Science, Engineering, and Technology's 50-year history to rise through the ranks from Assistant Professor to Professor. Her contributions to student mentoring and research at Penn State Harrisburg were recognized with the 2015 Advising Award and 2016 Research Award. In 2016, she was also recognized with the Kathryn Towns' Women's

History Award for promoting the advancement of women students and staff at the university. While at Penn State Harrisburg, she has taught 20 different courses in environmental engineering, ranging from hydrology to risk assessment and has directed the graduate environmental programs for 8 years. Beyond Penn State Harrisburg, she has provided extensive service to the Environmental and Water Resources Institute (EWRI/ASCE). Her service includes chairing the Technical Coordination Executive Committee, being a member of the EWRI Governing Board, chairing the Urban Water Resources Research Council, and serving on multiple Standing Committees and Task Committees. She also was the chair for the Stormwater Summit, where the strategy for positioning EWRI in the stormwater arena was developed. Recently, she served as a corresponding member to the ASCE Task Committee for Credentialing. For these contributions, she is being recognized with the Service to the Institute award (EWRI) and the Urban Water Resources Research Council's Outstanding Service Award.

Conrad G. Keyes, Jr., ScD, P.E., P.S., HON.M.ASCE, D.WRE(Ret), CM WMA
Dr. Keyes was a member of the ASCE Board of Direction in 1991-94 and was Founding President of the Environmental and Water Resources Institute. Keyes was the first Institute Representative to the ASCE Executive Committee. He served on all ASCE Report Card Task Forces until 2005. Keyes has served on the ASCE Technical Activities, Publications (Chair), Codes & Standards (Chair), Education Activities, Professional Practice national committees, and on most of the nine ASCE/EWRI standards committees (Chair of four over 20 years). Dr. Keyes has served as President of ASCE NM Section, NM Engineering Foundation, and NM Society of Professional Engineers. Dr. Keyes has been a consultant to the Corps of Engineers, NM Interstate Stream Commission, and Sandia National Laboratories. After NMSU retirement, Dr. Keyes served as Texas Engineer Advisor on the Rio Grande Compact Commission, as Treaty and Environmental Officer for the U.S. Section, International Boundary & Water Commission (IBWC), and as El Paso Office Manager and Special Projects Director for Boyle Engineering Corporation. He has served as Chair of the Paso del Norte Watershed Council and as Co-Chair of the US IBWC Citizens Forum. Dr. Keyes has extensive background in atmospheric water management, irrigation and drainage, solar evaporation of brine, and water resources engineering. He retired in 1987 as Department Head of Civil, Agricultural, and Geological Engineering at New Mexico State University.

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.

Rahime Iclal Birtek, Turkey

Zarif Khero, Pakistan

Pranab Kumar Mohapatra, India

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.

Findlay Edwards, Ph.D., P.E., D.WRE, BCEE, F.ASCE
Rich Juricich, M.S.
Veera Gnaneswar Gude, Ph.D., P.E., BCEE, D.WRE, F.ASCE
Paul Block, Ph.D., P.E., M.ASCE
Fabian Bombardelli, Ph.D.
Suat Irmak, Ph.D., Fellow ASABE

Royce J. Tipton Award

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.

Richard H. Cuenca, Ph.D., P.E., M.ASCE

Richard Cuenca graduated with a B.S. in Aeronautical Engineering from California Polytechnic, San Luis Obispo in June 1971. He then entered the Peace Corps and was a volunteer in Ethiopia (now Eritrea) from 1971-73 where he established the Surveying Department at Asmara Technical School based on his experience working summers for highway departments in California and Alaska. Returning to the U.S., he completed a M.S. in Civil Engineering at California State University, Sacramento and went on for a Ph.D. in Civil Engineering at University of California, Davis graduating in 1978. He then joined the faculty in what was originally the Agricultural Engineering Department at Oregon State University working in irrigation engineering, water resources engineering and hydrologic modeling. He published a textbook on Irrigation System Design in 1989. He has been a member of ASCE and the Task Committee on Evapotranspiration in Irrigation and Hydrology since 1977. He received the State-of-the-Art of Civil Engineering award in 1992 and the Task Committee Excellence award in 2005 for his contributions to this Task Committee. Richard Cuenca is now Professor Emeritus in the Department of Biological and Ecological Engineering at Oregon State University. His research over the past 40 years includes measurement and simulation of root zone soil water distribution and soil hydraulic properties in field conditions, design of monitoring systems to determine local- and regional-scale evapotranspiration, and coupling ground-based measurement systems for evapotranspiration and soil water content to remote sensing platforms. He served as Program Director for Hydrologic Sciences at the National Science Foundation (2008-2010) where he reviewed hydrologic research proposals, served on the liaison team between NSF and the U.S. Agency for International Development, and was liaison between NSF and the UNESCO International Hydrology Programme. He received the NSF Director's Award for Collaborative Integration for his participation with the BREAD (Basic Research to Enable Agricultural Development) Working Group in 2010. He received the NASA Group Achievement Award for his participation in the NASA AirMOSS remote sensing project in 2015.

Journal of Irrigation and Drainage Engineering

Best Reviewer

Tony L. Wahl, M.S., P.E.

Outstanding Reviewer

Mohammad Bijankhan, Ph.D.

Best Discussion

Esteban Vega
Pau Marti, Ph.D.

Alvaro Royuela, Ph.D.

"For discussion of "Modification of the Hargreaves-Samani Model for Estimating Solar Radiation from Temperature and Humidity Data" by John D. Valiantzas," Journal of Irrigation and Drainage Engineering, Volume 145, Issue 1, January 2019

Honorable Mention Paper Awards

Manijeh Mahmoudzadeh Varzi
Kendall DeJonge, Ph.D.

Thomas Trout, Ph.D.
Ramchand Oad, Ph.D.

"Optimal Water Allocation under Deficit Irrigation in the Context of Colorado Water Law," Journal of Irrigation and Drainage Engineering, Volume 145, Issue 5, May 2019

Best Paper Award

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

"Estimating Peak Runoff Rates Using the Rational Method," Journal of Irrigation and Drainage Engineering, Volume 145, Issue 6, June 2019

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.

Panayiotis Diplas, Ph.D., F.EWRI, F.ASCE

Panos Diplas is currently the P.C. Rossin Professor of Civil and Environmental Engineering Department at Lehigh University. He joined Lehigh in 2013 as Department Chair and served in that capacity until 2020. Prior to coming to Lehigh University, he taught at Virginia Tech for 25 years. In 1999 he founded the Baker Environmental Hydraulics Laboratory and served as its Director for 14 years. More recently, he renovated and expanded the Imbt Environmental Hydraulics Laboratory at Lehigh into a state-of-the-art facility. His primary areas of research activities include sediment transport and river mechanics, scour around bridge piers and other hydraulic structures, stream restoration, wetland hydrodynamics, ecological hydraulics,sustainable development, and marine hydrokinetic energy generation. His work has been recognized by a number of awards, including the National Science Foundation Young Investigator, Hans Albert Einstein, and the Karl Emil Hilgard Hydraulic Prize. During the spring semester of 2007 he was the J.S. Brown Intertec Visiting Professor at the University of Minnesota. He has served on the editorial board of many journals and chaired several EWRI and ASCE technical committees. He has published widely and his work has been cited extensively. He has given invited and keynote presentations at many universities and conferences in countries around the world. He earned a Ph.D. degree in Civil Engineering from the University of Minnesota in 1986 and was a Postdoctoral Researcher at the University of Canterbury, NZ, and IIHR-Hydroscience & Engineering of the University of Iowa.

Karl Emil Hilgard Hydraulic Prize

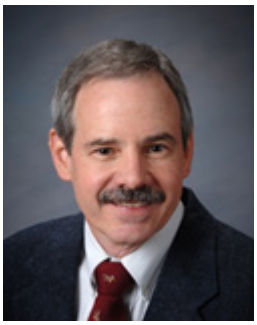
The Karl Emil Hilgard Hydraulic Prize is presented to the author or authors of the paper that is judged to be of superior merit in dealing with a problem of flowing water, either in theory or in practice.

Adel Emadzadeh, Ph.D. **Yee Meng Chiew, PH.D., M.ASCE**

"Settling Velocity of Porous Spherical Particles." Journal of Hydraulic Engineering, Volume 146, Issue 1, January 2020

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.

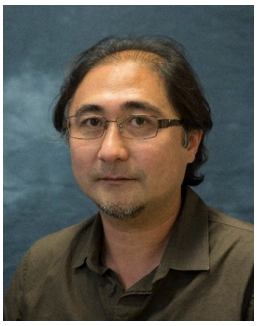


Albert J. Clemmens, Ph.D., P.E., D.WRE, M.ASCE

Dr. Clemmens worked for the U.S.D.A. Agricultural Research Service for 35 years. He was director of the U.S. Water Conservation Lab from 1998 – 2006 and Director of the U.S. Arid Lands Agricultural Research Center from 2008-2011. He was promoted to the Senior Technical grade (Super Grade) and eventually into the Senior Scientific Research Service, appointed by the Secretary of Agriculture. His research was primarily on surface irrigation, flow measurement, and canal automation. He retired in 2011, after which he worked for WEST Consultants for 8 years in hydrology and hydraulics. He received the Royce J. Tipton Award from ASCE in 2006.

Hans Albert Einstein Award

This 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.



Tian-Jian Hsu, Ph.D., M.ASCE

Tian-Jian Hsu earned a bachelor degree in Ocean Engineering from National Taiwan University in 1994 and PhD degree in Civil Engineering from Cornell University in 2002. He is currently Professor of Civil and Environmental Engineering at University of Delaware and the Director of Center for Applied Coastal Research. Hsu has published more than 70 peer-reviewed journal papers and book chapters. His main research covers numerical modeling/simulation of various non-cohesive and cohesive sediment transport problems, including nearshore sediment transport, beach profile evolution, wave bottom boundary layer and flocculation of cohesive sediments. More recently, his research extended toward heterogeneous sediment processes, such as the interaction of mud, sand and oil droplets, evolution of bedforms and scouring. Recognizing that tremendous progress made in the past decades in coastal science/engineering was due to the development of regional-scale open-sourcecoastal modeling systems, Hsu's research team devoted major efforts in the past several years to create open-source numerical modeling tools for fine-scale nearshore processes and sediment transport in the OpenFOAM framework. He led his graduate students and in collaboration with researchers at Laboratoire des Écoulements Géophysiques et Industriels (Grenoble, France) to create the open-source Eulerian two-phase model for sediment transport applications, called SedFoam and the more recent extension for its free-surface resolving capability, named SedWaveFoam.

Journal of Hydraulic Engineering

Best Paper

Adel Emadzadeh, Ph.D.

Yee Meng Chiew, PH.D., M.ASCE

"Settling Velocity of Porous Spherical Particles." Journal of Hydraulic Engineering, Volume 146, Issue 1, January 2020

Best Technical Note

Andrea Zampiron
Stuart Cameron
Isacco Valentini
Vladimir Nikora
Wada Patella
Mark Stewart

"Effects of Streamwise Ridges on Hydraulic Resistance in Open-Channel Flows," Journal of Hydraulic Engineering, Volume 146, Issue 1, January 2020

J.C. Stevens Award- Best Discussion

Arris S. Tijsseling, Ph.D.
Qingzhi Hou, Ph.D.
Shunda Li
Janek Laanearu, Ph.D.

"Discussion of "Rigid Water Column Model for Simulating the Emptying Process in a Pipeline Using Pressurized Air" by Oscar E. Coronado-Hernández, Vicente S. Fuertes-Miquel, Pedro L. Iglesias-Rey, and Francisco J. Martínez-Solano, Journal of Hydraulic Engineering, Volume 146, Issue 3, March 2020"

Simon W. Freese Environmental Engineering Award and Keynote Lecture

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

Pedro J. Alvarez, Ph.D., P.E., NAE
Pedro J.J. Alvarez is the George R. Brown Professor of Civil and Environmental Engineering at Rice University, where he also serves as founding Director of the NSF Engineering Research Center on Nanotechnology-Enabled Water Treatment (NEWT). Alvarez serves also on the board of directors of the Houston Endowment Inc., which is a private foundation to improve quality of life for the residents of greater Houston. His research interests include environmental implications and applications of nano-technology, bioremediation, fate and transport of toxic chemicals, water footprint of biofuels, water treatment and reuse, and antibiotic resistance control. Professor Alvarez received the B. Eng. Degree in Civil Engineering from McGill University and MS and Ph.D. degrees in Environmental Engineering from the University of Michigan. He is the 2012 Clarke Prize laureate for outstanding research in water science and technology, and also won the AAEES Grand Prize for Excellence in Environmental Engineering and Science. Past honors include a Collegiate Excellence in Teaching Award, President of the Association of Environmental Engineering and Science Professors (AEESP), the Perry McCarty AEESP Founders' Award for Outstanding Contributions to Environmental Engineering Education and Practice, the AEESP Frontiers in Research Award, the WEF McKee Medal for Groundwater Protection, the SERDP cleanup project of the year award, the Brown and Caldwell lifetime Achievement Award for Site Remediation, and various best paper awards with his students. He is an Associate Editor of Environmental Science and Technology and previously served on the scientific advisory board of the EPA and of the advisory committee of the NSF Engineering Directorate. Prof. Alvarez was elected to the National Academy of Engineering for outstanding contributions to the practice and pedagogy of bioremediation and environmental nanotechnology.

Rudolph Hering Medal

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

Boya Wang
Chen Zhou
Bruce Rittmann, Ph.D., Dist.M.ASCE, NAE
Rosa Krajmalnik-Brown
Yihau Luo
Youneng Tang

"Modeling Trichloroethene Reduction, Methanogenesis, and Homoacetogenesis in a H2-Based Biofilm," Journal of Environmental Engineering, Volume 146, Issue 2, February 2020

Wesley W. Horner Award

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

Glen Daigger, Ph.D., P.E., BCEE, NAE
Nancy G. Love, Ph.D., P.E., M.ASCE
Mazdak Arabi, Ph.D., M.ASCE
Sybil Sharvelle, Ph.D., M.ASCE

"Progress and Promise Transitioning to the One Water/Resource Recovery Integrated Urban Water Management Systems," Journal of Environmental Engineering, Volume 145, Issue 10, October 2019

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.

Kyle Flynn, Ph.D., P.E., P.H., M.ASCE
Steven Chapra, Ph.D., F.ASCE

"Evaluating Hydraulic Habitat Suitability of Filamentous Algae Using an Unmanned Aerial Vehicle and Acoustic Doppler Current Profiler," Journal of Environmental Engineering, Volume 146, Issue 3, March 2020

Journal of Hazardous, Toxic and Radioactive Waste

Best Theoretical Oriented Paper

Pratik Kumar
Satinder Kaur Brar
Rama Pulicharla
Azadeh J. Kermanshahi-pour

"Simple Technoeconomic Approach to Chlortetracycline Removal from Wastewater Treatment Plant" Journal of Hazardous, Toxic and Radioactive Waste, Volume 23, Issue 3, July 2019

Best Practice Oriented Paper

Tamlyn S. Naidu, Ph.D.
Craig M. Sheridan
Lizelle D. Van Dyk
Dennis Grubb, Ph.D., P.E., M.ASCE

"Sugar and Steel By-Product Utilization in Acid Mine Drainage Remediation," Journal of Hazardous, Toxic and Radioactive Waste, Volume 24, Issue 1, January 2020

Journal of Sustainable Water in the Built Environment

Best Case Study

Zack L. DelGrosso, S.M.ASCE
Randel L. Dymond, Ph.D., P.E., F.ASCE
Clayton C. Hodges, Ph.D., P.E.

"Identifying Key Factors for Implementation and Maintenance of Green Stormwater Infrastructure," Journal of Sustainable Water in the Built Environment, Volume 5, Issue 3, August 2019

Best Paper

Reshmina William, Ph.D., S.M.ASCE
Ashlynn S. Stillwell, Ph.D., A.M.ASCE
Paolo Gardoni

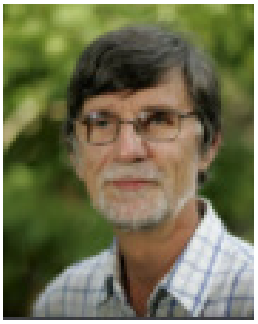
"Reliability-Based Approach to Investigating Long-Term Clogging in Green Stormwater Infrastructure," Journal of Sustainable Water in the Built Environment Volume 5, Issue 1, February 2019

Urban Water Resources Research Council Outstanding Service Award

Shirley Clark, Ph.D., P.E., D.WRE, F.EWRI, M.ASCE

Ven Te Chow Award & Keynote Lecture

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

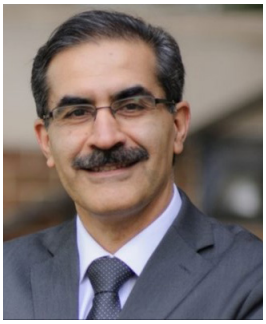


George Kuczera, Ph.D., F.Eng Australia
Professor Kuczera is recognised as a world authority on the theory and application of Bayesian statistical methods in hydrology and water resources. His research addresses the fundamental problem in application of hydrology to water engineering, namely limited predictive ability arising from large errors in data and model errors arising from limited understanding of dynamics and complexity. His work has focused on developing methods that make the best use of limited information and quantifying uncertainty to inform the decision making process. In recent years he and his team have developed BATEA, Bayesian total error analysis, which provides a comprehensive treatment of all major sources of uncertainty affecting hydrologic prediction.

He has made significant contributions in the area of water resources systems analysis. In recent years his team has developed decision support systems for urban water resource planning that use multi-objective optimization to identify optimal trade-off portfolios of capital and operational options. His work on integrated urban water management seeks to maximize community benefits by integrating water supply, storm water and waste water at small to large scales.

Arid Lands Hydraulic Engineering Award

This award recognizes original contributions in hydraulics, hydrology, planning, irrigation and drainage, hydro-electric power development, navigation applicable to arid or semi-arid climates, or contributions to the understanding and development of new technology in river basins.



Hamid Moradkhani, Ph.D., P.E., F.ASCE, D.RWR, F.EWRI

Dr. Hamid Moradkhani is the Alton N. Scott chair of hydrology and water resources in the Department of Civil, Construction and Environmental Engineering at the University of Alabama. He also serves as founding Director of the Centre for Complex Hydrosystems Research at the University of Alabama. Previously, he was a professor of Civil and Environmental Engineering and director of Remote Sensing and Water Resources lab at Portland State University. He is a pioneer in developing state-of-the-art Bayesian data assimilation and uncertainty quantification and his methods are widely used globally in different disciplines and variety of applications, in particular on monitoring and forecasting extreme events including flood, drought, heatwave and fire. His research emphasis is on harnessing data revolution, predictive science, machine learning, data analytics, remote sensing and high-performance computing in the context of Earth system and hydroclimate science. His research also advances our understanding of hydrologic science through modeling climate-water-human interactions and food-energy-water nexus. He is the Editor of Earth's Future for the American Geophysical Union, Guest editor of several special issues and on the Editorial Board of Water Recourses Research, Journal of Hydrology and few others. He was selected as Samueli School of Engineering's Hall of Fame at the University of California, Irvine, and honorary distinguished professor at Wuhan University. He is a licensed professional engineer and on the advisory board and panel of several international networks on flood and drought. He is a Fellow of the American Society of Civil Engineers, Fellow of the Environmental and Water Resources Institute, and the Diplomat of water resources engineering. He is the recipient of several awards, including the Outstanding Research and Innovation Award, from the American Association of Water Resources Engineers, Faculty Research Excellence Award, Branford P. Millar Award, for exceptional scholarship in research, instruction, university and public service.

Journal of Hydrologic Engineering

Best Case Study

Md. Safat Sikder, Ph.D.
Faisal Hossain, Ph.D., M.ASCE
Hyongki Lee, Ph.D.
Shahryar Ahmad, Ph.D.
Abebe S. Gebregiorgis, Ph.D., A.M.ASCE

"Case Study: Rapid Urban Inundation Forecasting Technique Based on Quantitative Precipitation Forecast for Houston and Harris County Flood Control District," Journal of Hydrologic Engineering, Volume 24, Issue 8, August 2019

Best Discussion

Dipteek Parmar, Ph.D.
A.K. Keshari, Ph.D.

"Discussion of "Water Quality-Based Environmental Flow under Plausible Temperature and Pollution Scenarios," by Shushobhit Chaudhary, C. T. Dhanya, Arun Kumar, and Rehana Shaik, Journal of Hydrologic Engineering, Volume 24, Issue 8, June 2020"

Best Technical Note

C. Prakash Khedun, Ph.D.
Aaron R. Byrd, M.ASCE
Vijay P. Singh, Ph.D., P.E., Dist.M.ASCE

"Joint Probability of Extreme Streamflow and Its Day of Occurrence," Journal of Hydrologic Engineering, Volume 24, Issue 8, August 2019

Best Associate Editor

Ali Ercan, Ph.D.

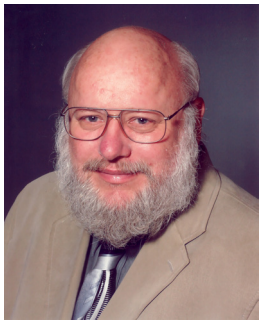
Best Technical Paper

Giorgio Baiamonte, Ph.D.

"SCS Curve Number and Green-Ampt Infiltration Models," Journal of Hydrologic Engineering, Volume 24, Issue 10, October 2019

Julian Hinds Award and Keynote 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.



Robert Pitt, Ph.D., P.E., D.WRE, M.ASCE
Bob Pitt is the Emeritus Cudworth Professor of Urban Water Systems in the Department of Civil, Construction, and Environmental Engineering at the University of Alabama. Prior to his 28 year academic career, Pitt was a senior engineer in industry and government for 16 years. He has conducted research concerning the effects, sources, and control of urban runoff and has written more than 100 publications, including journal articles, book chapters, research reports, and several books. He is a registered Engineer (WI), a Board-Certified Environmental Engineer by the American Academy of Environmental Engineers, and a Diplomate of the American Academy of Water Resources Engineers. He has served on numerous professional committees in the U.S. and abroad. He and his graduate students have conducted research on integrating green infrastructure controls in combined sewer areas; construction site erosion characterization and control, characterization and treatment of emerging contaminants in wet weather flows; stormwater treatment using media filtration; urban PAH sources and fates in marine waters; heavy metal releases from drainage system components; groundwater impacts from stormwater infiltration; beneficial uses of stormwater in times of changing weather; sources and fate of indicator bacteria in urban areas; and continued work on enhancements to the Source Loading and Management Model (WinSLAMM).

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.

Juneseok Lee, Ph.D., P.E., M.ASCE, D.WRE

Dr. Lee's research focuses primarily on drinking water infrastructure analytics and Premise Plumbing Issues. His work has been supported by major grants from funding bodies such as the National Science Foundation, the US Environmental Protection Agency, the California Water Service Company, and Hewlett-Packard. Dr. Lee has about 70+ technical publications, including articles in highly respected journals and conference proceedings, and has delivered numerous presentations at national and international conferences on the environment, water resources, and infrastructure engineering. In 2018 & 2020, he won the Best Paper Awards from the American Water Works Association (AWWA)'s Distribution & Plant Operations Division. Dr. Lee, who has a Ph.D. in Civil and Environmental Engineering from Virginia Tech, is a registered Professional Engineer of Civil Engineering in the state of California and board-certified Diplomate, Water Resources Engineer (D.WRE) from the American Academy of Water Resources Engineers. He currently serves as an Associate Editor of the ASCE Journal of Water Resources Planning and Management.

Journal of Water Resources Planning and Management

Best Research Oriented Paper

Federica Bertoni
Andrea Castelletti, Ph.D.
Matteo Giuliani, Ph.D.

"Integrated Design of Dam Size and Operations via Reinforcement Learning," Journal of Water Resources Planning and Management, Volume 146, Issue 4, April 2020

Quentin Martin Best Practice Oriented Paper

Rachel Baum
Gregory W. Characklis, Ph.D.

"Mitigating Drought-Related Financial Risks for Water Utilities via Integration of Risk Pooling and Reinsurance," Journal of Water Resources Planning and Management, Volume 146, Issue 6, June 2020

Best Policy Oriented Paper

A.F.M. Kamal Chowdhury, Ph.D.
Arijit Bagchi, Ph.D.
Thanh Duc Dang, Ph.D.
Stefano Galelli, Ph.D., M.ASCE

"Expected Benefits of Laos' Hydropower Development Curbed by Hydro-Climatic Variability and Limited Transmission Capacity: Opportunities to Reform," Journal of Water Resources Planning and Management, Volume 146, Issue 10, October 2020

Seminal Paper Award

Janet M. Wagner
David H. Marks, Ph.D.
Uri Shamir, Ph.D., F.ASCE

"Water Distribution Reliability: Analytical Methods," Journal of Water Resources Planning and Management, Volume 114, Issue 3, 1988

Best Associate Editor

Meghna Babbar-Sebens, Ph.D.

Best Reviewer

Jared Smith, Ph.D.

State-of-the-Art in Civil Engineering Award

Evan P. O'Brien
Irene Xagoraraki, Ph.D.

Walter L. Huber Civil Engineering Research Prize

Ming Xu, Ph.D., A.M.ASCE
Meagan S. Mauter, Ph.D., EIT