WORLD ENVIRONMENTAL & WATER RESOURCES CONGRESS

Minneapolis, MN | June 3-7, 2018

Hyatt Regency Minneapolis

AWARDS PROGRAM

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Luncheon Schedule

Monday, June 4
12:15 - 1:45 p.m.

Welcome & Awards Luncheon - featuring keynote lecturer:
Deborah H. Lee, P.E., Ph.D., D.WRE, SES Director, NOAA Great Lakes Environmental Research Laboratory

Tuesday, June 5
12:15 - 1:45 p.m.

Environmental/Water, Wastewater & Stormwater Councils Luncheon & Awards Lecture

Hydraulics & Waterways Council/WDSA Luncheon & Awards Lecture

Wednesday, June 6
12:15 - 1:45 p.m.

Irrigation & Drainage Council Luncheon & Awards Lecture

Planning & Management Council Luncheon & Awards Lecture

Student Luncheon

Thursday, June 7
12:15 - 1:45 p.m.

Watershed Council Luncheon & Awards Lecture

Professional Development: *Engineer Your Career* Luncheon

Professional Practice Ethics & Leadership Award

This award promotes and recognizes civil engineering leadership in professional practice and ethics.

Steven K. Starrett, Ph.D., P.E., D.WRE, F.ASCE, F.EWRI, is this year's recipient of the Professional Practice Ethics & Leadership award, as well as the Service to the Insitute award.

Dr. Starrett obtained a BS in civil engineering from Missouri University of Science & Technology in 1989. He obtained an M.S. and Ph.D. in environmental engineering from Iowa State University in 1992 and 1994, respectively.

He is a licensed Professional Engineer in Kansas, Missouri, Oklahoma, Arkansas and Texas. Dr. served on the civil engineering faculty at Kansas State University for 23 years and was also the Director of the Honor and Integrity System for about four years. Dr. Starrett became the Dean of Engineering and Engineering Technology at LeTourneau University in 2017. Dr. Starrett has been a long-time member of the EWRI Watershed Management Technical Committee. He was the Technical Program Chair for the 2009 EWRI World Environmental and Water Resources Congress and served as the Chair of the EWRI Conference Program Committee.

Service to the Institute Award

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

Dr. Steve Starrett, Ph.D., P.E., D.WRE, F.ASCE, F.EWRI, served as the EWRI Treasurer, Vice President, President Elect and President in 2017. In addition to his contributions to water resources
engineering he has made significant contributions to engineering ethics education. Dr. Starrett has facilitated numerous engineering ethics workshops at EWRI Congress, IPWE Conference, ASCE Annual Convention, and the Construction Institute Summit.

One of his graduate level engineering ethics courses was by the National Academy of Engineering as an exemplary engineering ethics university course. Dr. Starrett along with co-authors Drs. Bertha and Lara have recently published Engineering Ethics: Real World Case Studies with ASCE press. Steve Starrett enjoys the great outdoors, hunting, fishing, visiting national parks, riding motorcycles, and attending bluegrass

Steven Starrett

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.

Jeanette Brown

Jeanette Brown, P.E., F.ASCE, D.WRE, is a Research Assistant Professor at Manhattan College, Department of Civil and Environmental Engineering and former Executive Director of the Stamford Water Pollution Control Authority. She is a registered professional engineer, a Board Certified Environmental Engineer, and a Diplomate in the American Academy of Water Resource Engineers.

She has held many leadership positions including President of EWRI (2007), President of WEF (2010-2011), and President of AAEES (2004). She currently serves on the Board of the Water Research Foundation and the Environmental Engineering Foundation of AAEES. She has published and presented numerous papers on nutrient removal, biosolids management, and history of environmental engineering.

Lifetime Achievement Award

Robert M. Hirsch

Robert M. Hirsch, Ph.D., Fellow AAAS, is a Research Hydrologist with the U.S. Geological Survey (USGS) located at the USGS headquarters in Reston, V.A. From 1994 through 2008, he served as the Chief Hydrologist of the USGS. In this capacity, Dr. Hirsch was responsible for all USGS water science programs. These programs encompass research and monitoring of the nation's ground water and surface water resources including issues of water quantity as well as quality. He earned a B.A. in Geology from Earlham College, an M.S. in Geology from the University of Washington, and a Ph.D. from the Johns Hopkins University Department of Geography and Environmental Engineering.

He began his USGS career in 1976 as a hydrologist and has conducted research on water supply, water quality, pollutant transport, and flood frequency analysis. He co-authored the textbook "Statistical Methods in Water Resources." Since returning to a research position in 2008, he has focused his efforts on describing long-term changes in streamflow and river water quality. This includes exploring century-scale trends in flooding nationwideas well as the development and applications of new methods for characterizing trends in river water quality in many regions of the U.S. He has published applications of these methods to issues including nutrients, chloride, and mercury. This research has provided important insights on causes of the observed trends and has also resulted in the development of software (the EGRET R-Package "Exploration and Graphics for RivEr Trends") to help scientists analyze long-term water quality and quantity records.

Lifetime Achievement Award

Larry A. Roesner

Larry A. Roesner, Ph.D., NAE, Life Member ASCE, D.WRE, is Emeritus Professor of Urban Water Infrastructure Systems in the Department of Civil Engineering at Colorado State University. His latest research topics include Integrated Management of Urban Water Systems to minimize the amount of water that must be imported and minimizing the amount of water that is discharged as waste.

His research also addressed developing sustainable urban drainage practices that ensure that urban streams will remain geomorphically and ecologically stable following urban development in a watershed. Dr. Roesner taught graduate courses on Urban Water Systems Analysis, Urban Stormwater Management, and Water Quality Modeling. Prior to coming to CSU, he was employed by Camp Dresser & McKee where he practiced urban water resources management for 31 years, becoming internationally recognized as an expert in the development and application of hydrologic, hydraulic, and water quality simulation models. He is a principal developer of the Corps of Engineers model STORM, a simplified urban stormwater management model, and EPA's SWMM EXTRAN model, a sophisticated flow routing model for urban wastewater and drainage systems.

Applications experience includes studies across the United States, plus studies in Canada, Germany, Scotland, Malaysia, Korea and Brazil. Dr. Roesner is also the principal author of QUAL II, a stream water quality model developed for USEPA which simulates 11 water quality parameters. Experience with QUAL-II appli¬cations includes the United States and Canada, plus Romania, Uruguay, and Brazil.

Outstanding Institute Chapter

Small Chapter: Austin EWRI Chapter

The Austin EWRI Chapter covers 17 counties in Central Texas where most of active members are located within Travis County and neighboring Williamson & Hays counties.

The Austin EWRI Chapter continued their signature annual event for the 12th year: the Continuing Education Workshop. They hosted community events such as the "Rain Garden Build Day," an outreach to the City of Austin and its K-12 students, parents, and teachers. It incorporates after school peer-mentoring and environmental education programs. The Chapter also expanded its scholarship awards to both engineering & non-engineering students. Additional revenues were budgeted towards its Rain Garden Outreach Projects and to support the nonprofit "Austin Youth River Watch."

The Chapter estimates that about 62 firms, public agencies and universities sent attendees to their annual event and other activities.

Large Section: Chicago EWRI Chapter

The Chicago EWRI Chapter was very active 2016-2017, hosting a variety of monthly activities. The Chicago EWRI Chapter is part of the ASCE Illinois Section, spanning 17 counties in Northern Illinois with over 1,000 active members.

The Chicago Chapter sponsored/ cosponsored more than 15 activities this year, which include technical seminars, tours, luncheons and workshops. They also hosted volunteer, outreach, and social events, while maintaining regular committee meetings. Technical events featured a Reclamation Plant tour, and a Stormwater BMP's to Risk-based Modeling course. Some of these events were held in working with other associations and ASCE Institutes in the area. Outreach events sponsored competitions & awards, the Dream Big Movie Premiere to K-12 students, and to river cleanup. As a result, funds were raised to bring clean water to children in Africa and to offer cholarships to students of Northwestern University.

Over 455 Chicago EWRI members participated in EWRI events and about 400 are engineers. They promote inclusion by engaging Illinois Section's YMG, student chapters, minority affairs and student outreach committees.

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.

Arjumand Zaidi

Ph.D.
Jamshoro, Pakistan
Senior Research Fellow, US Pakistan Center for Advanced Studies in Water
Hosted by: Steven Burian

Jonas Dobias

City of Guatemala, Guatemala
Water Expert Adviser, Ministry of Energy and Mines of Guatemala
Hosted by: Carlo Salvinelli

Eugene Lendzemo

Kumbo, Cameroon
Technical Manager, Greenery
Hosted by: Joshua Knight

If you are interested in learning more, visit:www.asce.org/environmental-and-water-resources-engineering/visiting-international-fellowship/

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.

Nigel Quinn

Ph.D., P.E., D.WRE, F.ASCE. F.IEMSS, F.EWRI

Jayantha Obeysekera

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

Brett Phillips

Ph.D., F.ASCE, F.IEAust, FTSE, CPEng, NER, IntPE(Aus), F.EWRI

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.

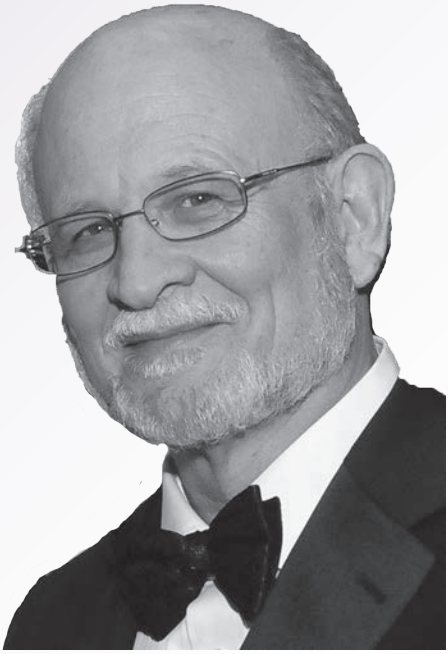
The founder of Trussell Technologies, Inc., R. Rhodes Trussell, Ph.D., P.E., BCEE, NAE, has a Ph.D. from University of California at Berkeley. He is a Board Certified Environmental Engineer and a registered engineer in the state of California. He has 50 years of experience and is author or co-author of over 230 publications and 6 books, including all three editions of the MWH book on Water Treatment.

Before founding Trussell Technologies he spent 33 years with MWH (now Stantec), the last 15 years as a member of their Executive Committee and Board of Directors. He has been involved in the design of more than 150 water treatment plants, ranging in capacity from 1 to 900 mgd.

Trussell served eighteen years with EPA's Science Advisory Board where he chaired the Committee on Drinking Water and six years on the Water Science and Technology Board for the National Academies, where was also Chair. Trussell has been a member of ten Academy committees on water issues. At the present time he is a member of the Committee on Grand Challenges for Environmental Engineering and Science in the 21st Century.

R. Rhodes Trussell

For extraordinary accomplishments in using fundamental scientific principles, and current research findings to solve the most challenging water quality problems.



Rudolph Hering Medal

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

For the Paper: *Cryptosporidium and Giardia in Water: Reassessment of Occurrence and Significance*

Jerry E. Ongerth

Jerry Ongerth, Ph.D., P.E., F.ASCE, is a Principal Honorary Fellow in Environ-mental Engineering at the University of Wollongong. He is an internationally recognized expert in water quality assessment and management for public water supply and specialist in the monitoring and control of *Cryptosporidium* and *Giardia* in water and wastewater.

An Environmental Engineer, Dr. Ongerth has expertise in planning and implementing integrated water management systems resulting from applied engineering experience in the USA, and in research and consulting activities in both the USA and Australia. For over 35 years he has developed and refined special expertise in the design and implementation of water quality monitoring systems for both microorganisms and trace organic contaminants in water.

Dr. Ongerth earned his BS degree in Civil Engineering from the University of California, Berkeley, and both MS and Ph.D. degrees from the University of Michigan. He is a registered Civil Engineer in California and Michigan; a Fellow of the American Society of Civil Engineers; and a Life Member of the American Water Works Association.

He has over 45 years of applied environmental engineering, teaching, and research experience in the USA and Australia. As an independent consultant he has worked for clients including Alcoa, the US Army Corps of Engineers, the Washington State Highway Department, Lyonnais des Eaux, NSW Department of Public Works & Services, and private food and meat processors. As project engineer and project manager for Brown & Caldwell, he conducted projects including water treatment, combined sewer overflow and stormwater management, contaminated site assessment and remediation, mine site restoration, wastewater reclamation and treatment, and hazardous waste management. His teaching at universities in the USA and Australia has covered the spectrum of environmental engineering fundamentals. His principal research interests, documented by over 60 peer-reviewed technical papers, have focused on public health aspects of public water supply and on wastewater reclamation and reuse.

Wesley W. Horner Award

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

Krishna R. Reddy, Ph.D., P.E., D.GE, ENV SP, F.ASCE
Lead Author, University of Illinois

Hanumanth Kulkarni, Aff.M.ASCE

Rajiv K. Giri, S.M.ASCE, University of Illinois

For the Paper: ***Modeling Coupled Hydromechanical Behavior of Landfilled Waste in Bioreactor Landfills***
Journal of Hazardous, Toxic, and Radioactive Waste

Expression of Appreciation

Lee Odell

For his contributions to the Water Supply, Treatment and Distribution Technical Committee and EWRI.

Lee Odell, P.E. is the Chair of ASCE/EWRI Water Supply, Treatment and Distribution Engineering Committee. He is a Vice President and is the Global Service Lead for Groundwater Treatment with CH2M, now Jacobs. Lee has a B.S., Civil Engineering, University of Iowa, and a M.S., Environmental Engineering, University of Iowa B.S., Civil Engineering, University of Iowa.

He was the recipient of the Neil B. Fisher Fellowship. He is a 2017 recipient of the AWWA Pacific Northwest Section Powell Lindsey Award. He is the Author of the AWWA Published Book "Treatment Technologies" for Groundwater, and has been a consulting engineer specializing in drinking water treatment for 28 years.

Journal of Hazardous, Toxic, and Radioactive Waste

Best Theoretical-Oriented Paper

Modeling and Prediction of Hourly Ambient Ozone (O_3) and Oxides of Nitrogen (NOx) Concentration Using Artificial Neural Network and Decision Tree Algorithms for an Urban Intersection in India, Journal of Hazardous, Toxic, and Radioactive Waste

Chandrra Sekar
C. S. P. Ojha; B. R. Gurjar
Manish Kumar Goyal

Best Practice-Oriented Paper

Development of Risk Assessment of and Management Strategies for TPH-Contaminated Sites Using TPH Fraction Methods

Z. H. Yang
Rao Y. Surampalli, Dist.M.ASCE
P. J. Lien
C. M. Kao
W.S. Huang

Hunter Rouse Hydraulic Engineering Award

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.

Larry Weber, Ph.D., P.E., M.ASCE, currently serves as the Executive Associate Dean for the College of Engineering at the University of Iowa. In this position Weber serves as the Chief Operating Officer for the College, with administrative responsibility for the research, teaching and service programs of the College and its associated centers and institutes. Previously from 2004 – 2017, Weber served as the Director of IIHR – Hydroscience and Engineering, the United States' oldest academic research program focused on hydraulics, hydrology and fluid mechanics. He was also the co-founder of the Iowa Flood Center, formed in 2009 as the nation's only state-funded center focused on flood mapping, flood mitigation and flood-science research. In 2013 Weber co-founded the Iowa Nutrient Research Center the nation's only academic center focused developing scientific understanding for the reduction of non-point source agricultural nutrient runoff.

Weber is considered a thought-leader on water resources program development throughout the United States and around the world. He has developed national and inernational research, educational and service programs of significant strength. These programs are cross-cutting, including faculty, students and staff in engineering, environmental sciences, social sciences, politicval science, communications, and the visual and performing arts. Additionally, the technology developed through this research has led to significant partnerships with state and federal agencies, and both environmental groups and agricultural commodity organizations.

During recent years, Weber's research has focused on watershed sustainability and increasing community resilience across all sizes of cities, from small rural communities to large urban centers. This research follows a systematic process of hydrologic assessment, setting goals, developing watershed plans, installing monitoring systems, project construction, community engagement, indentification of vulnerable populations, and details surveys and quantatative assessment.

Larry J. Weber

For research in monitoring, modeling, and visualization of water quantity and quality at the watershed scale and for cofounding the Iowa Nutrient Research Center at Iowa State University.

Karl Emil Hilgard 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.

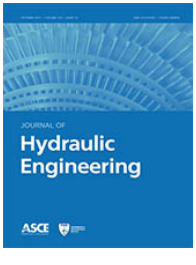
Abul Basar M. Baki
Lead Author

Wenming Zhang
Ph.D.

David Z. Zhu
Ph.D., M.ASCE

Nallamuthu Rajaratnam
Ph.D., F.ASCE

For the Paper: ***Flow Structures in the Vicinity of a Submerged Boulder within a Boulder Array***
Journal of Hydraulic Engineering



Journal of Hydraulic Engineering

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.

Blake P. Tullis

For significant contributions to hydraulic engineering in the areas of nonlinear weir spillway design, air vent sizing small embankment dam bottom outlets, culvert hydraulics, fish passage, physical modeling in support of hydraulic structure engineers through applied, innovative, hands-on design courses.

Blake P. Tullis , Ph.D., F.EWRI, M.ASCE is a professor of civil and environmental engineering at Utah State University (USA), where he conducts research at the Utah Water Research Laboratory in the areas of spillways hydraulics, culverts, fish passage, and erosion control. A significant focus has been the hydraulic performance of nonlinear weirs (e.g., labyrinth and piano key weirs). He teaches fluid mechanics, pipeline design, and hydraulic structure design courses.

Best Technical Note

Statistical description on the role of turbulence and grain interference on particle entrainment from gravel beds
Martina Cecchetto Simon Tait, Ph.D
Matteo Tregnaghi Andrea Marion, Ph.D.
Andrea Bottacin-Busolin, Ph.D.
Simon Tait, Ph.D.
Andrea Marion, Ph.D.

J.C. Stevens Award

The J.C. Stevens Award is given to the best discussion of a paper in the field of hydraulics (including fluid mechanics and hydrology).

Bruno Brunone

Bruno Brunone, born in Napoli (Italy) in 1958, received the MASc (1983) and Ph.D. (1986) all in Civil-Hydraulic Engineering from the University of Napoli Federico II where he has been an assistant professor. At the University of Perugia he has been an associate professor (1992-2000) and is a professor from 2000. From its foundation (1997) he is the Director of the Water Engineering Laboratory. Brunone, member ASCE, is an associate editor of the J. of Hydraulic Engineering and has served as a guest editor and reviewer for several International Journals. He has been the President of the Organizing Committee of the 12th Int. Conf. on "Computing and Control for the Water Industry" CCWI2013), and the 16th Int. Conf. on "Water Distribution System Analysis" (WDSA2014). In 2003 he founded the series of the biennial Italian Conferences on pipe system management and organized its five editions.

Brunone has been awarded 54 grants worth from International, National, and local sources. He is Co-I in the project Smart UWSS (http://smartuws.ust.hk/). His research interests concern pipe system management with the attention focused on transient testbased techniques for fault detection, modeling of transients – with particular regard to unsteady friction and viscoelastic effects – and pressure control by PRVs. In 2016 he received the Sustainability Award for the Portable Pressure Wave Maker (PPWM) device by H2O Bologna International Water Exibition. Brunone's publications include 134 Journal articles, 130 conference papers and 27 book chapters and books (ISI total publications: 108; h-index: 23; sum of times cited: 1477).

For his Discussion: *"Hydraulic Transients in Viscoelastic Branches Pipelines," in the Journal of Hydraulic Engineering. August 2016.*

Hans Albert Einstein Award

This award acknowledges significant contribution to the engineering profession in the area of erosion control, sedimentation, and/or waterway development either in teaching, research, planning, design, or management.

Thanos Papanicolaou

For connecting upland erosion to in-stream transport and geomorphology; new theories on source provenance and connectivity predicting stochastic transport, bedload turbulent interactions, cohesive sediments, and sensor technology for prediction of movement.

Thanos Papanicolaou, Ph.D., P.E., F.ASCE, Professor and Henry Goodrich Chair of Excellence in Civil and Environmental Engineering at the University of Tennessee, Knoxville, is the Director of the Hydraulics and Sedimentation Laboratory. Since receiving his MS and Ph.D. degrees in Civil and Environmental Engineering from Virginia Tech, he has been actively involved in experimental, fundamental, and applied research in environmental fluid and sediment transport mechanics, as well as in numerical modeling of riverine and watershed transport processes. Having authored over 100 articles in 50 different discipline journals, he is currently the Director of the Tennessee Water Resources Center, Director of the Hydraulics and Sedimentation Lab as well as the chief Editor of the Journal of Hydraulic Engineering, ASCE.

He is an active member of several professional societies including both AGU and EGU, the American Society of Civil Engineers, American Water Resources Association, Soil and Water Conservation Society, American Society of Agricultural and Biological Engineers, and the American Society of Engineering Educators.

He has been honored to receive from ASCE both the Walter Huber and Hunter Rouse awards. He has also been inducted to the Iowa Academy of Science. One of his greatest achievements are his students who have gone on to receive faculty positions, as well as work in governmental agencies and consulting firms, both here and overseas.

Julian Hinds Award

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.

Daene McKinney, Ph.D., P.E. M.ASCE, is the W.A. Cunningham Professor and Associate Chair in the Department of Civil, Architectural and Environmental Engineering at the University of Texas at Austin. He is currently the co-manager of the NSF grant "CNH-L: Science-Based, Community-Driven Approach to Reducing Glacier Lake Outburst Flood Risks in the Nepal Himalaya". Recently, he was technical lead on the USAID "Securing Mountain Water and Livelihoods" project and co-manager of the USAID High Mountains Adaptation Partnership (HiMAP) Program to broaden understanding of high mountain environments while supporting communities who rely on the mountains and glacial watershed systems to sustain their lives, including risk assessment of glacial lakes in Nepal and Peru.

Dr. McKinney was the technical lead on the Physical Assessment Project, a decade-long bi-national US-Mexico effort to develop improved management strategies for the Rio Grande basin. He was a key member of the team that helped negotiate the 1998 Syr Darya Transboundary Agreement in Central Asia, developing a model used in the negotiations and serving as Team Leader for the USAID Environmental Policy and Institutions for Central Asia Program. Dr. McKinney's research interests include sustainable management of water resources, especially the integration of engineering, economic, environmental and political considerations in transboundary basins.

His current research focuses on impacts of climate change in glacier-dominated river basins, water and environmental issues in transboundary settings, and the application of cooperative game theoretic approaches to transboundary river basin negotiations. Dr. McKinney has served as the Chief Editor for the ASCE Journal of Water Resources Planning and Management and he is a current Governor (alternate) of the World Water Council. Dr. McKinney is a licensed Professional Engineer in Texas.

Daene C. McKinney

For significant and lasting contributions in groundwater systems modeling, sustainable management of water resources, and transboundary water issues; outstanding service to the profession; and exemplary application of research to national and international water resources problems.

Service to the Profession Award

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.

Gregory W. Characklis

In recognition for oustanding service to the profession that is advancing national and international research agendas in environmental and water resources systems eingineering.

Gregory Characklis, Ph.D., M.ASCE, joined the Department of Environmental Sciences and Engineering at the University of North Carolina at Chapel Hill in March 2001, and currently serves as the Philip C. Singer Distinguished Professor of Environmental Engineering. His primary research interests involve developing solutions to water resource challenges through systems-based approaches that integrate consideration of both engineering and economic principles. Dr. Characklis is also Director of the Center on Financial Risk in Environmental Systems, an entity that bridges UNC's Gillings School of Global Public Health and Institute for the Environment. He serves as an Editor for Hydrology and Earth System Sciences, and on the Editorial Board of Water Security. In 2012, he was elected to the Board of the Association of Environmental Engineering and Science Professors (AEESP) and was subsequently elected AEESP President for 2015-16. In 2014 he was selected as a Fellow by the National Academy of Sciences' Kavli Frontiers of Science, and in 2010 he was named an Aldo Leopold Leadership Fellow by Stanford University's Woods Institute for the Environment.

Prior to joining UNC, he spent two years as Director of Resource Development and Management at Azurix Corp., where his responsibilities centered around assessing the technical and financial merits of water supply development projects. Before entering the private sector, he spent two years in Washington, D.C. as a Fellow with the National Academy of Engineering.

Dr. Characklis holds a Ph.D. and an M.S. in Environmental Science and Engineering from Rice University and a B.S. in Materials Science and Engineering from Johns Hopkins University.

Journal of Water Resources Planning & Management

Best Research-Oriented Paper

Exploring the relationships among reliability, resilience, vulnerability of water supply using many-objective analysis
Chi Zhang, Ph.D.
B. Xu
Y. Li
G. Fu

Quentin Martin Best Practice-Oriented Paper

Coupled Human and Water Infrastructure Systems Sector Interdependencies: Framework Evaluating the Impact of Cities Experiencing Urban Decline
Kasey M. Faust, Ph.D., A.M.ASCE
D.M. Abraham
D. DeLaurentis

Best Policy-Oriented Paper

Opportunities and Challenges for Direct Potable Water Reuse in Arid Inland Communities
Caroline E. Scruggs, Ph.D., P.E.
B.M. Thompson

Best Seminal Paper Award

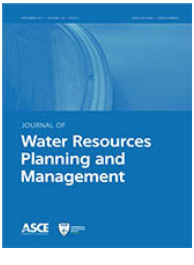
Genetic Algorithms for Least-Cost Design of Water Distribution Networks
Dragan A. Savic, Ph.D. and G.A. Walter Savic

Best Associate Editor

Stefano Galelli, Ph.D.

Best Reviewer

Rebecca Smith
Sean W.D. Turner, Eng.D.



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 or new technologies, and through public and professional service.

James Ayars, P.E., Ph.D is a Lead Reserach Agricultural Engineer. He received his BS in Agricultural Engineering, from Cornell University, New York, his MS in Agricultural Engineering (Irrigation and Drainage), from Colorado State University, Colorado, his Certificate of Advanced Engineering Study, from Cornell University, New York, and his Ph.D. in Agricultural Engineering (Irrigation, Drainage, Flow through porous media), from, Colorado State University, Colorado.

Dr. Ayars has 40 years of research experience, including, four years as an Assistant Professor at the University of Maryland, and the remainder as a Research Agricultural Engineer in the Water Management Research Unit. Dr. Ayars is an author of 229 publications (senior author of 106) including 15 book chapters and an editor of one book. He has investigated the integrated management of drainage and irrigation in arid irrigated agriculture. Recent studies have investigated the water requirements of annual and perennial horticultural crops and deficit irrigation of table wine and raisin grapes.

James E. Ayars

For his esteemed reputation in the field of water use, working on various projects in Australia, Uzbekistan, Jordan, California and Texas and for his involvement in creating a new salinity module used for the ASCE on-line content.

Journal of Irrigation & Drainage Engineering

Best Reviewer

Thomas Wöhling, Ph.D.

Best Discussion

For the Discussion: *Minimum Specific Energy and Transcritical Flow in Unsteady Open-Channel Flow*
Elham Darvishi, Ph.D.
John Fenton, Ph.D.

Honorable Mention Paper

Minimum Specific Energy and Transcritical Flow in Unsteady Open-Channel Flow
Oscar Castro-Orgaz, Ph.D.
Hubert Chanson, Ph.D.

Honorable Mention Paper

Numerical Modeling of Submerged Hydraulic Jump from a Sluice Gate
Mevlut Sami Akoz, Ph.D.
Oguz Simsek
Veysel Gumus, Ph.D.
Nazire Goksu Soydan
Mehmet Salih Kirkgoz, PhD

Best Paper

Approximate Furrow Infiltration Model for Time-Variable Ponding Depth
Eduardo Bautista, Ph.D.
James L. Schlegel
Douglas J. Hunsaker, Ph.D.
Kelly R. Thorpe, Ph.D.
Art W. Warrick, Ph.D.

Best Paper

Sprinkler Irrigation Droplet Dynamics, I: Review and Theoretical Development and *Sprinkler Irrigation Droplet Dynamics, II: Numerical Solution and Model Evaluation*
Dawit Zerihun, Ph.D.
Charles Anthony Sanchez, Ph.D.
Art W. Warrick, Ph.D.

Graduate Student Technical Paper Competition

Submissions to this category are the work of one graduate student; the student may include a faculty advisor as a second author. Up to three student submissions were selected based on the content of their technical papers. This year the graduate students were incorporated into the general sessions, and the final ranking will be announced at the Student Luncheon.

Comparison of Various Turbulence Models for Violent Geysers in Vertical Pipes
Khang Phan, University of Houston

Pocket Wetlands for Nutrient Removal in Tile-drained Agriculture
Mahsa Izadmehr, University of Illinois at Chicago

A Mechanistic Model to Predict Gas Ebullition Rate in the Presence of NAPLs in Sediments
Morvarid Khazraee Zamanpour, University of Illinois at Chicago

Undergraduate Student Technical Paper Competition

Submissions to this category are to be the work of one undergraduate student; the student may include a faculty advisor as a second author. These students will present their papers in the Undergraduate Students Session, and the final ranking will be announced at the Student Luncheon.

Analyzing Suspended Sediment Transport in Catalpa Creek
James E. Steele, Jr., Mississippi State University

Green Alternatives: Analysis of Rain Garden Hydrology and Water Quality Performance
Phong Ly, Mississippi State University

WSP Student Design Competition

The student teams selected will present their project during a special sessions at the EWRI World Water and Environmental Congress. The teams will compete before a panel of university and industry judges. The final ranking will be announced at the Student Luncheon.

Oakton College

Smart Recovery of Water Vapor Loss for Sustainable Operations

Judd Palonpon
Tracy Martinez
Anna Yabloch
Daria Chudnovsky

Seattle University

Sugarloaf Well Corrosion Control Preliminary Design Project

Jillian Gayler
Kristen Nakaoka
Lawrence Paltep
Evan Russell

Cal Poly Pomona

Wastewater Sanitation and Reclamation: Solutions for Sustainable Living

Jeffrey T. Briegel
David Cazares
Christopher H. Chiu
Brian T. Chung
Guadalupe Cortes
Caitlin E. Evans
Jaclyn B. O'Hara
Tiffany N. Parker
Kayla T. Peji
James Ronald C. Talavera
Cole D. Warrick
Jessica C. Yang

This competition is sponsored by WSP

Ven Te Chow Award

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

Keith Hipel, Ph.D., P.Eng, Hon.D.WRE, F.ASCE, is a Systems Design Engineering Professor at the University of Waterloo, as well as a Professional Engineer in Ontario.

He is interested in interdisciplinary research from a Systems Engineering perspective on the development of conflict resolution, multiple criteria decision analysis (MCDA), time series analysis and other methodologies for addressing problems lying at the interface of society, technology and the environment. These methodologies have multiple application purposes such as water resources management, hydrology, environmental engineering, and sustainable development.

Since 1976, Professor Hipel has taught engineering, mathematics, optimization, workshop, conflict analysis, and time series analysis courses. He is also the co-author of books and software used in the Conflict Analysis and Time Series Modelling courses. Furthermore, he is the Co-Founder and Director of student exchange programs with Tottori and Kyoto Universities, as well as the Tokyo Institute of Technology in Japan. Professor Hipel has presented at multiple seminars in several countries including USA, China, Japan, Israel, France, Germany, Brazil, India, the UK, Singapore and Hong Kong.

In addition to his research work, he has received numerous national and international professional engineering awards. On April 27th, 2006, the Senate of École Centrale de Lille, one of France's highly respected Grand Écoles, voted to award Professor Hipel a Doctor of Engineering Degree (DEng), Honouris Causa, for his exceptional contributions to the development of Systems Engineering methodologies.

Keith W. Hipel

For pioneering contributions in environmental impact assessment, simulation, forecasting and the Hurst Phenomenon in stochastic hydrology and in conflict resolution, water resources management and fair water allocation for making informed hydrological decisions from a system-of-systems perspective.

Arid Lands Hydraulic Engineering Award

This 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.

Mohammad Karamouz

For original and outstanding contribution in hydraulics, irrigation and drainage, management, hydroelectric power, drought, and climate change in arid or semi-arid regions over a 30-year period of teaching, consulting and research through his textbooks and technical presentations.

Mohammad Karamouz, Ph.D., PE, F.ASCE, DWRE, is a professor at the University of Tehran. He was a research Professor and the Director of Environmental Engineering Program at Polytechnic Institute of New York University from 2009-2014. He is the former Dean of Engineering at Pratt Institute in Brooklyn, New York. Dr. Karamouz received his BS in civil engineering from Shiraz University, his MS in water resources and environmental engineering from George Washington University, and his Ph.D. in hydraulics and systems engineering from Purdue University.

He served on the task committee on urban water cycle in UNESCO-IHP VI that led to the publication of a book he co-authored and was published by Taylor & Francis in 2008. He was also on the planning committee for the development of the five-year plan (2008–2013) for UNESCO's 7th International Hydrology Program (IHP VII). Among many professional positions and achievements, he was the founder, and former president, of Arch Construction and Consulting Co. Inc. in New York City, 1986-1996. He was also as a visiting professor in the Department of Hydrology and Water Resources at the University of Arizona, Tucson, 2000–2003.

Dr. Karamouz has more than 300 research and scientific publications, books, and book chapters to his credit, including four English text books entitled Hydrology and Hydroclimatology, Groundwater Hydrology, Engineering, and Management, and Urban Water Engineering and Management published by CRC press between 2010-2012 and Water Resources System Analysis published by Lewis Publishers in 2003. He has over 1500 citations in the web of Science/ Knowledge. Dr. Karamouz is the recipient of ASCE Service to the Profession Award in 2013 and the best Case Study Paper, ASCE Journal of Hydrologic Engineering in 2015.

Journal of Hydrologic Engineering

Best Case Study

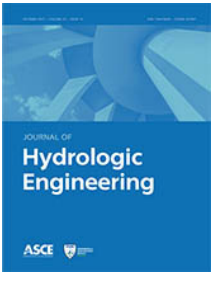
Using New Orleans Pumping Data to Reconcile Gauge Observations of Isolated Extreme Rainfall due to Hurricane Isaac
David Schlotzhauer
W. Scott Lincoln

Best Technical Note

Suspended Sediment Trap Efficiency of Vegetative Filter Strips
Ali Osman Akan, Ph.D., F. ASCE
Serter Atabay, Ph.D.

Best Discussion

Discussion of "Development of a Direct Geomorphologic IUH Model for Daily Runoff Estimation in Ungauged Watersheds" by Seiyed Mossa Hosseini, Najmeh Mahjouri, and Samaneh Riahi
Kwan Tun Lee, Ph.D.
Hafez Q.H. Shaheen, Ph.D.



Best Associate Editor

Frank T.C. Tsai, Ph.D., M.ASCE

Best Technical Paper

Yiping Guo, Ph.D.
Stochastic Analysis of Hydrologic Operation of Green Roofs

Outstanding Achievement Awards

Faisal Hossain, Ph.D., M.ASCE

Excellence in Task Committee Vision and Leadership

G. Padmanabhan, Ph.D., P.E., F.ASCE
TMDL Analysis and Modeling, Task Committee

Faisal Hossain, Ph.D., M.ASCE
Infrastructure Impacts of Landscape Driven Weather Change, Task Committee

Additional ASCE Society Awards*

**These awards will be presented at ASCE's 2018 Annual Convention in Denver, Colorado, October 12-15, 2018 asceconvention.org*

State-of-the-Art in Civil Engineering Award

Norman Medal

Walter L. Huber Civil Engineering Research Prize

Award Nominations due October 1

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