Society Pays Tribute to Engineering Luminaries

The following outstanding individuals have been elected distinguished members of ASCE. With the exception of ASCE's presidency, the status of distinguished member—formerly called honorary member—is the highest conferred by the Society. These distinguished members will be formally inducted later this year as part of the 140th Annual Civil Engineering Conference, which will be held in Las Vegas October 21–23.

IMAD L. AL-QADI, Ph.D., P.E., Dist.M.ASCE, the Founder Professor of Engineering at the University of Illinois at Urbana-Champaign, is honored for his extraordinary research and technical contributions in pavement engineering, modeling and rehabilitation technologies, pavement interlayer systems, and transportation infrastructure sensing and for his exemplary leadership in professional service and technology transfer.


Al-Qadi

His research and contributions to scholarly work in his field have been diverse and far reaching. Al-Qadi was among the first researchers to develop ground-penetrating radar for measuring the dielectric properties of construction materials, and he has made contributions to a variety of transportation infrastructure applications and analysis techniques. He is also a leader in full-scale testing, instrumentation, preservation, sustainability, material characterization, and three-dimensional modeling of pavements and of the interaction between pavement and tire. His innovative research has resulted in more than 475 publications, of which more than 240 were refereed papers, and he has made more than 400 presentations at various conferences, including numerous keynote lectures.

Al-Qadi began his career in academia at Virginia Polytechnic Institute and State University in 1990 and eventually became the Charles E. Via, Jr., Professor of Civil and Environmental Engineering there. In 2004 he became the Founder Professor of Engineering in the civil and environmental engineering department at the University of Illinois at Urbana-Champaign. Al-Qadi is also the founding director of the Illinois Center for Transportation, which since 2005, the year of its establishment, has conducted more than 120 transportation research projects.

Al-Qadi's accolades include ASCE's James Laurie Prize, the D. Grant Mickle Award, the International Geosynthetic Society Award, and the National Science Foundation Presidential Young Investigator Award. He is currently the chair of the Transportation Research Board's preservation section. In addition to being a member of the Board of Governors of ASCE's Transportation and Development Institute, Al-Qadi is the editor in chief of the *International Journal of Pavement Engineering.*

Al-Qadi earned a bachelor's degree from Yarmouk University, in Jordan, and master's and doctoral degrees in civil engineering from Pennsylvania State University. He is a registered professional engineer in Pennsylvania and Virginia and resides in Champaign, Illinois.

ROBERT L. BOWEN, P.E., Dist.M.ASCE, the chairman and founder of Bowen Engineering, of Indianapolis, is honored for his significant contributions to the civil engineering profession and his community.

Bowen is the founder and chairman of Bowen Engineering Corporation, a multimarket company specializing in water and wastewater treatment plants and energy utility construction. The company has been recognized on six occasions in the Build America Awards program, organized by the Associated General Contractors of America and the construction services group Aon. One award was for the $57-million addition to the wastewater treatment plant in Lafayette, Indiana; another was for a wind farm constructed in Brookston, Indiana. Bowen founded his company in 1967, and before that he spent several years working as a project manager for W.M. Lyles Construction Company, of Fresno, California.


Bowen

Bowen has dedicated significant resources toward community efforts. He and his wife, Terry, founded the Bowen Foundation, which for more than 15 years has provided vocational, technical, and community college scholarships to African-American students in Marion County, Indiana. In 2002 Bowen, his wife, and Purdue University's president, Martin Jischke, Ph.D., founded Science Bound, a program that encourages students in grades 8 through 12 to pursue careers in science and technology. The Bowens also provided support to Purdue University for the Robert L. and Terry L. Bowen High-Scale Performance Civil Engineering Laboratory. This $11-million state-of-the-art research facility allows engineers to test such structures as bridges and buildings while focusing on making construction materials durable, safe, and resistant to earthquakes.

Bowen earned a bachelor's degree in civil engineering from Purdue University, and in 1994 he completed the owner/president management program at the Harvard Business School. A registered professional engineer in Indiana, he makes his home in Indianapolis.

ROBERT G. DEAN, Sc.D., P.E., Dist.M.ASCE, an emeritus research professor at the University of Florida, is honored for his research in wave theory, beach erosion, and the effects of waves on tidal inlets and coastal structures, as well as for his inventions and his mentorship of coastal engineers.

Dean has spent his 50-year career in academia and industry conducting research and teaching at the Massachusetts Institute of Technology, the University of Washington, the University of Delaware, and the University of Florida, where he chaired the coastal and oceanographic engineering department. He has also performed coastal and ocean engineering work for approximately 100 firms and governmental agencies.


Dean

Within ASCE Dean has served as the chair of the Coasts, Oceans, Ports, and Rivers Institute's Coastal Engineering Research Council. He has also served on that institute's Coastal Engineering Practice Committee, Task Committee on Wave Forces, Committee on Hurricane Protection, Task Committee on Long Waves, and Hydromechanics Committee.

Dean has been the recipient of numerous accolades throughout his career, including ASCE's John G. Moffatt–Frank E. Nichol Harbor and Coastal Engineering Award, and he has twice been honored with the U.S. Army's Outstanding Civilian Service Medal. In 1980 he was elected to the National Academy of Engineering.

In 2003 Dean published the seminal textbook *Beach Nourishment: Theory and Practice* (Singapore: World Scientific Publishing Company, 2003). He also coauthored *Coastal Processes with Engineering Applications* (Cambridge, United Kingdom: Cambridge University Press, 2004) and *Water Wave Mechanics for Engineers and Scientists* (Singapore: World Scientific Publishing Company, 1991), and he has more than 200 technical reports and approximately 20 book chapters to his credit.

Dean earned a bachelor's degree in civil engineering from the University of California at Berkeley, a master's degree in oceanography from Texas A&M University, and a doctorate in civil engineering from the Massachusetts Institute of Technology. A registered professional engineer in Florida, he resides in Gainesville, Florida.

VINCENT P. DRNEVICH, Ph.D., P.E., D.GE, Dist.M.ASCE, a professor emeritus of civil engineering at Purdue University, is honored for his pioneering work developing ingenious methods for measuring soil properties. He has also demonstrated distinguished service as an engineer, teacher, mentor, researcher, and administrator and has significantly influenced thousands of engineering students.

Drnevich's research has focused on stress wave methods and time-domain reflectometry for the measurement of soil properties, the analysis of electromagnetic waves to extract information about the intrinsic properties of soil and chemically modified soil, and determining the maximum dry unit weight and water content range for the effective compaction of granular soils using a vibrating hammer. He holds six patents, and three standard methods have been developed from his work.


Drnevich

Drnevich began his academic career at the University of Kentucky. He then joined Purdue University as a professor and as the head of the School of Civil Engineering, a position he held for nine years. During the past decade he has made significant contributions and improvements to the design of civil engineering capstone courses, and he recently chaired the civil engineering division of the American Society for Engineering Education.

His many accolades include ASCE's Walter L. Huber Civil Engineering Research Prize and Norman Medal, as well as ASTM International's Hogentogler Award and Woodland G. Shockley Award. Drnevich serves on the editorial board of the *Geotechnical Testing Journal,* and he has authored or coauthored more than 100 technical papers and articles in various journals and proceedings.

Drnevich earned bachelor's and master's degrees in civil engineering from the University of Notre Dame and a doctorate from the University of Michigan. A registered professional engineer in Indiana, he serves on the State Board of Registration for Professional Engineers. He lives in West Lafayette, Indiana.

JOHN DUNNICLIFF, P.E., Dist.M.ASCE, an independent geotechnical engineering consultant in the United Kingdom, is honored for his preeminent leadership in the field of geotechnical instrumentation and monitoring and for his long and distinguished career as a specialty consultant dedicated to the improvement of geotechnical practice.

Dunnicliff has provided services to a variety of projects worldwide, including tunnels, highways, water treatment facilities, dams, power projects, deep foundations, railroads, airports, underground nuclear waste facilities,

retaining walls, mines, and buildings of historical importance. His work has included a number of high-profile projects, including the supercollider particle accelerator in Texas; Boston's Central Artery/Tunnel Project, or "Big Dig"; subways and railways in New York City; a railway in Hong Kong; and the Basalt Nuclear Waste Isolation Project, in Washington State.


Dunnicliff

Dunnicliff authored the leading book in his field: *Geotechnical Instrumentation for Monitoring Field Performance* (Malden, Massachusetts: Wiley Interscience, 1988). He has authored more than 70 professional publications and has solicited and edited more than 130 articles on geotechnical instrumentation and monitoring for *Geotechnical Instrumentation News*. He has also assumed the leading role in efforts to create two books as tributes to Ralph B. Peck and has led more than 100 continuing professional development courses worldwide.

Dunnicliff earned master's degrees in civil engineering from both Oxford and Harvard universities. He lives in the United Kingdom in Devon.

BRUCE R. ELLINGWOOD, Ph.D., P.E., Dist.M.ASCE, a professor of structural engineering at the Georgia Institute of Technology, is honored for his contributions as a structural engineering researcher and educator. He is renowned for his ability to bring the fruits of research to professional practice through the introduction of structural reliability principles in codes and standards.


Ellingwood

Ellingwood's professional career spans more than 35 years. After completing his graduate studies at the University of Illinois at Urbana-Champaign, he worked at the Naval Ship Research and Development Center and subsequently held research and leadership positions within the National Bureau of Standards (now the National Institute of Standards and Technology). He joined the faculty at Johns Hopkins University in 1986, where he served as chair of the civil engineering department from 1990 to 1997 and held the Willard and Lillian Hackerman Chair in Civil Engineering from 1996 until 2000. In 2000 Ellingwood was appointed the chair of Georgia Tech's School of Civil and Environmental Engineering, a position he held until 2002. He was also the College of Engineering Distinguished Professor, and he currently holds the Raymond Allen Jones Chair in Civil Engineering.

An active member of ASCE, Ellingwood served as the vice-chair of the Minimum Design Loads for Buildings and Other Structures Standards Committee from 1984 until 2006. He also served as chair of the Structural Engineering Institute's Technical Activities Division and as the president of the Maryland Section.

In 2001 he was elected to the National Academy of Engineering. His accolades include ASCE's Walter L. Huber Civil Engineering Research Prize, Norman Medal, Moisseiff Award, State-of-the-Art of Civil Engineering Award, and Nathan M. Newmark Medal. He is also a member of the honor societies Sigma Xi, Chi Epsilon, and Tau Beta Pi. The editor of the journal *Structural Safety,* he serves on six other editorial boards and is the author or coauthor of more than 350 papers and reports.

Ellingwood earned bachelor's, master's, and doctoral degrees in civil engineering from the University of Illinois at Urbana-Champaign. A registered professional engineer in the District of Columbia, he makes his home in Atlanta.

DAN M. FRANGOPOL, Sc.D., P.E., Dist.M.ASCE, who holds the Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, is honored for outstanding contributions to civil engineering that have included advances in bridge safety and maintenance, in systems reliability and redundancy, and in incorporating monitoring, maintenance, and management into life-cycle costs through multicriteria optimization under uncertainty.


Frangopol

Frangopol's definition of the redundancy of structural systems paved the way for the development of the system redundancy factors introduced in the first edition of the American Association of State Highway and Transportation Officials' *Load and Resistance Factor Design (LRFD) Bridge Design Specifications.* His other significant contributions include a probabilistic model for the maintenance of deteriorated structures; a method for managing infrastructure systems that integrates lifetime safety and life-cycle cost; a multicriteria optimization approach to individual structural systems and networks that simultaneously considers safety, serviceability, maintenance, and life-cycle cost; and a probabilistic method for assessing the performance of long-span structures. Frangopol has also demonstrated worldwide leadership in bridge engineering and life-cycle civil engineering and is the founding editor of *Structure and Infrastructure Engineering,* an international peer-reviewed journal. He is also the author or coauthor of more than 250 books, chapters, and refereed journal articles.

Frangopol began his career in academia at the Technical University of Civil Engineering of Bucharest, in Romania. He was also involved in structural design with A. Lipski Consulting Engineers, of Brussels, Belgium, before joining the University of Colorado at Boulder in 1983. He joined the faculty at Lehigh University in 2006.

An active member of ASCE, Frangopol has held several leadership positions in the Structural Engineering Institute. Within the institute's Technical Activities Division he has chaired the Executive Committee and the Awards Committee and has been the chair of several technical and administrative committees, including the Safety of Buildings Committee, the Safety of Bridges Committee, the Optimal Structural Design Committee, and the Structural Safety and Reliability Committee. He is also the founder and current chair of the Technical Council on Life-Cycle Performance, Safety, Reliability, and Risk of Structural Systems.

Frangopol received a doctorate in applied sciences from the Université de Liège, in Belgium, and holds two honorary doctorates, one from the Technical University of Civil Engineering of Bucharest, the other from the Université de Liège. He also recently received an honorary professorship at Tongji University, in Shanghai, China, and is a visiting professor at the National Taiwan University of Science and Technology. He resides in Center Valley, Pennsylvania.

LESTER A. HOEL, Eng.D., P.E., Dist.M.ASCE, the L.A. Lacy Distinguished Professor of Engineering at the University of Virginia, is honored for his sustained and outstanding contributions to the advancement of transportation engineering through teaching, research, and service. He has also demonstrated leadership in university education relating to the planning, management, and operation of urban, intermodal, and highway transportation systems.

Hoel's career in academia spans more than four decades and has focused on the management, planning, operation, and design of surface transportation infrastructure. His research contributions have addressed such infrastructure issues as advanced transit technology applications, public transportation terminal design, transit security, "smart" growth, and land use.

Hoel was an assistant professor of engineering at San Diego State College (now San Diego State University) from 1962 to 1964, after which he taught traffic studies at the Norwegian University of Science and Technology, in Trondheim, and performed research at the Institute of Transport Economics, in Oslo, Norway. Upon returning to the United States he taught at Carnegie Mellon University and eventually joined the civil engineering department at the University of Virginia.

Long an active member of the civil engineering and transportation communities, Hoel is a former president of the Council of University Transportation Centers and was the division chair of the National Research Council's oversight of the Transportation Research Board. He is a member of the Norwegian Academy of Technological Sciences and of the honor societies Sigma Xi, Chi Epsilon, and Tau Beta Pi. In 1989 he was elected to the National Academy of Engineering.


Hoel

Hoel earned a bachelor's degree in civil engineering from the City College of New York, a master's degree, also in civil engineering, from Brooklyn Polytechnic Institute (now the Polytechnic Institute of New York University), and a doctorate in engineering from the University of California at Berkeley. A registered professional engineer in Virginia, he makes his home in St. Helena, California.

AHSAN KAREEM, Ph.D., Dist.M.ASCE, the Robert M. Moran Professor of Engineering at the University of Notre Dame, is recognized for his contributions in the field of wind engineering and engineering mechanics, his significant contributions to the ASCE standards pertaining to wind loads, and his development of Web-based analysis and tools for design practice.


Kareem

Kareem has made contributions to civil engineering research in such areas as dynamic wind load effects on tall buildings, long-span bridges, and offshore platforms; system identification and control; simulation and computational methods; uncertainty; and safety and risk assessment. In addition to developing, improving, and implementing versions of ASCE's standards on wind loads, he has developed Web-based analysis and design tools, including the Virtual Organization for Reducing the Toll of Extreme Winds.

In addition to his position at Notre Dame, Kareem holds an advisory position at Tongji University, in Shanghai, China, and has been a guest professor at Tokyo Polytechnic University.

The findings from Kareem's research have been reflected in more than 160 journal publications. He is a former editor in chief of the *International Journal of Wind and Structures* and a former associate editor of ASCE's *Journal of Structural Engineering* and *Journal of Engineering Mechanics.*

His numerous accolades include the National Science Foundation's Presidential Young Investigator Award, Elsevier's Munro Prize, and ASCE's Jack E. Cermak Medal, Robert H. Scanlan Medal, and State-of-the-Art of Civil Engineering Award. In 2009 he was elected to the National Academy of Engineering, and earlier this year he was elected a foreign fellow of the Indian National Academy of Engineering.

Kareem earned a bachelor's degree *(Continued on Page 12)*

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(Continued from Page 9) in civil engineering from the West Pakistan University of Engineering and Technology, a master's degree in civil engineering through a joint program involving the University of Hawaii and the Massachusetts Institute of Technology, and a doctorate in civil engineering from Colorado State University. He resides in Granger, Indiana.

FRANCIS J. LOMBARDI, P.E., Dist.M.ASCE, the chief engineer of the Port Authority of New York and New Jersey, is honored for his leadership in restoring the World Trade Center following the 1993 terrorist bombing; for leading recovery efforts following the terrorist attacks on the World Trade Center towers on September 11, 2001; and for his service to the nation as the chief engineer of one of the world's busiest ports.


Lombardi

As chief engineer, Lombardi directs the Port Authority of New York and New Jersey's engineering department. He oversees engineering and architectural design, construction management, materials engineering, quality assurance, and engineering management services.

In the months following the terrorist attacks of September 11, 2001, Lombardi oversaw such activities as securing facilities, recovering critical systems and data, restoring business operations, continuing construction contracts, and helping staff return to work. He also played a vital role in the $565-million reconstruction of the mass transit station at the former site of the World Trade Center. Lombardi shares his expertise as an industry professor at the Polytechnic Institute of New York University.

Lombardi attended Queens College for three years and then transferred to New York University as part of a five-year program that combined liberal arts and engineering. As a result, Queens College awarded him a bachelor of arts. Lombardi also obtained a bachelor's degree in civil engineering from New York University's College of Engineering in 1970. He later earned a master's degree in structures from Columbia University and obtained a certificate of advanced graduate study in business management from Pace University. A licensed professional engineer in New York and New Jersey, Lombardi resides in New York City.

PAUL F. MLAKAR, Ph.D., P.E., Dist.M.ASCE, a senior research scientist at the U.S. Army Corps of Engineers' Engineer Research and Development Center, in Vicksburg, Mississippi, is being recognized for his leadership in forensic civil engineering. He has made significant contributions to structural assessments following catastrophic events, is highly adept at effectively communicating technical issues to the public, and has shown great dedication to ASCE and the nation.

Mlakar is the army's senior research scientist for weapons effects and structural dynamics and has led U.S. initiatives in these areas. He has also established himself as one of the country's preeminent forensic civil engineers.


Mlakar

Mlakar has led teams in investigations of events that have figured in U.S. history. He participated in the investigation of the bombing of the Alfred P. Murrah Federal Building, in Oklahoma City, and he led the ASCE Pentagon building performance study following the terrorist attack on September 11, 2001. In the aftermath of Hurricane Katrina, Mlakar served on the Interagency Performance Evaluation Task Force, which assessed the performance of the New Orleans hurricane protection system.

An active member of ASCE, Mlakar lent his time and expertise to the task committee formed in connection with the *2009 Report Card for America's Infrastructure* and currently serves on the Structural Engineering Institute's Blast Protection of Buildings Standards Committee and Progressive Collapse Standards and Guidance Committee. He is also a member of the Technical Council on Forensic Engineering.

Mlakar graduated second in his class from the United States Military Academy at West Point. He subsequently earned a master's degree and a doctorate in engineering science from Purdue University. He is a registered professional engineer and resides in Vicksburg, Mississippi.

HARRY G. POULOS, D.Sc., P.E., Dist.M.ASCE, a senior principal with Coffey Geotechnics, of Sydney, Australia, is recognized for his contributions to geotechnical engineering, in particular, his theoretical and practical work in foundation engineering and pile foundation analysis and design, which has been applied to some of the world's tallest structures.

From 1965 until his retirement, in 2001, Poulos was a faculty member in the civil engineering department at Australia's University of Sydney, receiving an appointment as a professor in 1982. In addition to his academic work, he joined the consulting firm Coffey Partners International in 1989. Poulos is an emeritus professor at the University of Sydney and an adjunct professor at the Hong Kong University of Science and Technology.


Poulos

Poulos has applied his academic research to a variety of major projects worldwide, including buildings, bridges, tunnels, and offshore structures. He has been involved in several high-profile projects, including the Emirates Towers and the Burj Khalifa, both in Dubayy; the Docklands project, in Melbourne, Australia; and the 700 km long Egnatia Odos motorway, in Greece.

Long active in the international geotechnical community, Poulos was made a member of the Order of Australia in 1993 for his services to engineering. In 2003 he received the Centenary Medal from the Australian government for his services to science and geotechnical engineering.

Poulos holds a bachelor's degree and a doctorate in civil engineering from the University of Sydney. He is a registered professional engineer in Australia and resides in Sydney.

STEIN STURE, Ph.D., Dist.M.ASCE, an interim provost and the executive vice-chancellor for academic affairs at the University of Colorado at Boulder, is honored for his contributions in the fields of fracture mechanics, constitutive modeling of cementitious composites and geomechanics, and nonlinear analysis and computational techniques related to granular materials and soil-structure interaction. He is also being recognized for his exemplary career as an educator.


Sture

His academic career spans nearly 35 years, beginning at Virginia Polytechnic Institute and State University in 1976. In 1980 Sture joined the faculty at the University of Colorado at Boulder, where he is now the Huber and Helen Croft Professor in the College of Engineering and Applied Science's civil, environmental, and architectural engineering department. Sture has also been a visiting professor at the Norwegian University of Science and Technology and at the University of Oxford, in the United Kingdom, where he was named a Jenkin fellow in engineering sciences.

Sture has served ASCE in numerous capacities. Having served as the president of the Colorado Section, the director of District 16, and the chair of the Region 7 formation team, he is currently a governor of the Engineering Mechanics Institute and a member of the Technical Region's Board of Governors.

Sture has authored or coauthored more than 400 papers and research reports. He has also served as a consultant for nearly 30 public and private organizations, including Lockheed Martin, the National Aeronautics and Space Administration, Shell, the Federal Aviation Administration, and the United Nations Development Programme.

Sture earned bachelor's, master's, and doctoral degrees in civil engineering from the University of Colorado at Boulder. He also earned a degree in engineering mechanics in Norway. He resides in Boulder, Colorado.

of note

▲ **The Transportation and Development Institute's Automated People Movers Standards Committee will be meeting September 23–24 at Toronto Pearson International Airport. For additional information about the meeting, contact Jonathan C. Esslinger, P.E., F.ASCE, the institute's director, by telephone at (703) 295-5295 or by e-mail at jesslinger@asce.org.**

▲ **The Structural Engineering Institute is seeking members for the newly authorized Athletic Field Lighting Structures Standards Committee. The committee is developing national consensus guidelines for the proper specification, design, installation, and maintenance of lighting system support structures for athletic fields and similar areas. Membership on a Structural Engineering Institute standards committees is open to all those who might reasonably be expected to be directly affected by the activity or who indicate that they are so affected. Anyone interested in serving on the committee should apply online at http://content.seinstitute.org/committees/codeform.html. For more information, contact Lee Kusek, ASCE's standards administrator, at lkusek@asce.org or (703) 295-6176.**

▲ **A 45-day public comment period on the update to the Structural Engineering Institute's standard 48 (*Design of Steel Transmission Pole Structures*) will begin on August 2. Anyone wishing to participate should contact Lee Kusek, ASCE's standards administrator, at lkusek@asce.org or (703) 295-6176 for instructions. The period will run until 5 PM (participant's local time) on September 17.**

▲ **The Environmental and Water Resources Institute's newly developed *Managed Aquifer Recharge (MAR) Guidelines for Investigation of Land Subsidence Due to Fluid Withdrawal* will be open for a 45-day public comment period beginning on August 2. Land subsidence is a global phenomenon and is often discovered only when damage to buildings or other important facets of infrastructure occurs. The new guidelines pertain to the occurrence, mechanics, measurement, analysis, simulation, and control of land subsidence caused by fluid withdrawal, with emphasis on groundwater withdrawal. Anyone wishing to participate in the public comment period should contact Lee Kusek, ASCE's standards administrator, at lkusek@asce.org or (703) 295-6176 for instructions. The period will run until 5 PM (participant's local time) on September 17.**