

AWARDS AND RECOGNITION

ASCE/EMI awards Frangopol 2020 Alfred M. Freudenthal Medal

Life-cycle engineering pioneer recognized with lifetime achievement award

Dan M. Frangopol, the inaugural Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, is the recipient of the 2020 Alfred M. Freudenthal Medal awarded by the Engineering Mechanics Institute (EMI) of the American Society of Civil Engineers (ASCE).

Frangopol, who is a Distinguished Member of ASCE, a past Vice President of EMI, and an Inaugural Fellow of EMI, has been recognized for his "outstanding contributions to the advancement of probabilistic, reliability and risk methods in civil engineering, particularly in developing probabilistic models for life-cycle performance assessment, maintenance and optimum management of civil infrastructure systems in diverse loading environments."

According to ASCE, which represents more than 150,000 members of the civil engineering profession in 177 countries, this prestigious medal is awarded every two years to "an individual in recognition of distinguished achievement in safety and reliability studies applicable to any branch of civil engineering."

ASCE established the award in 1975 to honor Freudenthal, who is recognized as the "father" of structural reliability.

Frangopol is regarded as a worldwide authority on structural reliability, optimization, and life-cycle engineering. Throughout his distinguished career of research, education, and service, he has received a number of awards from ASCE, including the 2020 Raymond C. Reese Research Prize, the 2019 George W. Housner Structural Control and Monitoring Medal, the 2019, 2004, and 1998 State-of-the-Art of Civil Engineering Awards, the 2016 Outstanding Projects and Leaders Awards (OPAL) Lifetime Achievement Award in Education, the 2016 Alfredo Ang Award on Risk Analysis and Management of Civil Infrastructure, the 2015 Alfred Noble Prize, the 2014 and 2001 J. James R. Croes Medals, the 2012 Arthur M. Wellington Prize, the 2007 Ernest E. Howard Award, the 2005 Nathan M. Newmark Medal, and the 2003 Moisseiff Award.

ASCE honors Frangopol, Liu with 2020 Reese Research Prize

CEE professor, former postdoc recognized for achievements in structural engineering research

Dan M. Frangopol, the inaugural Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, and his former postdoc Yan Liu, Associate Professor, School of Naval Architecture and Ocean Engineering, Wuhan, Hubei, China, are the recipients of the 2020 Raymond C. Reese Research Prize awarded by the American Society of Civil Engineers (ASCE).

According to ASCE, which represents more than 150,000 members of the civil engineering profession in 177 countries, this prestigious prize is:

"awarded to the author or authors of a paper in a print issue of an ASCE journal in the twelve-month period ending with June of the year preceding the year of the award that describes a notable achievement in research related to structural engineering and which indicates how the research can be used. The paper should include the results of research (experimental and/or analytical) and, in particular, should indicate and recommend how the research can be applied to design; it is this latter feature that is considered to be most important."

ASCE established the award in 1970 to recognize outstanding contributions to the application of structural engineering research. In this context, the 2020 Raymond C. Reese Research Prize was awarded to recognize the outstanding achievement in research related to structural engineering and, in particular, the novelty of the proposed design approach using utility theory to consider the attitude and preference of the decision maker toward the inspection outcome.

and its application to design of an integrated decision-making framework for optimum inspection planning of fatigue sensitive structures, such as highway bridges and naval ships. The results of this outstanding research were shared with the academic and professional community through the article "Utility and Information Analysis for Optimum Inspection of Fatigue-Sensitive Structures," that appeared in the ASCE Journal of Structural Engineering, Volume 145, Number 2 (February), 2019.

This is the 11th award-winning journal paper of Frangopol and his current and former PhD students and postdocs, including nine from ASCE (Alfred Noble Prize (2015), Croes Medal (2001 & 2014), Moisseiff Award (2003), Reese Research Prize (2020), State-of-the-Art of Civil Engineering Award (1998, 2004 & 2019), and Wellington Prize (2012)), one from IABSE (Outstanding Paper Award (2007)), and one from Elsevier (Munro Prize (2006)).

Frangopol elected to National Academy of Construction

Dan M. Frangopol, the inaugural Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, has been elected to the National Academy of Construction (NAC).

NAC members are selected through a rigorous peer nomination and election process and come from all sectors of the built environment — owners, contractors, designers, government agencies, professional service firms, and academia.

The mission of NAC "is to select, honor, and recognize those individuals who have made extraordinary contributions to our industry," as stated by Tom Sorley, the president of the Academy. NAC currently has 326 distinguished leaders from every segment of the engineering and construction industry. Members apply their corporate experience and talent toward enhancing the strength of our industry and well-being of our nation.

"It is an extremely high honor for me to join the 2020 class of 36 new members elected to NAC and represent Lehigh University," says Frangopol.

This becomes Frangopol's fifth academy membership: three foreign national academies (Royal Academy of Belgium for Science and the Arts, Romanian Academy, and Academy of Technical Sciences of Romania) and one European (Academy of Europe).

Frangopol is regarded as a worldwide authority on life-cycle engineering, structural reliability, and optimization. His main research interests are in the development and application of probabilistic concepts and methods to civil and marine engineering including life-cycle cost analysis; structural reliability; probability-based assessment, design, and multi-criteria life-cycle optimization of structures and infrastructure systems; structural health monitoring; life-cycle performance maintenance and management of structures and distributed infrastructure under extreme events (earthquakes, tsunamis, hurricanes, and floods); risk-based assessment and decision making; multi-hazard risk mitigation; infrastructure sustainability and resilience to disasters; and climate change adaptation.

Throughout his distinguished career of research, education, and service, Frangopol has received many honors including 4 honorary doctorates, 14 honorary professorships, medals, prizes and awards from the American Society of Civil Engineers (ASCE) including Distinguished Membership, International Association for Structural Safety and Reliability (IASSAR), International Association for Bridge Engineering (IABSE), International Society of Automotive Engineers (SAE International), International Association for Life-Cycle Civil Engineering (IALCCE), International Association for Bridge Maintenance and Safety (IABMAS) and other professional organizations.

Frangopol is the Founder and Editor-in-Chief of Structure and Infrastructure Engineering an international peer-reviewed journal launched in 2005 and the Founding Editor of the Book Series Structures and Infrastructures. He is the author or co-author of 3 books, 50 book chapters, and over 400 articles in archival journals (including 11 award-winning papers from ASCE, IABSE, and Elsevier).

Frangopol will be formally inducted as a member at NAC's next annual meeting to be held in Boston, Massachusetts, October 29-31, 2020.

Read more about Frangopol's research and achievements [here](#).

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