

Short Biosketch of DAN M. FRANGOPOL

Dr. Dan M. Frangopol is the inaugural Fazlur R. Khan Endowed Chair of Structural Engng. and Architecture and Professor Emeritus at Lehigh University. Before joining Lehigh in 2006, he was Professor of Civil Engng. at the Univ. of Colorado Boulder, where he is now Professor Emeritus. From 1979-83, he was a Structural Design Engineer with A. Lipski Consulting Engineers in Brussels, Belgium. In 1976, he received his doctorate in Applied Sciences with the highest honor from the Univ. of Liège, Belgium. His main research interests are in the development and application of probabilistic and optimization concepts and methods to civil and marine engng. in a life-cycle context, including: structural reliability and probabilistic mechanics; life-cycle cost analysis; 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. Frangopol is internationally recognized as a leader in the field of life-cycle engineering of civil and marine structures. According to ASCE (2012) *“Dan M. Frangopol is a preeminent authority in bridge safety and maintenance management, structural system reliability, and life-cycle civil engineering. His contributions have defined much of the practice around design specifications, management methods, and optimization approaches. From the maintenance of deteriorated structures and the development of system redundancy factors to assessing the performance of long-span structures, Dr. Frangopol’s research has not only saved time and money, but very likely also saved lives... Dr. Frangopol is a renowned teacher and mentor to future engineers.”* He is also *“widely recognized as a leading educator and creator in the field of life-cycle civil engineering.”* (ASCE 2015). *“Frangopol’s groundbreaking research into infrastructure from a holistic perspective has earned him a reputation in the civil engineering community” as the “Father of Life-Cycle Analysis.”* (ASCE 2020).

Frangopol was inducted into the National Academy of Engineering (NAE), National Academy of Construction (NAC), Canadian Academy of Engineering (CAE), Mexican Academy of Engineering, Engineering Academy of Japan, Royal Academy of Belgium for Science and the Arts, Romanian Academy, Romanian Academy of Technical Sciences, and Academia Europaea. He is a Distinguished Member of ASCE (highest ASCE honor), Inaugural Fellow of SEI and EMI, Fellow of ACI, IABSE, and SCSHM (previously called ISHMII), and Honorary Member of AICPS. Frangopol was ranked as the 10th most-cited civil engng. author in the August 2019 Stanford Univ. worldwide citation survey published in PloS, and No.1 (Lehigh Univ.), No. 45 (USA), and No. 95 (world) on April 6, 2022, by Research.com on the list of top scientists in Engng. and Technology.

In 2023, ASCE created the *Dan M. Frangopol Medal for Life-cycle Engineering of Civil Structures*; in 2025, the peer-reviewed journal *Structure and Infrastructure Engineering* published a *double special issue in honor of Dan M. Frangopol*; and in October 2026, an international symposium will be held in Tokyo in *honor of his retirement*.

Frangopol’s awards and honors include the OPAL Leadership Award for Lifetime Accomplishments in Education (ASCE); Newmark, Freudenthal, Housner, Croes (twice) Medals (ASCE); T.Y. Lin Medal (IABMAS); Khan Medal (IALCCE); Mufti Medal (ISHMII); Thorpe Medal (EC³); Ang, Howard, Moisseiff (twice), Reese (twice) Awards (ASCE); Wellington (three times) and State-of-the-Art of Civil Engng. (four times) Awards (ASCE); Noble (twice, ASCE-AIME-ASME-IEEE-WSE); Munro Prize (ELSEVIER); Intl. Award of Merit (EUROSTRUCT); Research Award (KAJIMA); Research Prize (IASSAR); Distinguished Service Award (IASSAR); Senior Research Prize (IABMAS); OPA Award (IABSE); Rostock Univ. Medal; Reliability and Optimization of Struct. Systems Award (IFIP); Distinguished Probabilistic Methods Educator Award (SAE); Opera Omnia Award (AICPS). He also received the ASCE Lehigh Valley Section’s Civil Engng. of the Year Award; Lehigh University’s Hillman Faculty Award, Libsch Research Award, and Hillman Award for Excellence in Graduate Advising; Lehigh P.C. Rossin College of Engng. & Applied Science’s Excellence in Research, Scholarship & Leadership Award; Lehigh L.S. Beedle Distinguished CEE Award; Univ. of Colorado Boulder (Excellence in Research, Scholarly and Creative Work Award; College of Engng. and Applied Science’s Research Award, and Eckel Faculty Prize for Excellence). He holds 6 honorary doctorates (Luleå Univ. of Technology, Polytechnic Univ. of Milan, Univ. of Liège, Tech. Univ. of Civil Engng. Bucharest, Tech. Univ. of Iași, and Polytechnic Univ. of Timișoara). He is an Honorary Prof. at 14 universities (Hong Kong Polytechnic, Tongji, Southeast, Hunan, Tianjin, Chang’an, Beijing Jiaotong, Chongqing Jiaotong, Dalian Univ. of Tech., China Univ. of Petroleum, Changsha Univ. of Science and Tech., Shenyang Jianzhu Univ., Royal Melbourne Institute of Tech., and Harbin Institute of Tech.), and a Guest, Visiting Chair or Adjunct Prof. at 6 universities in Asia, Australia, and Europe.

Frangopol is the Founding President of the Intl. Assoc. for Bridge Maintenance and Safety (IABMAS) and the Intl. Assoc. for Life-Cycle Civil Engng. (IALCCE), and Founding Vice-President of the Intl. Society for SHM of Intelligent Infrastructure (ISHMII). He is the Honorary President of the Brazil, Canada, Chile, Italy, Romania, South Korea, Sri Lanka, Sweden, Turkey, and USA Groups of IABMAS, and of the Dutch Group of IALCCE, and Honorary Member of the IABMAS Australia, China, Denmark, Japan, Portugal and Spain Groups. He is Past Vice-President of the Intl. Assoc. for the Struct. Safety and Reliability (IASSAR), Past Chair of the Executive Committee of the Technical Activities Division of the 20,000+ members of the Struct. Engng. Institute (SEI) of ASCE, Past Vice-President and Governor of the Engng. Mechanics Institute of ASCE, Past Chair of the Executive Board of IASSAR, Past Chair of IFIP WG7.5 on Reliability and Optimization of Struct. Systems, and Founding Chair of the ASCE-SEI Technical Council on life-cycle performance, safety, reliability and risk of struct. systems. He has held numerous leadership positions in national and intl. professional societies. Frangopol is an experienced researcher and technical consultant or advisor to industry and government agencies, both nationally and abroad. His work has been funded by NSF, FHWA, ONR, NASA, USACE, AFOSR, ARDEC, ASCE and by intl. agencies including NATO, TEPCO, UK Highways Agency, and Dutch Ministry of Infrastructure and Environment.

Frangopol is the Founder and Editor-in-Chief of *Structure and Infrastructure Engineering* and Founding Editor of the Book Series *Structures and Infrastructures*. He is the author/coauthor of 5 books, 70 book chapters, over 530 articles in archival journals (including 18 award-winning papers), and more than 700 papers in conference proceedings. He has edited/coedited 61 books and 32 special issues of archival journals. Frangopol’s work has had a significant impact on structural engineering evidenced by an h-index of 112, an i10-index of 564, and more than 48,700 citations (Google Scholar). He has supervised the dissertations of 50 PhD students and the theses and reports of 56 MS students. 30 of his former doctoral students and post-doctoral researchers are university professors in the United States and abroad, and many are prominent in professional practice and research laboratories.