

Short Biosketch of DAN M. FRANGOPOL

[Dr. Dan M. Frangopol](#) is the inaugural holder of the Fazlur R. Khan Endowed Chair of Structural Engng. and Archit. at Lehigh Univ. Before joining Lehigh Univ. in 2006, he was Professor of Civil Engng. at the Univ. of Colorado Boulder, where he is now Professor Emeritus. During the period 1979-83, he held the position of Project Structural Engng. with A. Lipski Consulting Engineers in Brussels, Belgium. In 1976, he received his doctorate in Applied Sciences with the highest distinction (*summa cum laude*) from the Univ. of Liège, Belgium. Frangopol's main research interests are in the development and application of probabilistic and optimization concepts and methods to civil and marine engng., 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. 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). In 2023, ASCE created the *Dan M. Frangopol Medal for Life-cycle Engineering of Civil Structures*.

Frangopol was inducted to the U.S. National Acad. of Construction, Canadian Acad. of Engng., Mexican Acad. of Engng., Engng. Acad. of Japan, Royal Acad. of Belgium for Science and the Arts, Romanian Acad., Romanian Acad. of Technical Sciences, and Acad. Europaea. He is a Distinguished Member of ASCE (highest ASCE honor), Inaugural Fellow of SEI and EMI, and Fellow of ACI, IABSE, and ISHMII. Frangopol is ranked as the 10th most-cited civil engineering author in the August 2019 Stanford Univ. worldwide citation survey published in PloS, and is ranked 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.

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, inaugural); Khan Medal (IALCCE, inaugural); Mufti Medal (ISHMII); Thorpe Medal (EC³); Ang (inaugural), Howard, Moisseiff (twice), Reese Awards (ASCE); Noble, Wellington (twice), and State-of-the-Art of Civil Engng. (three times) Awards (ASCE); Munro Prize (ELSEVIER); International Award of Merit (EUROSTRUCT); Research Award (KAJIMA); Research Prize (IASSAR); Senior Research Prize (IABMAS); OPA Award (IABSE); Reliability and Optimization of Structural Systems Award (IFIP); Distinguished Probabilistic Methods Educator Award (SAE). He is also the recipient of the ASCE Lehigh Valley Section's Civil Engineer of the Year Award, Lehigh University's Hillman Faculty Award, Libsch Research Award, Hillman Award for Excellence in Graduate Advising, Rossin Excellence in Research Scholarship & Leadership Award, Univ. of Colorado Excellence in Research, Scholarly and Creative Work Award, College of Engng. and Applied Science's Research Award, and Eckel Faculty Prize for Excellence. Frangopol holds 4 honorary doctorate degrees from the Polytechnic Univ. of Milan, Italy, Univ. of Liège, Belgium, Technical Univ. of Civil Engng. Bucharest, Romania, and Technical Univ. of Iași, Romania, and the 5th will be awarded in May 2024 by the Polytechnic University of Timișoara, Romania. He is an Honorary Professor at 14 universities (Hong Kong Polytechnic, Tongji, Southeast, Hunan, Tianjin, Chang'an, Beijing Jiaotong, Chongqing Jiaotong, Dalian Univ. of Technology, China Univ. of Petroleum (East China), Changsha Univ. of Science and Technology, Shenyang Jianzhu Univ., Royal Melbourne Institute of Technology, and Harbin Institute of Technology), a Visiting Chair Professor at the National Taiwan Univ. of Science and Technology, and a Guest Professor at six universities in Europe and Asia.

Frangopol is the Founding President of the International Association for Bridge Maintenance and Safety (IABMAS) and of the International Association for Life-Cycle Civil Engng. (IALCCE), and Founding Vice-President of the International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII). He is the Honorary President of the Brazil, Canada, Chile, Italy, 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. Frangopol is Past Vice-President of the International Association for the Structural Safety and Reliability (IASSAR), Past Chair of the Executive Committee of the Technical Activities Division of the 20,000+ members of the Structural 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 Structural Systems, and Founding Chair of the ASCE-SEI Technical Council on life-cycle performance, safety, reliability and risk of structural systems. He has held numerous leadership positions in national and international 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 numerous other 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 four books, 65 book chapters, over 480 articles in archival journals (including 14 award-winning papers), and more than 700 papers in conference proceedings. He has edited/coedited 59 books and 30 special issues of archival journals. Frangopol's work has had a significant impact on structural engng. evidenced by an h-index of 102, an i10-index of 477, and more than 38,000 citations (Google Scholar). He has supervised the dissertations of 50 PhD students and the theses and reports of 56 MS students. 29 of his former students and post-doctoral researchers are university professors in the United States and abroad, and many are prominent in professional practice and research laboratories.