

Biosketch of DAN M. FRANGOPOL

The Fazlur Rahman Khan Endowed Chair of Structural Engineering and Architecture
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Dr. Dan M. Frangopol is the inaugural holder of the Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, Bethlehem, Pennsylvania. Before joining Lehigh University in 2006, he was Professor of Civil Engineering at the University of Colorado at Boulder where he is now Professor Emeritus. From 1979 to 1983, he held the position of Project Structural Engineer with A. Lipski Consulting Engineers in Brussels, Belgium. In 1976, he received his doctorate in Applied Sciences from the University of Liège, Belgium.

Dr. Frangopol's main research interests are in the development and application of probabilistic concepts and methods to civil and marine engineering, 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 (2010) *“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 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). He is an experienced researcher and consultant to industry and government agencies, both nationally and abroad.

Dr. Frangopol holds four honorary doctorates (Doctor Honoris Causa) from the Polytechnic University of Milan (Politecnico di Milano), Italy, the University of Liège, Belgium, the Technical University of Civil Engineering Bucharest, Romania, and the Gheorghe Asachi Technical University of Iași, Romania. He is an Honorary Professor at 14 universities (Hong Kong Polytechnic, Tongji, Southeast, Hunan, Tianjin, Chang’an, Beijing Jiaotong, Chongqing Jiaotong, China University of Petroleum (East China), Changsha University of Science and Technology, Dalian University of Technology, Shenyang Jianzhu University, Royal Melbourne Institute of Technology (RMIT), and Harbin Institute of Technology), a Visiting Chair Professor at the National Taiwan University of Science and Technology, and a Guest Professor at 6 universities in Europe and Asia.

Dr. Frangopol is a [Member](#) of the US [National Academy of Construction](#), [Distinguished Member](#) of ASCE, Foreign Member of [Academia Europaea](#) (Academy of Europe, London), Foreign Associate of the [Engineering Academy of Japan](#), Foreign Member of the [Royal Academy of Belgium for Science and the Arts](#), Honorary Member of the [Romanian Academy](#), and Honorary Member of the [Romanian Academy of Technical Sciences](#). He is an Inaugural Fellow of both SEI and EMI, Fellow of ACI, IABSE, and ISHMII, Honorary President of the [IABMAS - USA, Brazil, Chile, Italy, Sri Lanka, and Turkey Groups](#), Honorary Member of the [IABMAS - Australia, China, Japan, and Portugal Groups](#), and Honorary President of the [IALCCE - Dutch Group](#).

Dr. Frangopol is the Founding President of the International Association for Bridge Maintenance and Safety ([IABMAS](#)), Founding President of the International Association for Life-Cycle Civil Engineering ([IALCCE](#)), Founding Vice-President of the International Society for Health Monitoring of Intelligent Infrastructures ([ISHMII](#)), and Founding Director of the Consortium on Advanced Life Cycle Engineering for Sustainable Civil Environments (COALESCE). He is the Past Vice-President of the International Association for Structural Safety and Reliability ([IASSAR](#)), Past Chair of the Executive Board of IASSAR, and Past Chair of the IASSAR Awards Committee. For [ASCE](#) he has chaired the Executive and Awards Committees of the 20,000+ members of the Structural Engineering Institute (Technical Activities Division), the Technical Committees on Safety of Buildings, Safety of Bridges, and Optimal Structural Design, the Technical Administrative Committee on Structural Safety and Reliability, and is the Past Vice-President and Governor of the [Engineering Mechanics Institute](#), and Founder and Past Chair of the [Technical Council on Life-Cycle Performance, Safety, Reliability and Risk of Structural Systems](#). He is a member of the [ASCE Industry Leaders Council](#). For [IABSE](#) he has chaired the Working Commission 1 on Structural Performance, Safety and Analysis. He is Past Board Member of the Joint Committee on Structural Safety ([JCSS](#)), and Past Chair of the International Federation for Information Processing ([IFIP](#)) Working

Group on Reliability and Optimization of Structural Systems. He is also the initiator and organizer of the [Fazlur R. Khan Distinguished Lecture Series](#) at Lehigh University.

Dr. Frangopol is the recipient of several national and international awards including the ASCE Freudenthal Medal (2020), ASCE Reese Research Prize (2020), ASCE Housner Medal (2019), ASCE State-of-the-Art of Civil Engineering Award (three times 1998, 2004, 2019), ASCE OPAL Leadership Award for Lifetime Accomplishments in Education (2016), ASCE Ang Award (2016), ASCE Noble Prize (2015), ASCE Croes Medal (twice 2001, 2014), IALCCE Khan Life-Cycle Civil Engineering Medal (2012), ASCE Wellington Prize (2012), IABMAS Senior Research Prize (2012), ASCE Distinguished Membership (2010), ISHMII Fellowship Award (2009), IALCCE Research Award (2008), Royal Academy of Engineering Distinguished Visiting Fellowship Award (2008), ASCE Howard Award (2007), IABSE OPA Award (2006), ELSEVIER Munro Prize (2006), IABMAS T.Y. Lin Medal (2006), ASCE Newmark Medal (2005), Kajima Research Award (2004), ASCE Moisseiff Award (2003), JSPS Fellowship Award for Research in Japan (twice 2003, 2016), IASSAR Research Prize (2001), and the SAE International Distinguished Probabilistic Methods Educator Award (1996). He is also the recipient of the ASCE Lehigh Valley Section's Civil Engineer of the Year Award (2016). Among several awards received at the University of Colorado, Frangopol is the recipient of the Boulder Faculty Assembly Excellence in Research Scholarly and Creative Work Award (2004), College of Engineering and Applied Science's Research Award (1999), and Eckel Faculty Prize for Excellence (2003). He is also the recipient of four Lehigh University awards including the Lehigh University's Hillman Faculty Award (2019), Lehigh University's Hillman Award for Excellence in Graduate Advising (2016), Lehigh University's Libsch Research Award (2013), and Rossin College of Engineering and Applied Science's Excellence in Research Scholarship and Leadership Award (2020).

Dr. Frangopol is the Founder and Editor-in-Chief of [Structure and Infrastructure Engineering](#) an international peer-reviewed archival journal, included in the ISI Science Citation Index, dedicated to recent advances in maintenance, management and life-cycle performance of a wide range of structures and infrastructure systems. He is also the Founding Editor of the Book Series [Structures and Infrastructures](#) (CRC Press, Taylor & Francis Group, Balkema). The aim of this Book Series is to present research, developments, and applications written by experts on the most advances technologies for analyzing, predicting and optimizing the performance of structures and infrastructure systems.

Dr. Frangopol is the author/co-author of three books, 64 book chapters, over 420 articles in archival journals (including 11 award-winning papers from ASCE, IABSE, and Elsevier, and [115 articles in ASCE journals](#)), and more than 600 papers in conference proceedings. Dr. Frangopol is also the editor/co-editor of 55 books published by ASCE, Balkema, CIMNE, CRC Press, Elsevier, McGraw-Hill, Routledge, and Thomas Telford, and guest editor of 24 special issues of archival journals. He has served as an editorial board member of 15 international journals, including *Bridge Engineering*, *Computers & Structures*, *Construction & Building Materials*, *Engineering Structures*, *Probabilistic Engineering Mechanics*, *Reliability Engineering & System Safety*, *Structural Safety*, and *Sustainable & Resilient Infrastructure*. Additionally, he has chaired and organized several national and international structural engineering conferences and workshops. He has given plenary/keynote lectures at over 60 major conferences held in Asia, Australia, Europe, North America, South America, and South Africa, including the T. Y. Lin Lecture and the Fazlur R. Khan Lecture. He also presented many invited lectures and short courses at world-renowned universities and organizations, including the K. C. Kavanagh Memorial Lecture, the Warren Lecture, and the Wenyuan Lecture, and has served as a consultant or advisor to numerous companies. Dr. Frangopol's work has had a significant impact on structural engineering evidenced by an h-index of 81, an i10-index of 418, and more than 26,500 citations (Google Scholar, August 17, 2020).

Dr. Frangopol has performed research and served as a consultant in many major projects sponsored by the National Science Foundation, the Federal Highway Administration, the Office of Naval Research, the National Aeronautics and Space Administration, the Army Corps of Engineers, the Air Force Office of Scientific Research, the Department of Defense, the Army Armament Research, Development and Engineering Center, the National Cooperative Highway Research Program, the Colorado, Florida and Pennsylvania Departments of Transportation, the Transportation Research Board, the Applied Technology Council, the Pennsylvania Infrastructure Technology Alliance, the Progeny System Corporation, the Henry Luce Foundation, the U.K. Highways Agency, the North Atlantic Treaty Organization, and the Japan Ministry of Education, among others. Also, he received research funding from ArcelorMittal, the Tokyo Electric Power Company, the Japan Institute of Systems Research, the Dutch Ministry of Infrastructure and Environment, the Korean Ministry of Land, Transport and Maritime Affairs, the U.S.-Spain Joint Committee for Scientific and Technological Cooperation, the Parsons Transportation Group, the American Society of Civil Engineers, the Georgia Institute of Technology, and the University of Colorado.

Dr. Frangopol has supervised the dissertations of 46 PhD students and the theses and reports of 56 MS students. He has also supervised and sponsored 21 post-doctoral researchers and hosted over 60 visiting scholars. 28 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. He also served as External Member of PhD Committees at major universities in Austria, Australia, Brazil, Canada, Denmark, England, France, Hong Kong, India, Italy, Ireland, Netherlands, New Zealand, Portugal, Serbia, Spain, Sweden, Switzerland, and the US, and taught short courses in many leading universities in Asia, Europe, North America, and South Africa.

For additional information on Dr. Frangopol's activities please visit <https://www.lehigh.edu/~dmf206/>