

Conference Keynote Speakers (updated)

Tuesday, August 6, 2019
8:10 AM – 8:40 AM

Extending the Life-Cycle of Civil and Marine Structures: Role of SHM

Dr. Dan M. Frangopol

Abstract

Structural deterioration can pose tremendous risk to the functionality, serviceability, and safety of civil and marine structures, considerably limiting their service life. To extend the life-cycle of existing structures under deterioration, rational life-cycle management should be conducted accounting for various uncertainties arising from loads, resistance, and modeling. Compared to conventional inspection methods that are sometimes disruptive and costly, structural health monitoring (SHM) provides a novel and cost-efficient approach to reducing uncertainties and ultimately facilitating the decision-making process for realizing structural longevity. In this keynote lecture, accomplishments in the integration

of probabilistic life-cycle management and SHM of civil and marine structures are presented.

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Biography



Dr. Dan M. Frangopol

Dan Frangopol is the inaugural holder of the Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University. He is recognized as a leader in the field of life-cycle engineering of civil and marine structures. His main research interests are in the application of probabilistic concepts and methods to civil and marine engineering. Dr. Frangopol is the Founding President of the International Associations for Bridge Maintenance and Safety (IABMAS) and Life-Cycle Civil Engineering (IALCCE). He is also the Founding Vice-President of the International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII). He has authored/co-authored 3 books and over 400 articles in archival journals including 10 award-winning papers. He is the Founding Editor of the international peer-reviewed journal *Structure and Infrastructure Engineering* and of the Book Series *Structures and Infrastructures*. Dr. Frangopol is the recipient of several medals, awards, and prizes, from ASCE, IABSE, IASSAR, and other professional organizations, such as the George W. Housner Structural Control and Monitoring Medal, Lifetime Achievement Award in Education (OPAL), Newmark Medal, Alfredo Ang Award, T. Y. Lin Medal, F. R. Khan Medal, and the Croes Medal (twice), to name a few. He holds 4 honorary doctorates and 14 honorary professorships from major universities. He is a foreign member of the Academia Europaea (Academy of Europe, London), a foreign member of the Royal Academy of Belgium, an Honorary Member of the Romanian Academy, an Honorary Member of the Romanian Academy of Technical Sciences, and a Distinguished Member of ASCE.