

## Life-Cycle Analysis Expert Named ASCE Fellow

BY Staff

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Biondini

**Fabio Biondini**, Ph.D., C.Eng., F.ASCE, professor of structural engineering at Politecnico di Milano, in Milano, Italy, and a consultant engineer for problems in advanced structural analysis, has been named a Fellow by the ASCE Board of Direction.

Biondini has conducted several forensic investigations related to structural failures of bridges, roof systems, breakwaters, and cranes. His main research areas are life-cycle civil engineering, structural reliability, structural optimization, and earthquake engineering. His scientific contributions cover several topics, including the life-cycle risk, reliability, robustness, redundancy, and resilience of deteriorating structural systems and infrastructure networks, with emphasis on the formulation of general methods and time-variant performance indicators for life-cycle seismic design and assessment of concrete structures exposed to corrosion. The methodologies he has developed have been successfully applied in engineering practice to the assessment, repair, and rehabilitation of existing structures such as cable-stayed bridges, arch bridges, and landmark buildings.

Biondini has served ASCE at the international level in several leadership roles and capacities. He is the current chair of Task Group 2 on Reliability-Based Structural System Performance Indicators and past chair of Task Group 1 on Life-Cycle Performance of Structural Systems under Uncertainty, SEI/ASCE Technical Council on Life-Cycle Performance, Safety, Reliability, and Risk of Structural Systems. He is also past chair of the SEI/ASCE Technical Committee on Safety of Buildings and a past member of the SEI/ASCE Technical Committee on Safety of Bridges.

His service to ASCE include a special project funded by the SEI TAD Executive Committee for the development of a state-of-the-art report outlining the current status and research needs in the field of life-cycle of civil structure and infrastructure systems. The task of the special project was to conduct a survey and organize an International Workshop on Life-Cycle Performance of Civil Structure and Infrastructure Systems (November 2015 at ASCE Headquarters) to support the ASCE Grand Challenge of reducing life-cycle costs of civil infrastructure projects by 2025.

Biondini is the recipient of the 2006 IFIP Young Researcher Award, the 2006 IABSE Outstanding Paper Award, the 2010 IALCCE Special Service Award, the 2011 Erskine Fellowship from the University of Canterbury in New Zealand, the 2012 IABMAS Junior Prize, and the 2014 IABMAS Special Service Award. He has given keynote and invited lectures at several national and international conferences and workshops held in Italy and many other countries, including France, Japan, and the United States.

He is author or coauthor of about 270 scientific publications, including book contributions, book chapters, journal articles, and conference papers. He recently coauthored journal papers that were included in the Special Section "Risk-Based Life-Cycle Performance of Structural Systems" in ASCE's *Journal of Structural Engineering*. This collection of papers is the archival work product of the SEI/ASCE Technical Council and its Task Groups for the first five years of their existence, and represents the consensus as to the current state of the art in life-cycle performance assessment and risk-informed decision making in structural engineering.

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