

PRESS RELEASE

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IABSE People and Paper Awards 2024

The International Association for Bridge and Structural Engineering (IABSE) is pleased to announce the Laureates of the IABSE People and Paper Awards 2024.

IABSE Early Career Prize

The IABSE Early Career Prize 2024 is presented to Helder Manuel da Silva e Sousa, Portugal, ‘in recognition of his spirit to bridge between different professionals, society and to cooperate between generations, through his work on the field of risk and resilience assessment of existing structures and infrastructures.’

The IABSE Early Career Prize was established to honour and encourage a member early in his or her career for outstanding achievement in structural engineering. The Award is conferred on an individual member, forty years of age or younger. The Prize includes prize money. The first IABSE Early Career Award was presented in 1983.



Helder Sousa is currently an Assistant Researcher at the University of Minho (Portugal). He obtained his Bachelor degree in 2009 and his Masters degree in 2010 in Civil Engineering. He pursued his PhD thereafter in the topic of methodologies for safety assessment of existing timber structures. His current, main topic of research include reliability and resilience of structures and infrastructures. He is also the Chair of IABSE TG 5.8 on ‘Resilience of existing structures’ and he is also the Technical Coordinator of several national and international projects involving prediction modelling and management of roadway and railway assets.

Helder Sousa’s work encompasses probabilistic and numeric analysis of existing structures combined with inspection/testing (e.g. visual inspection, NDTs, laser scanner survey), monitoring and advanced techniques (e.g. Bayesian models, artificial intelligence and neural networks). Recently, he has been implementing this information into advanced HBIM environments. His work on the development of a safety assessment framework for existing structures based on probabilistic analysis and on-site testing - topic during his PhD, was already put into implementation on different relevant real life cases, such as the UNESCO historical sites of Guimarães’ Castle and Tomar’s Convent of Christ. Recently, he was proposed as a Deputy Coordinator for a new Erasmus Mundus Joint Masters, ‘NORISK: International Masters in Risk Assessment

and Management of Civil Infrastructures'. Hélder Sousa was also awarded a researcher contract through the Portuguese National Research Foundation (FCT), as Assistant Researcher, with a project that combines his research experience with his liaison with structural designers and industry.

Hélder Sousa joined IABSE in 2017 and was the Scientific Committee Secretary of IABSE Guimarães Symposium 2019. He displayed initiative, responsibility and leadership far beyond it could be expected from a young engineer, starting with his role for the Symposium. Since then he has joined and actively contributed to the several IABSE Boards and Committees. In 2019 he joined the IABSE e-Learning Board and the IABSE Task Group 5.2 on Key Performance Indicators. In 2019, he became a member of the Young Engineers Committee (YEC) and since 2023, he is also leading the 'Education and Training' tasks for the YEC. From 2020, he is the Chair of IABSE TG 5.8 on 'Resilience on Existing Structures', and he joined the SEI Editorial Board in 2021. Hélder Sousa has also been part of the Scientific Committees for IABSE conferences in Ghent 2021; Prague 2022; Nanjing 2022, Istanbul 2023, New Delhi 2023, and San Jose 2024. He is an engineer in his early career, who displays IABSE's spirit to bridge different professionals, society and cooperate between generations, for the benefit of the society, in the field of structural engineering. Hélder Sousa lectures on several international masters courses and has published more than 110 scientific and technical papers (journal and conference), including 47 ISI journal papers, 8 non-ISI, 65 conference papers, 1 book, and 4 book chapters. Some of his major publications include the following:

1. Sousa H.S., Sørensen, J.D., Kirkegaard, P.H., Branco, J.M., Lourenço, P.B. (2013) On the use of NDT data for reliability-based assessment of existing timber structures. *Engineering Structures* (56) (doi: 10.1016/j.engstruct.2013.05.014).
2. Sousa H.S., Branco, J.M., Lourenço, P.B. (2016) A holistic methodology for probabilistic safety assessment of timber elements combining onsite and laboratory data. *International Journal of Architectural Heritage* (10.5) (doi: 10.1080/15583058.2015.1007177).
3. Ariza M.P.S., Zambon I., Sousa H.S., Matos J.C., Strauss A. (2020) Comparison of forecasting models to predict concrete bridge decks performance. *Structural Concrete* (21) (doi: 10.1002/suco.201900434).
4. Strauss A., Orcesi A., Lampropoulos A., Briseghella B., Frangopol D.N., Sousa H.S., Casas J., Matos J.C., Schellenberg K., Valenzuela M., Akiyama M., Linneberg P., Hajdin R., Moser T. (2024) IABSE Survey of Implemented Decision-making Models used by Public and Private Owners/Operators of Road- and Railway Infrastructures, *Structural Engineering International* 34(1) (doi: 10.1080/10168664.2022.2154731).
5. Santos F.A., Bonatte M.S. Sousa H.S., Bittencourt T.N., Matos J.C. (2024). Safety assessment of Brazilian concrete bridges through reliability analysis. *Structural Engineering International* 34(2) (doi:10.1080/10168664.2023.2288386).

The International Association for Bridge and Structural Engineering (IABSE), founded in 1929, operates on a worldwide basis and deals with all aspects of planning, design, construction, maintenance and repair of civil engineering structures. The mission of IABSE is to exchange knowledge and to advance the practice of structural engineering worldwide in the service of the profession and society. [Read further here.](#)

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