

ABC**PhD**OPENTalks2024

Dynamic Performance of Footbridges: FE Analysis Strongly Supported by In-Field Experimental Tests

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The presentation will focus on the dynamic performance of footbridges, with the finite element (FE) analysis method strongly supported by in-field experimental tests. Various dynamic aspects of footbridges will be discussed, including the influence of pedestrian loading, seismic factors, and other external influences. The presentation will also outline the methodology used for numerical analysis and provide details of the conducted field research. Results obtained from both numerical and experimental investigations will be compared and discussed for their alignment and practical engineering applicability. Ultimately, the presentation aims to provide a deeper understanding of the dynamic behaviour of footbridges, crucial for ensuring their safety and performance under various operating conditions.

Wednesday March 20, 2024, H: 12.00

Politecnico di Milano,

Campus Leonardo

room 3.1.2, building 3, first floor

piazza Leonardo Da Vinci 32, Milano



Bridge Engineer, MSc (2012), Ph.D. (2016), Assistant Professor at Cracow University of Technology (Poland). Experienced in research, teaching, and project coordination within academia and industry. Izabela has devoted her academic career to teaching courses in static and dynamic structural analysis, induced seismic engineering, FE numerical simulations, and structural health monitoring (SHM) of civil engineering structures. In terms of scientific research, she has primarily focused on bridge dynamics, with an emphasis on numerical dynamic performance analysis of footbridges supported by in-field experimental tests. Izabela holds a Professional Engineer license for unlimited design in the engineering specialty of bridges (in Poland). She coordinated expert work in the field of diagnostics and monitoring of surface infrastructure facilities at the biggest bituminous coal mine in Poland. In terms of publications, she has over 50 publications on dynamic structural analysis through book chapters, peer-reviewed journals, and conference proceedings.