

Risk, resilience and sustainability informed integrity management of infrastructure systems

Robustness and resilience of infrastructure systems subject to earthquakes

Speaker: Prof. Da-Gang Lu, Harbin Institute of Technology

Time: 17th October, 2022 15:00 – 16:00 Beijing time

Host: Dr. Jianjun Qin, Shanghai Jiao Tong University

Lecture outline:

During the service life, infrastructure systems are exposed to earthquakes and cascading multi-hazards. Due to the severe damage and collapse of infrastructure systems and structures as well as huge human and society costs caused by earthquakes, the awareness of the significance of robustness and resilience of infrastructure systems subject to earthquakes has gradually intensified over the years. This presentation introduces the development of research on seismic robustness and resilience of infrastructure systems and structures, and illustrates different perspectives of robustness and resilience modeling and quantification. Further, the presentation shows how the introduced modeling methods can be applied in different infrastructure systems, including buildings, bridges, urban underground infrastructure, offshore wind farms, etc. Finally, the presentation will introduce an ongoing major project on resilience assessment and risk control of transportation infrastructure subject to earthquakes and other multi-hazards.

About the speaker:

Da-Gang Lu currently works at the School of Civil Engineering, Harbin Institute of Technology (HIT), who is a professor of engineering mechanics & civil engineering. He is members of JCSS, JCGC, IABMAS, IALCCE, IACM, etc. Prof. Lu has published 3 monographs and over 300 peer-reviewed journal and conference papers. Prof. Lu's research group is RARE@HIT (Reliability and Risk Engineering). The main research areas of RARE@HIT are: (1) Reliability, Robustness and Resilience of Engineering Structures; (2) Vulnerability, Risk and Resilience of Critical Infrastructure; (3) Performance-Based Design of Structures against; (4) Life Cycle Assessment, Design and Management of Civil Infrastructure; (5) Soft Computing and SMulti-Hazardsoft Design in Civil Engineering under Uncertainty; (6) Computational Stochastic Mechanics and Probabilistic Engineering Mechanics.



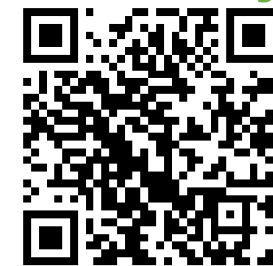
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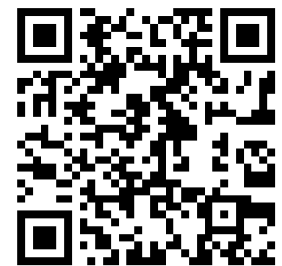
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