Introduction to Structural Health Monitoring with case studies

Zhen Sun, Ph.D.

Postdoctoral researcher

Construct-ViBest, Department of Civil Engineering, FEUP, University of Porto, Portugal

Abstract:

In recent years, structural health monitoring (SHM) has been developing rapidly. As a interdisciplinary field, SHM has integrated sensor technology, big data analytics tools, and AI techniques with the traditional disciplines such as civil engineering, mechanical engineering, and energy engineering. The current status of SHM in China and Europe will be reviewed comprehensively in academia and industry. The value of SHM will be presented with case studies on bridges, dams, and wind turbines to show how SHM is applied in the different fields. The challenges in the SHM research field will also be discussed.

Bio:

Dr. Sun is currently a postdoctoral researcher in Department of Civil Engineering, FEUP, University of Porto. He received his PhD from Yokohama National University in 2020 (PhD program study in The University of Tokyo from 2009 to 2013). Before that, he worked on structural health monitoring and condition assessment of girder/cable-supported bridges in a research institute in China for several years.

His main research interests include (1) Structural dynamics and structural health monitoring; (2) Damage detection and load carrying capacity evaluation of girder bridges; (3) Data-based condition assessment of cable-supported bridges.

Thursday, October 28, 2021   17:00 – 18:00 JST

Online (Microsoft Teams, Team code: z2y60pz)

Degree Program in Engineering Mechanics and Energy
University of Tsukuba
http://www.eme.tsukuba.ac.jp/en/