Special Issue

Recent Advances in Structural Health Monitoring of Bridges

Message from the Guest Editors

Structural Health Monitoring (SHM) is crucial for ensuring safety and preventing downtime of civil structures and infrastructures. Recent advancements in sensing technologies, modelling strategies and data analysis have significantly improved the ability to identify anomalies, assess structural conditions, and predict future performance. In recent years, traditional sensing techniques have seen a rapid increase in applications, enabling the validation of data analysis methods for SHM towards the technology transfer to industrial practice.

This special issue of Sensors focuses on SHM strategies for bridges, viaducts, and overpasses, addressing the advancements in sensing technologies, experimental techniques, and theoretical development, as well as lessons learned from long-term monitoring experiences of full-scale structures. Suitable topics include, but are not limited to:

Innovative sensors for SHM; Model-based and data-driven techniques for damage identification; Digital twin for condition assessment and predictive maintenance; Data fusion and multi-sensors integration; Population-based SHM methods; Vision-based systems for condition assessment;
etc.

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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