

Special Issue

Advanced Sensing Technologies, Data-Driven Analytics and Information Integration for Structural Damage Detection and Localization

Message from the Guest Editors

Recent advances in sensing technologies and data-driven methodologies are transforming Structural Health Monitoring (SHM) from traditional vibration-based assessment into an integrated, intelligent, and predictive discipline. Combining different types of data, like accelerometers, GNSS, strain and fibre-optic sensors, radar and vision-based systems, or remote and distributed networks, helps us understand how structures behave in the real world. This Special Issue aims to bring together original research and review papers focused on advanced sensing systems, data fusion strategies, and analytical methods for detecting, localising, and quantifying damage in civil structures and infrastructures. Special attention is devoted to approaches capable of distinguishing true damage from environmental or operational variability, and frameworks that support condition-based maintenance, rapid post-event evaluation, and resilience-oriented design. Contributions addressing experimental validation, field applications, and real-world datasets are particularly encouraged.

Guest Editors

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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.

Editor-in-Chief

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