

## Special Issue

# Advanced Sensing and Intelligent Modeling for Structural Health Monitoring

### Message from the Guest Editors

Structural Health Monitoring (SHM) is rapidly evolving from periodic inspection toward continuous, data-rich assessment powered by advances in sensing hardware and intelligent modeling. Emerging sensing modalities (e.g., distributed fiber-optic, vision-based, guided-wave, and wireless sensing) now enable higher-resolution and multi-physics measurements, while modern analytics (e.g., machine learning, physics-informed methods, and digital twins) offer new pathways to extract reliable condition information from complex, noisy, and heterogeneous data.

This Special Issue aims to showcase state-of-the-art developments that integrate next-generation sensing with robust, explainable, and uncertainty-aware modeling to improve damage detection, diagnosis, prognosis, and decision support for civil and mechanical systems.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

Advanced sensing and instrumentation for SHM.

Multi-modal data fusion and robust SHM analytics.

Intelligent and physics-consistent modeling for SHM.

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### Guest Editors

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### Deadline for manuscript submissions

30 August 2026



## Applied Sciences

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### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

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