Special Issue

Advanced Sensing and Deep Learning for Damage Detection and Performance Assessment in Structural Health Monitoring

Message from the Guest Editors

Structural Health Monitoring (SHM) has rapidly developed over the past few decades as authorities and practitioners look for efficient methods to ensure the safety and longevity of critical infrastructure. Recent advancements in sensor and computing technologies have significantly improved the ability to capture detailed data on structural conditions. When combined with artificial intelligence techniques, these technologies can provide unprecedented insights into the health and performance of engineering structures. Deep learning models are particularly well-suited for analyzing the vast amounts of data generated by modern sensor systems. We invite original research and comprehensive review articles that explore innovative approaches to damage detection and performance assessment using advanced sensing and deep learning. The topics of interest include sensing techniques, edge computing, data fusion, and the latest application of deep neural networks. Contributions that address the challenges and opportunities in integrating these technologies in real-world scenarios are particularly encouraged.

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Deadline for manuscript submissions

15 February 2026

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/221435

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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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