



Recent Developments in Structural Health Monitoring

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Deadline for manuscript
submissions:

10 June 2024

Message from the Guest Editors

Dear Colleagues,

This Special Issue “Recent Developments in Structural Health Monitoring” aims to collect recent advances and developments in the structural health monitoring of buildings, bridges, dams, oil tanks, pipes and aerospace equipment. How to protect these structures from the disasters and maintain their regular function requires advanced sensing technology and smart structural health monitoring (SHM) systems. This Special Issue aims to cover original or review articles exploring innovations in SHM. Themes of interest include, but are not limited to:

- Smart sensing technology and SHM systems of structures;
- Self-sensing structures to measure the parameters, such as stress (or force), strain (or deformation), crack, damage, temperature and pressure;
- Optical fiber sensors and components in engineering;
- Smart materials and structures with both self-sensing and self-healing functions;
- Vibration testing based structural damage identification;
- Dynamic analysis and modal parameter recognition;
- Monitoring data motivated model updating;
- Structural performance assessment;
- Smart operation and management.
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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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