Special Issue

Structural Health Monitoring in Civil Engineering: From Damage Detection to Safety Assessment

Message from the Guest Editors

Structural health monitoring, as one of the most effective approaches, is able to provide essential data on the structural state of buildings. In recent years, the rapid progress in structural sensing techniques and data processing has prompted structural health monitoring become a more credible approach for assessing civil structural states. In all aspects of structural health monitoring, the essential issue is damage detection, which provides information directly related to structural performance. Therefore, this Special Issue, "Structural Health Monitoring in Civil Engineering: From Damage Detection to Safety Assessment", invites researchers to submit their up-to-date studies on SHM and damage detection, including but not limited to the following:

- Vibration-based structural health monitoring;
- Wave-based structural health monitoring;
- Optical fiber sensing in structural health;
- Machine vision-based structural damage monitoring;
- Piezoelectric smart aggregate-based damage monitoring;
- Acoustics and ultrasonic methods.

For further reading, please follow the link to the Special Issue Website at:
https://www.mdpi.com/journal/buildings/special_issues/KO09YVZK4O

Guest Editors

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Deadline for manuscript submissions

closed (31 March 2026)

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About the Journal

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.

Editor-in-Chief

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