



New Technologies and Materials in Structural Health Monitoring of Civil Infrastructures

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Message from the Guest Editors

Civil infrastructures play a crucial role in modern society by providing essential services and supporting economic growth. Civil infrastructures deteriorate and become damaged due to various reasons including aging, weathering, poor maintenance, prolonged overloadings, vibrations, foundation settlements, and disasters (such as floods, fire, and earthquakes). Structural health monitoring (SHM) is one of the most reliable methods for condition and performance monitoring of civil infrastructures. SHM ensures safe operation, improves operational efficiency, reduces the life-cycle costs, and increases the sustainability of infrastructures.

Given the importance of civil infrastructures, this Special Issue aims to promote the latest advancements in the field of SHM and smart materials for infrastructures to improve the infrastructures' safety, sustainability, and performance.





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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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