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Advances in Research on Structural Dynamics and Health Monitoring

Guest Editors:

Prof. Dr. Shaohong Cheng
Department of Civil & Environmental Engineering, University of Windsor, Windsor, ON N9B 3P4, Canada

Prof. Dr. Haijun Zhou
Civil Engineering Department, Shenzhen University, Shenzhen 518060, China

Deadline for manuscript submissions:
closed (30 September 2024)

Message from the Guest Editors

Dear colleagues,

This Special Issue "Advances in Structural Dynamics and Health Monitoring" aims to collect and disseminate the latest developments in the dynamic analysis and health monitoring of civil structures to reflect current research trends and challenges in these fields. We invite original research, in terms of analysis and design methods, numerical modelling, experimental testing, field measurements, and case studies, as well as state-of-the-art review papers. Themes of interest include, but are not limited to:

- Dynamic response of structures;
- Safety and serviceability of structures under dynamic loads;
- Sustainability of civil structures under extreme loads;
- Refinement of design codes to accommodate extreme loading conditions;
- Measurement and testing of structural vibrations;
- Vibration control and implementation of smart materials in control devices;
- Performance evaluation of various passive, semiactive, and active control schemes;
- Structural health monitoring;
- System identification;
- Structural performance assessment.

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Guest Editors

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Editor-in-Chief

Prof. Dr. David Arditi
Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

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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Contact Us

Buildings Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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