Special Issue

Structural Vibration Analysis and Control in Civil Engineering

Message from the Guest Editors

This Special Issue aims to gather and disseminate innovative scientific research in **structural vibration analysis and control**. The goal is to advance the understanding of structural dynamics, propose effective vibration mitigation measures, and improve the resilience of critical infrastructure, such as bridges, high-rise buildings, and other civil engineering structures. We welcome original research articles and review studies addressing the following topics:

- Dynamic response prediction of structures under various loading conditions;
- Seismic design and wind-induced vibrations in civil engineering structures;
- Measurement, spectral analysis, and energy distribution of ground vibrations;
- Attenuation laws for blast-induced and seismic vibrations;
- Active and passive vibration control systems for structural protection;
- Artificial intelligence methods for vibration prediction and control;
- Multidisciplinary approaches including experimental studies, numerical simulations, and theoretical analyses;
- Seismic vulnerability analysis and structural damage assessments.

More details:

https://www.mdpi.com/journal/buildings/special_issues /7VTK6F6A78

Guest Editors

Dr. Jinyang Li

Dr. Zhiqian Dong

Dr. Dinghao Yu

Dr. Jianxiao Mao

Deadline for manuscript submissions

28 February 2026



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Impact Factor 3.1 CiteScore 4.4



mdpi.com/si/227628

Buildings Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 buildings@mdpi.com

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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

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

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).