Special Issue

Recent Developments in Vibration Control and Monitoring of Civil Structures

Message from the Guest Editors

Civil structures are prone to different types of dynamic loads, e.g., earthquakes, strong wind, ocean waves. To avoid the risk of structural damage, or ultimately collapse, there is a need for the installation of structural control and monitoring systems in the structures. As expected, novel structural designs often require the development of novel control and monitoring systems, with improved performance characteristics compared to traditional solutions.

This Special Issue aims to garner excellent research involving several aspects of theoretical development, algorithms, design, experiment, and practical implementations of control and monitoring systems in civil structures. Topics of interest include but are not limited to the following:

- Design of novel high-performance dampers/sensors;
- Modeling of novel dampers/sensors;
- Experiments of novel damping/monitoring systems;
- Performance of novel dampers against extreme events;
- Structural identification based on monitoring data;
- Novel algorithms for identifying structural parameters and loadings.

Guest Editors

Dr. Wenai Shen
Dr. Xiang Xiao
Prof. Dr. Zhouquan Feng

Deadline for manuscript submissions

closed (31 March 2024)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/152117

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

mdpi.com/journal/buildings

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/journal/buildings

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

Author Benefits

High Visibility:

indexed within SCIE (Web of Science), Scopus, Ei Compendex, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Construction and Building Technology) / CiteScore - Q1 (Architecture)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).