

Special Issue

Advanced Structural Techniques for Seismic and Wind Resilience: Innovations in Safety and Performance

Message from the Guest Editors

Our upcoming Special Issue, titled “Advanced Structural Techniques for Seismic and Wind Resilience: Innovations in Safety and Performance”, aims to provide

a platform for discussing the latest structural design methodologies and innovative energy dissipation systems that ensure the stable and secure behavior of structures under external loads, such as seismic and wind forces. Seismic and wind loads continue to pose significant risks to buildings, highlighting the importance of optimized structural design and safety assurance for researchers and practitioners alike. This Special Issue will cover the following topics:

- Structural design for seismic and wind load resistance;
- Structural response analysis using nonlinear dynamic methods;
- Structural damping systems for seismic and wind load mitigation;
- Efficient seismic retrofitting solutions;
- Mechanical devices for vibration absorption;
- Optimized and efficient structural design approaches;
- Nonlinear dynamic analysis and validation;
- Experimental validation of structural performance;
- Applications of machine learning in structural optimization and performance prediction.

Guest Editors

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Deadline for manuscript submissions

closed (30 November 2025)



Buildings

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Impact Factor 3.1
CiteScore 4.4



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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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