Special Issue

Novel Design of Tall Building Structures Based on Modern Resilience and Sustainability Performance Criteria

Message from the Guest Editors

In recent decades, the construction of tall buildings has significantly expanded as a result of material technology and scientific developments, combined with increased societal and financial needs for housing and commercial space in modern metropoles. This Special Issue is dedicated to current developments regarding novel design approaches of tall buildings (covering tall/super-tall/mega-tall types) that consider resilient and sustainable performance criteria. *We welcome papers on the following and related topics:*

- Seismic design concepts—earthquake resistant/mitigation systems;
- Current codification provisions-specifications in tall building design;
- Wind loading effects;
- Finite element modeling and nonlinear analysis procedures;
- Performance-based design of tall buildings;
- Impact of building envelope—curtain wall contribution/resilience;
- Sustainable design of tall buildings;
- High-performance materials in tall building design and construction;
- Digital twin technology;
- Structural optimization of tall buildings;
- Case studies.

Guest Editors

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Deadline for manuscript submissions

closed (30 November 2024)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/148272

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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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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).