Special Issue

UHPC Materials: Structural and Mechanical Analysis in Buildings

Message from the Guest Editors

The aim of this Special Issue is to provide an overview of the recent innovations and advances UHPC materials and their composite structures. The topics of this Special Issue include but are not limited to:

- Design, performance, and construction techniques of innovative UHPC materials (e.g., steel-free UHPC, and fast-hardening and low-shrinkage UHPC);
- Design, performance, and construction techniques of innovative modular structures (e.g., beams, columns, slabs, and nodes) made from UHPC and other building materials;
- Prefabricated modular construction and life-cycle assessment of UHPC modular structures;
- Rehabilitation, repair, and retrofitting of existing buildings with UHPC;
- Mechanical behavior of UHPC and its corresponding composite structures against the static (e.g., compression, tension, and bending) and dynamic (e.g., impact, fatigue, and seismic) actions;
- Various research techniques (e.g., experimental studies, nonlinear finite-element analysis, and deep learning-based structural analysis and evaluation).

For more information, please visit the link below:
https://www.mdpi.com/journal/buildings/special_issues/B9VI11KV93

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Deadline for manuscript submissions

16 August 2025

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/210246

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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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