

Special Issue

Urban Underground Space Design: Structural Stability and Mechanics Analysis

Message from the Guest Editors

As cities globally grapple with the challenges of population growth and limited surface, the use of underground spaces emerges as a solution with great potential. From a structural stability standpoint, the intricate network of tunnels, subways, and other underground structures requires a meticulous design to withstand various loads, ground movements, and possible natural hazards. Geotechnical analysis is similarly important, involving the understanding of soil and rock mechanics, groundwater conditions, and the interaction between the subsurface and the constructed elements. Within this framework, this Special Issue proposes a series of research papers from the above research areas. Topics include, but are not limited to, research results on the following:

- Innovative approaches to urban underground space design;
- Sustainable practices in underground construction;
- Geotechnical analysis for urban underground projects;
- Case studies and best practices.

For more information, please follow the link below:

https://www.mdpi.com/journal/buildings/special_issues/6U5F547YLT

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Deadline for manuscript submissions

closed (28 February 2025)



Buildings

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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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