

Special Issue

Advanced Fire Safety Engineering Strategies for Complex and Contemporary Buildings

Message from the Guest Editors

Contemporary buildings, characterized by high-rise configurations, complex geometries, interconnected spaces, innovative materials, advanced energy systems, and emerging construction technologies, present fire scenarios that often exceed conventional prescriptive approaches. Their assessment requires fire safety engineering, enabling performance-based design through advanced computational methods and the development of regulations, standards, and performance-based codes (PBC). Original research contributions are invited on, but not limited to, the following topics:

- Performance-based design for contemporary architecture;
- Interdisciplinary approaches in architecture, fire engineering, and materials science;
- Digital technologies and intelligent fire safety systems;
- Fire performance of sustainable, hybrid, and emerging materials;
- Fire safety in high-rise and non-conventional buildings;
- Innovative facades and vertical fire spread;
- Intelligent detection, predictive risk assessment, and resilient systems;
- Structural fire engineering and multi-hazard performance;
- Regulatory frameworks, standards, and PBC for emerging fire safety challenges;
- Lessons learned from recent fire events.

Guest Editors

Prof. Dr. António Leça Coelho

Prof. Dr. André Rodrigues

Dr. Nuno Correia dos Santos

Deadline for manuscript submissions

31 January 2027



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 5.6



mdpi.com/si/285428

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

[mdpi.com/journal/
buildings](https://mdpi.com/journal/buildings)





Buildings

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 5.6



[mdpi.com/journal/
buildings](https://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 (Engineering, Civil) / CiteScore - Q1 (Architecture)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.7 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the first half of 2026).