

Special Issue

Challenges in Implementing Emerging Technologies in the Building Construction Industry

Message from the Guest Editors

The building construction industry is facing various challenges, including the emergence of new technologies, limited resources, labor shortages, and carbon emission control. Therefore, the proactive adoption of new technologies and concepts is needed in construction and project management. The widespread implementation of new technologies such as robotics, artificial intelligence, BIM, smart monitoring devices, and data integration platforms is driving the transformation and upgradation of the construction industry, with considerable potential to help address these challenges. However, the successful implementation of these new technologies in the building construction industry requires addressing a series of issues such as human-machine collaboration, efficiency, costs, and engineering ethics, particularly the need to establish new concepts and management systems adapted to the industry. Therefore, this Special Issue aims to share the latest knowledge and cases, focusing on how new technologies and concepts can better promote the transformation and upgradation of the building construction industry.

Guest Editors

Prof. Dr. Qiming Li

Dr. Yantao Yu

Dr. Bo Xiao

Dr. Xiaer Xiahou

Dr. Jianbo Zhu

Deadline for manuscript submissions

20 November 2026



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/207873

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 3.1
CiteScore 4.4



[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 (Construction and Building Technology) /
CiteScore - Q1 (Architecture)

Rapid Publication:

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).