

Special Issue

Advances in Data Capturing, Modeling, Simulation, and Analysis in Construction and the Built Environment

Message from the Guest Editors

Despite the rapid growth of modeling and simulation approaches, tools, and techniques in various industries, such as aerospace and manufacturing, their adoption in the context of the built environment has remained relatively modest. However, recent advances in data collection, modeling, analysis, and simulation, as well as data science have paved the way for an increasing development and application of novel methods, tools, and techniques for capturing, modeling, visualizing, and analyzing construction and the built environment. The aim of this Special Issue is to disseminate current and emerging cutting-edge research and developments in capturing, modeling, simulating, and analyzing new build and retrofitting projects, project lifecycle, as well as built heritage assets. Research that reports on beyond state-of-the-art approaches, tools, and techniques for data capturing (drones, laser and lidar scanning), modeling (scan/point cloud to building information modeling), simulating (virtual reality, augmented and mixed reality), and analyzing (big data, artificial intelligence, and machine learning) is particularly welcome.

Guest Editors

Prof. Dr. Lamine Mahdjoubi

Architecture and Environment, University of the West of England, Bristol BS16 1QY, UK

Dr. Xiaojun Luo

Department of Accounting, Economics and Finance, Faculty of Business and Law, University of the West of England (UWE), Bristol BS16 1QY, UK

Deadline for manuscript submissions

closed (31 July 2023)



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/155182

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).