

Special Issue

Large Language Models and Multimodal AI for Next-Generation Building Information Modeling (BIM): From Conversational Agents to Immersive Design Collaboration

Message from the Guest Editors

The rapid evolution of artificial intelligence (AI), particularly large language models (LLMs), is revolutionizing how building information modeling (BIM) data is created, interpreted, shared and utilized throughout the lifecycle of built assets. BIM has become the central hub for information management in the architecture, engineering, and construction (AEC) industry, offering a rich foundation for embedding intelligent automation and human–AI collaboration. LLM-driven platforms are now enabling context-aware information retrieval, natural language interaction with design and construction data, automated compliance checking and immersive decision-making experiences through VR/AR environments. In parallel, the integration of LLMs with knowledge graphs, digital twins, robotics and multimodal interfaces is paving the way for autonomous design assistance, predictive planning and real-time construction monitoring. This Special Issue focuses on emerging research and advanced applications of LLMs in BIM—ranging from conversational AI agents and reasoning-enhanced data management to multi-agent collaboration and virtual co-design. We welcome high-quality contributions.

Guest Editors

Dr. Muhammad Shoaib Khan

Prof. Dr. Sisi Zlatanova

Prof. Dr. Jongwon Seo

Deadline for manuscript submissions

30 June 2026



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/262010

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](http://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).