Special Issue

Smart Construction Management by Harnessing Digital Transformation and Automation

Message from the Guest Editors

This Special Issue seeks to gather cutting-edge research, case studies, and review articles that spotlight recent advances in digital and automated approaches to construction management. We invite contributions that rigorously evaluate technological interventions, propose novel frameworks for integration, and demonstrate measurable benefits in real-world projects. Both multidisciplinary studies and domain-specific investigations are welcome, whether they focus on the planning, execution, monitoring, or maintenance phases of construction. Topics of interest include, but are not limited to, the following:

- **Digital Project Planning and Design**
- **Automated Construction Processes**
- **Data-Driven Decision Making**
- **IoT and Sensor Integration**
- **Autonomous Machinery and Drones**
- **Augmented and Virtual Reality**
- **Blockchain and Digital Ledger Technologies**
- **Cyber-Physical Systems and Digital Twins**
- **Human-Technology Interaction**
- **Sustainability and Resilience**

By collecting these contributions, this Special Issue aims to accelerate the industry's progression toward fully integrated, intelligent, and automated construction management.

Guest Editors

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Deadline for manuscript submissions

31 December 2025

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/242249

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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