

Smart and Digital Construction in AEC Industry

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Message from the Guest Editors

Dear Colleagues,

A rapid increase in the use of smart and digital technologies in construction accelerates the transformation of the AEC industry. However, issues relating to data interoperability, information security, technology maturity, return on investment, and skilled workforce shortage still exist and prevent the implementation of these digital technologies in practice.

In this Special Issue, we would like to invite researchers to address these issues from various perspectives, including (but not limited to) the following:

- **BIM/CIM/digital twin;**
- **Deep learning/artificial intelligence;**
- **Computer vision;**
- **Internet of Things and wireless sensor networks;**
- **Knowledge graph/NLP;**
- **Construction robotics;**
- **Mathematical modeling and simulation;**
- **Lean construction.**



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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.

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