



Automation and Information and Knowledge Model Technologies in Construction Engineering

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Message from the Guest Editors

The ubiquity of digitalization in construction enables new levels of automation for processes and workflows that create and maintain digital assets throughout the building and infrastructure lifecycle stages. Research in the various fields of computer science and informatics combined with research in construction creates new research opportunities for construction informatics, which is boosting research in the automation of many BIM-based methods.

Original research papers on the following topics are welcome:

BIM-based automation, semantic web and linked data for automation, ontology driven workflows, digital twins, digital building logbooks, automation and classification systems, IFC extensions, construction robots, autonomous machines for construction, automation of building, automation for construction safety, automation of modular construction, ethical automation in construction, smart construction materials and automation, and building management automation systems.

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Automation_Information



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Special Issue



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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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