



Construction Automation: Current and Future

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Message from the Guest Editors

Dear Colleagues,

It is becoming increasingly clear that the automation of construction can address various and serious issues related to construction, for example, the low quality of final products, shortages of skilled labour, poor safety, quality, productivity, tight schedules, sustainability, and a circular economy, which are features of building and infrastructure projects in the modern day. Striking the proper human–automation balance requires a deep understanding of the technological tools we have at present or in the foreseeable future and, as such, we have proposed a Special Issue named ‘Construction Automation: Current and Future’ to gather research works around the cutting-edge automated technologies from the academic and industry perspectives. Within this, the themes of interest include, but are not limited to:

- 3D Printing;
- Automation and Robotics;
- Computer Vision;
- Artificial Intelligence;
- Machine and Deep Learning;
- Digital Fabrication;
- BIM, VR, AR, MR;
- Laser Scan, Reverse Modelling;
- Digital Twin;
- Internet of Things;
- Wearable Sensing and Tracking;
- Safety, Efficiency, Human Cognition, Ergonomics.





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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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