

Special Issue

Automation and Robotics in Building Design and Construction

Message from the Guest Editors

Construction robots are increasingly being adopted in the construction industry and building construction projects due to their potential to address several challenges and improve efficiency, safety, and quality. In addition, automation is inevitable across industries, and the construction sector must prepare its workforce for this transition. For all these reasons, construction robots and automation are playing a crucial role in advancing the current construction environment in a smart and safe manner. This Special Issue aims to cover topics related to the technological improvement of construction robots in all phases of construction projects, such as the following:

- Automated data acquisition of construction environments using construction robots;
- Robot-oriented design in construction;
- Data flow from data acquisition by construction robots to on-site works;
- Robotic off-site manufacturing;
- Robotic on-site execution and maintenance;
- Computational design oriented to robotics;
- Human-robot collaboration;
- Construction management under human-robot collaboration;
- Construction automation using robotics.

We look forward to receiving your contributions.

Guest Editors

Dr. Minkoo Kim

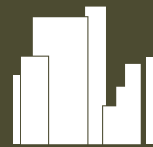
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About the Journal

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

Prof. Dr. David Arditi

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