

## Special Issue

# Construction 5.0 in Early Architectural Design Phases

### Message from the Guest Editors

Construction and manufacturing are currently undergoing a paradigm shift from Industry 4.0 to Industry 5.0. While the former focused on full automation and machine-to-machine communication to increase productivity, the latter centers on collaborative automation and communication between humans and machines. The new approach prioritizes human needs within production processes, employing technology to empower workers rather than replace them. Industry 5.0 transcends efficiency and productivity, reaffirming the social role of industry and its contribution to collective well-being. In this new scenario, the integration of traditional crafts, artisanal techniques, cultural characteristics, and local practices—enabled by information technology, artificial intelligence, and robotics—will once again transform the design-to-production process, paving the way toward a Construction 5.0 that is sustainable, human-centered, and resilient.

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### Guest Editors

Prof. Dr. Frank Petzold  
Prof. Luis Felipe González Böhme  
Dr. Gerhard Schubert

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### Deadline for manuscript submissions

closed (31 May 2026)



## 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.

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### Editor-in-Chief

Prof. Dr. David Arditi

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JCR - Q2 (Construction and Building Technology) /  
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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).