



Architectural Design Supported by Information Technology: 2nd Edition

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Message from the Guest Editors

Dear Colleagues,

As fundamental planning decisions are made during early stages in design processes, early stages of architectural design have a significant impact on the subsequent performance of cities, districts and buildings in these settlements.

Increasing digitization, the technological innovations that accompany digitization and resultant new methods have contributed to wide-ranging transformations in architectural design processes in recent decades.

Today, information technology offers a vast number of different design methods and tools, for example, simulations, artificial intelligence, additive manufacturing and robotic fabrication as well as BIM towards digital twins in built environments as a digital backbone.

In addition, climate change and its consequences have significantly changed the way we think about living together and how we deal with (spatial) resources.

The aim of this Special Issue is to allow scientists who are investigating digital methods to support decision-making processes in early stages of design processes to publish their works and to discuss potential application fields with a broad scientific community.





Editor-in-Chief

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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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