



Digital Technologies Transforming Construction Design

Guest Editors:

Dr. Barbara Rangel

Faculty of Engineer, University of
Porto, 4099-002 Porto, Portugal

Dr. Ana Sofia Guimarães

CONSTRUCT, Faculty of
Engineering (FEUP), University of
Porto, Rua Dr. Roberto Frias s/n,
4200-465 Porto, Portugal

Prof. Dr. César Martín-Gómez

Department of Construction,
Building Services and Structures,
Universidad de Navarra, 31009
Pamplona, Spain

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Message from the Guest Editors

Due to today's economic, cultural, and political panorama, construction is being pushed to industrialisation.....As a machine, the building is controlled remotely by a digital twin model. Hence, automation is now a part of building processes during construction and in service.

This “digital revolution” has inevitably transformed construction design processes from architecture to engineering. 3D printing has allowed customised pre-fabrication and the return to monolithic construction. Artificial intelligence is giving design the capacity to predict infinite variations. Virtual and augmented reality empowers constructors and building users to connect directly to management processes.

In this Special Issue, a reflection is made on the transformations this digital revolution is generating in construction design, from architecture to engineering, gathering new research trends, case studies, pilot projects, reviews, and state-of-the-art discussions.

For further reading, please follow the link to the Special Issue Website at:

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Editor-in-Chief

Prof. Dr. David Arditi

Construction Engineering and Management Program,
Department of Civil,
Architectural, and Environmental
Engineering, Illinois Institute of
Technology, 3201 South
Dearborn Street, Chicago, IL
60616, USA

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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Contact Us

Buildings Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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