Special Issue

Digital Twins in Construction Projects

Message from the Guest Editors

The emergence of advanced digitalised technologies has caused the construction industry to undergo an unwavering digital transformation. Digital twins, as the core element of construction industry 4.0, have been utilised in construction projects to improve project management, data visualisation, and construction automation. Despite the growing number of proposed frameworks and architectures and the potential benefits claimed for digital twins, the construction world demands more innovative attempts to link these frameworks to real practice. This Special Issue focuses on using digital twins in construction projects with a particular focus on achieving construction industry digitalisation. It encourages the utilisation and integration of digital twins with various digitalisation aspects of the construction projects, such as construction informatics, digital transformation, construction simulation, construction automation, and virtual construction. Various existing technologies (BIM, IoT, AR, VR and machine learning) and social aspects (cyber security and data ownership) are also encouraged to be integrated in this Special Issue. We look forward to receiving your contributions.

Guest Editors

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Deadline for manuscript submissions

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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

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