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Application of BIM through the Life Cycle of Buildings

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Message from the Guest Editors

Dear Colleagues,

Building Information Modelling (BIM) has been long an important approach to industry recognised as innovation in the Architecture, Engineering and Construction (AEC) sectors. Current knowledge and practice about BIM are largely focused on new building design and construction. Therefore, there are still significant opportunities in the field for further BIM research. This Special Issue surveys the latest applications of BIM throughout the entire building life cycle from the early design stages to procurement and construction, to facilities management, and to the end of the life cycle of demolition and deconstruction, as well as other related areas of potential including but not limited to building renovation and heritage conservation.

We invite submissions of both original research and critical review papers, addressing the above themes as well as exploring the future extensions of BIM such as digital twins; the adoption of advanced systems (e.g., virtual reality and augmented reality) to better support communication and collaboration in BIM; and the integration of artificial intelligence for enhancing decision making and automation in the building life cycle.







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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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