Special Issue

Selected Papers from the 20th International Conference on Computing in Civil and Building Engineering (ICCCBE 2024)

Message from the Guest Editor

The 20th International Conference on Computing in Civil and Building Engineering (ICCCBE 2024), held in Montreal, highlighted the crucial role of computational methods in advancing construction operation planning. This Special Issue aims to consolidate cutting-edge research presented at the ICCCBE 2024. It will focus on innovative approaches to visualizing construction processes, optimizing workflows, and leveraging graphical models to address challenges in planning and execution. Submissions may include theoretical or applied research, case studies, or reviews that explore the intersection of digital tools and construction management. Topics covered in this Special Issue include, but are not limited to, the following:

- Visualization techniques for digital twins in construction planning
- Optimization algorithms for resource allocation and scheduling
- Graphical modelling for construction site monitoring and control
- The application of virtual and augmented reality in construction operation rehearsals
- Machine learning and AI-driven tools for predictive planning and visualization
- The integration of BIM and CIM for enhanced construction workflow management

Guest Editor

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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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