Special Issue

Challenges of Intelligent Management Approaches in Construction Engineering

Message from the Guest Editors

Construction engineering often faces significant challenges related to multi-source data management, resulting from the diverse range of construction objects and processes involved. To improve management efficiency, various intelligent management tools, including building information modeling (BIM), construction process simulation, database construction and algorithm development have been implemented. Nevertheless, in practical engineering projects, intelligent management approaches still need to address several persistent issues, such as data fragmentation, model–practice discrepancy, complex management structure, inefficient communication, and suboptimal collaboration. Exploring and devising solutions to these problems is essential for bridging the gap between academic research and practical implementations of intelligent management approaches, ultimately contributing to their promotion. The primary objective of this Special Issue is to explore the contemporary challenges and advancements in intelligent management approaches within the field of construction engineering.

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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.

Editor-in-Chief

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