Special Issue

Smart Technology in the AEC Industry

Message from the Guest Editor

The architecture, engineering, and construction (AEC) industry is experiencing a major transformation driven by smart technologies. This Special Issue explores the development, adoption, and impact of emerging digital solutions reshaping how AEC projects are conceived. designed, delivered, and maintained. Topics include, but are not limited to, advancements in digital twins, IoT, artificial intelligence (AI), robotics, wearable tech, and smart sensing systems. We welcome interdisciplinary research addressing challenges and opportunities in education, productivity, safety, sustainability, and lifecycle management in the built environment. Contributions may include theoretical frameworks, applied case studies, system design, or deployment strategies. Submissions demonstrating real-world integration of smart systems, performance improvements, or scalable models for broader adoption are especially encouraged. This collection aims to provide a platform for innovative research that informs both academia and industry on the future of smart, datadriven construction practices.

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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