Special Issue

Smart Safety: Leveraging Digital Technologies in Construction Health and Safety Management

Message from the Guest Editors

The construction sector is among the most perilous sectors worldwide, consistently confronting challenges related to upholding safety and health standards. The integration of digital technologies, commonly termed "smart safety", is revolutionizing health and safety management in this evolving sector. This method utilizes sophisticated technologies such as the Internet of Things (IoT), wearable devices, artificial intelligence (AI), blockchain, robotics, and building information modeling (BIM) to improve safety standards and reduce risks on construction sites. This digital revolution boosts compliance with safety rules and promotes a culture of accountability and awareness among construction stakeholders. Smart safety signifies a crucial transformation in health and safety management by diminishing workplace mishaps, enhancing productivity, and safeguarding worker well-being. This proposal examines the opportunities, constraints, and future prospects of digitalization for enhancing safety and efficiency on construction sites.

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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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