Special Issue

Digitization and Automation Applied to Construction Safety Management

Message from the Guest Editors

This Special Issue aims to provide actionable insights for researchers and practitioners to build safer, smarter, and more resilient construction ecosystems. Therefore, submitted papers should focus on state-of-the-art research on various aspects of digital and automation technology adoption, from both academic and industry perspectives. A key emphasis lies in the integration of these tools into *management frameworks*—such as dynamic resource allocation, data-driven safety training programs, and collaborative platforms for stakeholder communication. Within this, topics of interest include, but are not limited to, the following:

- Safety informatics and data analytics;
- AI-based accident analysis and prevention;
- Cognitive aspects of technology-enabled safety practices;
- AI-driven safety monitoring and alert systems;
- Automated safety compliance checks;
- Digital twins for simulating hazardous scenarios and human cognition;
- Human–robot teaming/interactions/trust in construction safety management;
- IoT-enabled wearable devices for worker/machine/material safety tracking;
- Integration of safety science with emerging technologies.

Guest Editors

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Deadline for manuscript submissions

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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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