Special Issue

Health and Safety in the Built Environment: Toward a Systems Thinking and Human-Centred Approach

Message from the Guest Editors

This SI examines the limitations of traditional, compliance-driven health and safety paradigms and proposes an integrative framework rooted in systems thinking and human-centred design. Key themes include:

- Digitalization and Emerging Technologies: How are BIM, sensors, and AI reshaping safety practices, opportunities, and risks?
- Psychosocial Risks and Mental Health: How do stress, fatigue, and burnout interact with site hazard?
- Cognitive and Behavioural Foundations of Safety: How do workers and managers perceive risk, and what biases shape their safety behaviour?
- Culture, Climate, and Organisational Dynamics: How are safety values built, maintained, or weakened across projects?
- Human Factors and Ergonomics: How can design better reflect human strength, limits, and variability?
- Resilience and Systems Approaches: What can construction safety learn from resilience engineering and STAMP?
- Learning and Adaptation: How can industries shift from blame-oriented investigation to proactive learning?
- Contractual and Organisational Structures: What systemic levers shape (or hinder) safe work practices?
- Worker Participation and Empowerment: How can workers become co-designers of resilient, safe systems?

Guest Editors

Dr. Hector Martin

Dr. Rai Shah

Dr. Wilfred Matipa

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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