

Special Issue

Advances in Building Structure Analysis and Health Monitoring

Message from the Guest Editors

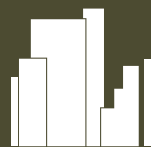
Rapid advancements in artificial intelligence (AI) have opened new frontiers in building structure analysis and health monitoring. This Special Issue focuses on the integration of AI technologies to enhance the safety, efficiency, and longevity of building structures. Contributions that explore innovative AI-based techniques, such as machine learning, deep learning, and data-driven models, for structural analysis, damage detection, and predictive maintenance, are invited. We are particularly interested in interdisciplinary approaches that combine AI with traditional structural engineering methods, enabling real-time monitoring and adaptive solutions to structural challenges. Our aim is to provide a platform for groundbreaking research that contributes to the evolution of intelligent building systems.

Guest Editors

Prof. Dr. Gongfa Chen
Prof. Dr. David H. Bassir
Dr. Shuai Teng

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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).