Special Issue

Challenges in Civil and Earthquake Engineering Addressed by Data-Driven/AI Approaches

Message from the Guest Editors

We are delighted to announce that Doctor Shaghayegh Karimzadeh will serve as the leading guest editor, in collaboration with Doctor Onur Kaplan and Doctor Vasco Bernardo as the co-editors, for a Special Issue of our journal that will be devoted to the application of Data-driven (DD), Machine Learning (ML) and Artificial Intelligence (AI) techniques to problems in civil and earthquake engineering. In recent years, DD/ML/AI approaches have proliferated, with the potential to drastically alter and enhance the role of data science in a variety of fields, including civil and earthquake engineering challenges. The Special Issue's emphasis is on applying more-advanced DD, ML and AI approaches to various civil engineering challenges and real-world problems, including those involving earthquake engineering, structural engineering, seismology, geotechnical and geophysical engineering. Moreover, this Special Issue aims to improve the transferability of research findings, the quality of data generation, sharing, and collection, the quality of the literature used to validate and compare models, and the process of identifying future work.

Guest Editors

Dr. Shaghayegh Karimzadeh

Dr. Onur Kaplan

Dr. Vasco Bernardo

Deadline for manuscript submissions

closed (10 December 2023)

Buildings

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CiteScore 4.4

mdpi.com/si/148288

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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 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).