



Big Data and Machine/Deep Learning in Construction

Guest Editor:

Dr. Fan Lei

Department of Civil Engineering,
Xi'an Jiaotong-Liverpool
University, Suzhou 215123, China

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Message from the Guest Editor

Dear Colleagues,

The use of big data and machine/deep learning in the field of construction has rapidly gained momentum in recent years, offering unprecedented opportunities to improve efficiency, safety and sustainability. This Special Issue aims to bring together cutting-edge research and innovative applications that harness the power of big data and machine/deep learning in the construction domain.

We invite researchers, practitioners and industry experts to submit high-quality original research and review articles that address, but are not limited to, the following topics:

- Detection of objects, hazards and defects at construction sites;
- Semantic segmentation of construction scenes;
- Building information modeling (BIM);
- Sustainable construction practices;
- Energy efficiency in construction;
- Data-driven decision making in construction;
- Monitoring and quality control of construction processes;
- Predictive construction-related maintenance;
- Smart construction equipment;
- Construction project management and resource optimization;
- Construction risk management;
- AI-enabled wearable technology in construction.



Editor-in-Chief

Prof. Dr. David Arditi

Construction Engineering and
Management Program,
Department of Civil,
Architectural, and Environmental
Engineering, Illinois Institute of
Technology, 3201 South
Dearborn Street, Chicago, IL
60616, USA

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.

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Buildings Editorial Office
MDPI, St. Alban-Anlage 66
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