



Advanced Numerical and Computer Methods in Civil Engineering

Guest Editors:

Dr. Dongming Li

School of Civil Engineering and
Architecture, Wuhan University of
Technology, Wuhan, China

Dr. Zechuan Yu

School of Civil Engineering and
Architecture, Wuhan University of
Technology, Wuhan 430070,
China

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Message from the Guest Editors

Advanced numerical and computer methods in civil engineering have become increasingly important for modern engineers and researchers in recent decades. They can be used alone or in combination with experimental/theoretical studies, from the material level to the structural level, for solving nearly all engineering problems. This Special Issue will present novel developments or new applications of advanced numerical and computer methods for addressing problems in civil engineering.

Our interests include but are not limited to the following:

- Advanced finite element/meshless/boundary element/peridynamic/discrete element/data-driven based/machine-learning based/CFD technologies;
- Advanced atom-level/molecular-level/cross-scale/multi-physics modeling;
- Advanced strength/stability/failure/fatigue/fracture/dynamic/thermal/acoustic analysis and optimization with numerical and computer methods;
- Other contents in the scope of advanced numerical and computer methods in civil engineering.

For further reading, please follow the link to the Special Issue Website at:

https://www.mdpi.com/journal/buildings/special_issues/R8XH61D33E





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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Contact Us

Buildings Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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