



Performance-Based Design of Buildings

Guest Editors:

**Prof. Dr. Asimina
Athanopoulou-Kyriakou**

Institute of Structural Analysis
and Dynamics of Structures,
School of Civil Engineering,
Aristotle University of
Thessaloniki, GR54124
Thessaloniki, Greece

Dr. Konstantinos Kostinakis

School of Civil Engineering,
Aristotle University of
Thessaloniki, 54124 Thessaloniki,
Greece

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Message from the Guest Editors

Performance-based design is an approach to the design of structures that emphasizes achieving specific performance goals or objectives, rather than adhering to prescriptive codes or standards. The performance-based approach can be used whether the process is about existing or new structures. In recent decades, performance-based design has drawn considerable attention from researchers, since by using advanced simulation and modelling tools, engineers and designers can predict how a structure will perform under various conditions, such as wind, seismic activity, and fire, and optimize the design accordingly. This SI aims to illustrate the key issues encountered in the application of performance-based design for structures subjected to various loads. More specifically, the Special Issue will focus on, but is not limited to, recent developments, challenges and limitations, case studies, and design codes[...]

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

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

Tel: +41 61 683 77 34
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