



Performance-Based Design of Buildings

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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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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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