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Structural Safety Evaluation and Health Monitoring

Guest Editors:

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Message from the Guest Editors

This Special Issue will contribute to the field of structural safety evaluation and health monitoring. Its purpose is to facilitate understanding of durability, the risk and reliability of constructed facilities, and to inspire performance-based design and evaluation, which is essential to the lifecycle resilience assessment of structures. This includes structural durability evaluation, performance-based seismic design and evaluation, application of machine learning techniques in structural safety evaluation, digital twins and building information modeling, advanced finite element modeling techniques, small data learning for structural damage identification, virtual and mixed reality for health and safety controls, nondestructive testing, structural health monitoring algorithms, energy storage system and modeling, and other approaches. Research on the concept of smart construction and green building design is also welcome. This will contribute to the next of generation smart buildings.

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

https://www.mdpi.com/journal/buildings/special_issues/040IHMEFMP

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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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