



Assessment, Repair, Maintenance, and Conservation of Existing Buildings: State-of-the-art Methods, Advances, and Case Studies

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Message from the Guest Editors

Dear Colleagues,

The assessment, repair, maintenance, and conservation of existing buildings represent critical aspects in the field of architecture, engineering, and urban planning. As the global population continues to grow, the demand for sustainable and efficient use of existing building stock becomes increasingly significant. This multifaceted issue necessitates comprehensive solutions that encompass state-of-the-art methods, advances in technology, and illuminating case studies. The delicate balance between preserving historical value and adapting structures to meet repair, maintenance, and conservation needs requires different and personalized approaches in the function of the building construction technology. This Special Issue aims to explore the current landscape of assessment, repair, maintenance, and conservation methodologies, shedding light on innovative techniques, technological advancements, and case studies that contribute to the evolution of sustainable and resilient built environments.





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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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