



buildings



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Seismic Performance Assessment of Buildings

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to provide a forum for presenting and discussing the latest findings and developments in the area of seismic performance assessment of buildings. It is well known that earthquakes are catastrophic events inducing major human and economic losses. Seismic performance assessment is a formal process for the seismic upgrade of existing buildings which includes a specific intent to achieve defined performance objectives in future earthquakes. It requires basic data on the vulnerability of structural and nonstructural components to damage (fragility), as well as estimates of potential casualties, repair costs, repair times, and environmental impacts (consequences) associated with this damage.

The aim of this Special Issue is to attract world-leading researchers in the area and to help them spread their latest developments, including new methodologies for the seismic performance assessment of buildings, numerical modeling, and the definition of performance objectives and estimates of the consequences both at the building and urban scale.

It is the hope of the Editorial Team that this Special Issue will contribute to advancing the state-of-the-art towards seismic performance assessment and improvement of buildings.

Prof. Dr. Rita Bento
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Guest Editors



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Special Issue



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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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