Special Issue

Seismic Performance of New-Designed and Existing RC Buildings

Message from the Guest Editors

Reinforced Concrete (RC) buildings represent a widespread construction solution in urban contexts and, therefore, their seismic performance should be adequate to reduce the social and economic impact generally produced by earthquakes. On the other hands, existing buildings are generally not-conforming to the most updated seismic codes. Seismic performance assessment and rehabilitation represent one of the greatest challenges to be faced by engineers and researchers nowadays. This Special Issue aims at collecting the recent advancements in design, modelling and analysis tools for seismic performance assessment of RC new-designed or existing buildings, along with the last outcomes of testing experiences on RC buildings or on buildings' structural and non-structural components. Welcome topics include:

- Simplified linear modelling and analysis tools,
- Nonlinear modelling and analyses,
- Investigations about behavior factor of RC buildings,
- Seismic performance and effect on structural performance of masonry infill walls,
- Fragility curves derivation,
- Seismic loss assessment,
- Experimental testing of structural or non-structural components in RC buildings.

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About the Journal

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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