

## Seismic Design and Performance of Timber Structures

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### Message from the Guest Editors

Every year, earthquakes cause damage and destroy a sizeable portion of the building stock across the globe. Among traditional constructions, those built with timber are considered the most effective earthquake-resistant structures, provided that the continuity in the load path is not compromised, the joints are intact, and moisture-induced problems are kept at bay. On the other hand, in the last decade, a large variety of timber building systems has been developed in Europe that complements traditional timber frame buildings. The performance and advancement of innovative timber building systems in case of earthquake loading must be investigated, while great lessons can be taken from traditional constructions that are commonly accepted as seismic-resistant.

The aim of this Special Issue is to collect results and to promote discussion and developments from recent research related to timber elements used to build new structures or to reinforce those existing in seismic-prone areas.



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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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