



Seismic Vulnerability and Strengthening of Unreinforced Masonry Buildings

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Message from the Guest Editors

Dear Colleagues,

Historical structures represent a high percentage of existing constructions in numerous seismic prone regions, and some of them are iconic monuments of their countries. These structures deserve special care because of their individual historical and/or architectural meaning and are living witnesses of earlier constructive traditions. Most of the existing European historical structures are made of masonry. Earthquakes often cause either massive damage or destruction of these structures, whose seismic behavior evaluation is a challenge for scientific research.

The seismic vulnerability assessment of such structures depends on reliable numerical simulations. Numerical modeling of the seismic behavior of masonry structures represents a very complex problem due to the constitutive laws of structural materials and their highly non-linear behavior. Starting from these premises, the target of this Special Issue is to outline materials and techniques used from ancient times to design masonry buildings, as well as to investigate the different procedures and numerical modeling methods for structural analysis of historical constructions and monuments in seismic prone areas.





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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

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