





Special Issue Reprint

Seismic Assessment and Design of Structures

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This Special Issue reprint is dedicated to presenting open and challenging issues in earthquake engineering. It consists of 29 peer-reviewed papers that cover a broad range of subjects and applications related to the seismic assessment and design of structures. Based on advanced computational, analytical, numerical, and experimental approaches novel results and discussions are presented. Within this context, the first studies of this issue/reprint are focused on providing an insight into the seismic performance of structures taking into account significant engineering components that still have not been fully addressed. Subsequently, there are studies with new strategies to improve the effectiveness of the dampers on the seismic mitigation performance of structures. Concerning performance-based earthquake engineering, new approaches in the seismic fragility assessment of structures are introduced. Furthermore, new innovative types of reinforced steel for the seismic design and assessment of RC structures are analytically and experimentally evaluated. The seismic performance of retrofitted structures is also addressed, while analytical modeling tools that can effectively capture the seismic behavior of substandard RC structural elements are introduced. Some other papers provide experimental results to evaluate and/or validate the structural performance of elements, such as anchors, connectors, and nuclear components. Finally, this issue/reprint also incorporates modified methodologies and identification techniques to improve seismic analysis methods in the field of structural engineering.





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