Special Issue

Design and Seismic Performance Evaluation of Reinforced Concrete Structures

Message from the Guest Editor

Since 1903, when the first multi-story reinforced concrete building was built by pioneering techniques (the 16th-story Ingalls Building, in Cincinnati, Ohio), building codes for their design and construction have been developing. Earthquake risk represented special difficulties, but at the same time the biggest incentive for improving building codes. By inspecting the damage to buildings after earthquakes i.e. their earthquake performance, their key weaknesses in design and construction were observed, if the buildings were built in compliance with building codes. Since the 1980s, when building codes could achieve medium protection of buildings against earthquakes (damage much greater than expected, however a good level of life-safety protection), a new way of thinking has been developing, the so-called performance-based seismic design (i.e. Appendix to the SEAOC 1999 Blue Book). This special issue is focused on such performance, thus to examine the problems and the relationship between the design and construction criteria and seismic hazard exposure, acceptable risk and seismic performance of reinforced concrete structures.

Guest Editor

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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