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High-Performance Concrete Structures for Disaster Prevention

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Deadline for manuscript submissions:
closed (20 December 2023)

Message from the Guest Editors

Reinforced concrete has been widely used all over the world as a building material. However, due to the dissymmetry of concrete tension and compression, concrete structures are subjected to cracking damage under earthquakes and other extreme loads. Furthermore, rebar fracture may cause instability of the structures. For this Special Issue, we are seeking submissions of original research articles on one or more of, but not limited to, the following topics:

- advanced concrete technologies for enhancing the performances of and preventing catastrophic consequences in existing reinforced concrete structures under extreme loads;
- capacity assessment or failure process simulation methods for existing or next-generation reinforced concrete structures;
- experimental studies for high-toughness concrete structures;
- hysteretic behavior models for high-performance reinforced concrete structures;
- damage identification and performance evaluation methods for reinforced concrete structures.

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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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