

New Technologies in Concrete Structures

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Message from the Guest Editors

Dear Colleagues,

Upgraded design standards and increased safety requirements, in addition to the deterioration of infrastructures coupled with the damage caused by natural disasters, necessitate the need for developing new technologies that can be used in concrete structures. Today, designing civil engineering structures requires more than just satisfying the requirements for functionality and load-carrying capacity. There is a crucial need for designing structural systems that possess a high strength to weight ratio and have a high adaptability to changes in temperature and loading conditions.

For this Special Issue, authors are kindly invited to submit high-quality original research articles, reviews, and case studies on topics including, but not limited to: advances in reinforced concrete structures; smart materials; new strengthening systems, nano building materials; off-site construction; self-healing concrete; 3D printing; geopolymer concrete; fiber-reinforced concrete; high-performance concrete; soil-cement materials; special foundation technologies; and eco-friendly cement-based materials.



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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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