Special Issue

Advances in Modular and Prefabricated Concrete Construction

Message from the Guest Editors

This Special Issue explores cutting-edge developments in modular and prefabricated concrete construction, an innovative building methodology revolutionizing the construction industry. By prefabricating individual building modules off-site and assembling them on-site, this approach addresses critical industry needs such as accelerated construction timelines, enhanced quality control, reduced material waste, and minimized on-site labor. These advancements are essential in ensuring that modular and prefabricated concrete buildings meet stringent requirements for safety, cost-efficiency, sustainability, durability, and resilience. We invite contributions on:

- Novel structural elements and systems for modular concrete construction.
- Connection technologies for enhanced structural integrity.
- Strategies for optimizing construction processes and logistics in modular building systems.
- Assessment and mitigation of durability and resilience challenges in modular concrete structures.
- Digital technologies in the design, manufacturing, and assembly of prefabricated concrete modules.
- Lifecycle and sustainability in precast modular buildings.

Guest Editors

Dr. André Furtado

Dr. Wit Derkowski

Dr. Irene Josa

Deadline for manuscript submissions

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About the Journal

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.

Editor-in-Chief

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