

Special Issue

Timber–Concrete Composite Structures: Property Analysis, Stability Design and Applications

Message from the Guest Editor

The timber–concrete composite structure is a type of composite structural system developed based on timber structures. It combines the timber beams and concrete slabs into a collectively loaded whole through the shear connectors. The mechanical and physical strengths of both components are utilized efficiently. Compared to the traditional timber beam, the timber–concrete composite beam contains multiple advantages, such as greater load bearing capacity and bending stiffness, improved sound insulation, and less susceptibility to vibration. In order to safely and reasonably apply timber–concrete composite structures, it is necessary to establish accurate and effective theories to estimate the mechanical properties and stability design methods for timber–concrete composite structures. Experimental research, modeling studies, and review papers will be considered. Submitted studies shall clearly identify their novelty and contribution to the state of the art.

Guest Editor

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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.

Editor-in-Chief

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