



Contemporary Applications of Wood in Architecture and Construction

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Message from the Guest Editors

Dear Colleagues,

Wood, a timeless gift from nature, holds a profound place in human civilization's history. Beyond its aesthetic allure, wood embodies a renewable resource with a significantly lower carbon footprint compared to traditional building materials, which aligns seamlessly with global initiatives on climate change. The study of wood materials includes structural strength, thermal efficiency, acoustic properties, fire resistance, and longevity, making it a vital focus for architects, engineers, and environmentalists seeking innovative, eco-conscious solutions.

This Special Issue aims to explore the mechanical behavior and real-world performance of modern engineered wood products and innovative mass timber building connections and their environmental impacts. We welcome research articles and reviews on topics including (but not limited to) the following:

The structural applications of wood from plantation trees; Modern engineered wood products; Innovative connections for mass timber buildings; In-service performance analysis of wood buildings; Architectural design aspects of wood buildings; Life cycle assessments of wood buildings.

Guest Editors





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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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