Special Issue

Theoretical and Numerical Analysis of Composite Structures

Message from the Guest Editors

Nowadays, composite structures represent a consolidated design opportunity for numerous industrial applications involving plates, shells, and grid structures, especially if the design demands the combination of outstanding structural performances and mass savings. The design of composite structures involves different aspects including structural analysis, buckling assessment, and dynamic analysis. The optimization of the structure is another crucial point, and different techniques have been proposed and are currently being explored. Additionally, the manufacturing process represents an important and determinant challenge for the further diffusion of composite material solutions. In this context, this Special Issue aims to gather innovative contributions in the field of composite structure design. Original contributions regarding analytical or numerical methodologies of analysis, applied case studies, and the simulation of the manufacturing process are welcome. For further reading, please follow the link to the Special Issue Website at: https://www.mdpi.com/journal/buildings/special_issues/ theoretical_numerical

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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.

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