# Special Issue

# High-Performance Composite Construction: Materials and Components

## Message from the Guest Editors

Composite construction possesses advantages such as high load-carrying capacity, ease of construction, and excellent ductility; thus, it has become increasingly prevalent in structural engineering. In recent years, composite construction has become more popular due to the development of emerging high-performance materials and novel structural components. Therefore, understanding composite construction at the levels of material, member, connection, and structure is essential, and new design theories and mechanisms are also required.

This Special Issue is dedicated to high-performance composite construction. Topics of interest include (but are not limited to): the behavior of high-performance concrete and steel; the behavior of novel composite components; FE/theoretical modeling of composite materials and components; Ultimate strength prediction of composite components; Data-driven design of composite components and so on. For further reading, please follow the link to the Special Issue Website at: https://www.mdpi.com/journal/buildings/special_issues/ H5QXRQ314W

## Guest Editors

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## Deadline for manuscript submissions

closed (15 September 2024)

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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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