Special Issue

Recent Advances in Constructional Steel Research

Message from the Guest Editors

Constructional steel has been used widely for developing infrastructures. Theoretically, constructional steel is fully recyclable, which is promising for promoting carbon neutrality. Nevertheless, the robustness, sustainability, and resilience of constructional steel and steel infrastructures under extreme loads and natural hazards need to be further investigated. This Special Issue welcomes but is not limited to the following:

- The mechanical behavior of constructional steel under fracture, fatigue, fire, corrosion, etc.;
- Experiments and constitutive modeling of constructional steel;
- Development of high-performance steel infrastructures;
- Experimental and numerical study of steel infrastructures;
- Topology optimization of steel structural components;
- Seismic-resilient steel structural systems;
- Behavior and design of steel structures under natural hazards;
- Progressive collapse performance of steel structural systems;
- Performance enhancement of existing steel infrastructures;
- Life-cycle assessment and optimization;
- Machine learning application for constructional steel research.

Guest Editors

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Deadline for manuscript submissions

closed (31 May 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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