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Mechanical Performance of Steel and Composite Beams

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Deadline for manuscript submissions:
31 May 2024

Message from the Guest Editors

Steel is mainly used for structural purposes due to its rigidity, durability, flexibility in architecture, and high strength-to-weight ratio. Research and innovation in steel technology may soon take construction in entirely new directions.

The use of composite structures is increasing in the construction industry due to their higher load-bearing capacity, better structural fire performance, and more significant potential to provide optimized structural solutions, effectively creating synergies between structural materials.

Thus, We encourage you to submit manuscripts containing scientific findings on composite and steel beams based on theoretical and practice-oriented articles, including experimental and/or numerical studies, case studies, and review articles. Papers on one or more of the following subjects are especially welcomed:

- Steel beams;
- Composite beams;
- Steel and reinforced concrete beams with web openings;
- Nonlinear finite-element analysis;
- Buckling or post-buckling analysis;
- Machine learning;
- Fire resistance;
- Stainless steel;
- Fibers;
- Composite materials.

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Special Issue

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Editor-in-Chief

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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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