Special Issue

Investigating Stability and Failure Mechanisms in Steel Structures

Message from the Guest Editors

We are pleased to announce a Special Issue entitled "Investigating Stability and Failure Mechanisms in Steel Structures" to be published in *Buildings*. Steel structures are fundamental to modern infrastructure, yet their safety and reliability are often challenged by stability issues, load-bearing limitations, and potential failure under complex service conditions. This Special Issue aims to collect state-of-the-art research and practical case studies that deepen the understanding of stability mechanisms, ultimate capacity, and failure processes in steel structures. Topics may also cover aspects related to performance degradation, repair, and strengthening strategies, thereby extending the scope to life-cycle performance and structural resilience. Potential topics of interest include, but are not limited to, the following:

- Global and local stability of steel members and systems;
- Failure mechanisms under static, dynamic, or cyclic loading;
- Load-bearing capacity assessment and long-term performance;
- Experimental and numerical investigations on steel structures;
- Performance degradation under environmental or mechanical actions;
- Retrofitting, strengthening, and rehabilitation techniques.

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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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