

Special Issue

Advances in Structural Steel Research

Message from the Guest Editors

The main aim of this Special Issue is to rapidly disseminate state-of-the-art fundamental and applied research that will have a positive impact on the design, analysis, and erection of steel infrastructure. Topics of interest include but are not limited to the following:

Area-1: Steel Structures

- Performance-based design or analysis criteria
- Life-cycle cost assessment and optimization
- Modeling of steel structures subjected to single or multiple hazards
- Innovative structural steel systems
- Novel connections and fastening systems

Area-2: Structural Steels

- The mechanical behavior of structural steels under blast, corrosion, fracture, fatigue, and fire
- Constitutive modeling of structural steels subjected to blast, corrosion, fracture, fatigue, and fire
- Applications of shape memory alloys and multiphase steels in construction
- Additive manufactured steels for construction
- The influence of nano- and microscale steel properties on the behavior of steel structures

Any other topic closely related to steel infrastructure will be considered for publication.

Guest Editors

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About the Journal

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editors-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).