

# Special Issue

## Seismic and Durability Performance of Steel Connections

### Message from the Guest Editor

This Special Issue brings together a series of papers that highlight recent progress in the field of steel frame connections, with particular emphasis on seismic analysis and design of innovative connection systems, as well as seismic damage assessment, evaluation, repair, and retrofit strategies. With the rapid emergence of prefabricated and modular steel structures, novel connection types with distinct mechanical behaviors and construction requirements have continued to evolve. Corrosion-induced degradation not only reduces the strength and stiffness of connection components but also alters their seismic response and failure modes, posing new challenges for both design and maintenance. Given that connections often govern the failure modes and deformation capacity of steel frames under seismic loading, understanding their performance—is crucial for ensuring structural safety and resilience. Ongoing research into their behavior under combined seismic and corrosive actions, degradation mechanisms, and performance-based design is not only academically valuable but also essential for advancing modern, durable, and resilient steel construction practices.

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### Guest Editor

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### Deadline for manuscript submissions

30 April 2026



## Buildings

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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.

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### Editor-in-Chief

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