Special Issue

Advances in Aluminium Alloy Structural Applications

Message from the Guest Editors

Aluminium represents one of the most popular metallic materials, with continuously increasing applications across various sectors of the economy and industry. Key features related to the material's physical and mechanical properties, such as lightness and corrosion resistance, together with extrusion flexibility and the wide range of available alloys, make aluminium an attractive choice for designers and engineers in construction. This Special Issue is dedicated to advances in the use of aluminium alloys in structural applications, aiming to provide an up-to-date framework in this field. Submissions may cover a wide range of topics concerning aluminium alloy structural applications, from material-related subjects, to member- and system-level objectives, including novel approaches in strength and stability design, normative provisions, the treatment of heat-affected zones, horizontal lateral load–cyclic response, behaviour under elevated temperatures, and behavioural parameters of aluminium in constructional applications such as bridges, long-span structures, building envelopes, composite systems, and retrofit activities.

Guest Editors

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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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