



Fire Science and Safety of Bridge Structure

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Message from the Guest Editors

Fire loadings present a severe threat to the safety and durability of bridge structures. A severe, explosive fire can lead to the damage and failure of local components or even the complete collapse of the bridge along with nearby buildings. Thus, this can result in injuries, serious economic and property losses and even the loss of life.

To ensure the safety of bridge structures throughout their lifecycle, it is necessary to implement reliable design strategies, construction measures, comprehensive protection techniques and early pre-warning and monitoring methods to detect extreme fire loadings. Therefore, new structures and high-performance materials, together with intelligent safety methods and innovative protective techniques, must be developed to prevent fire loadings. The topics of this Special Issue will include extreme fire loading effects, new structures and materials, intelligent safety methods and innovative protective techniques used in bridge structures, along with other related buildings.





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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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