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Performance Evaluation and Improvement of Corroded Steel Structures

Guest Editors:

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Deadline for manuscript submissions:
closed (15 November 2023)

Message from the Guest Editors

Dear Colleagues,

Steel structures exposed to corrosive environments (e.g., marine, industrial, acid rain) for a long time inevitably suffer from corrosion even if some protective measures are taken. Corrosion may lead to the degradation of material and structural performance, such as bearing capacity, stability, seismic performance, fatigue life, etc., resulting in reduced reliability, shortened life, and even increased collapse risk. This produces an urgent need for the methodologies/technologies of safety evaluation, risk assessment, and performance improvement for in-service steel structures with corrosion damage. Therefore, this Special Issue focuses on advances in durability test techniques, corrosion detection technologies, structural static/dynamic performance evaluation methods, and the maintenance and reinforcement technologies of steel structures, and original research papers, communications, and reviews are all welcome.

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Editor-in-Chief

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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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