Special Issue

Analysis, Calculations, Evaluations, and Controls of High-Rise/Large-Span Structures

Message from the Guest Editors

High-rise/large-span structures such as tall buildings, high-rise wind turbines, bridges, stadiums, etc., are known to be important, but may exhibit sophisticated multi-mode, multi-body vibrations under complicated environmental loadings involving earthquakes, winds, or even hydraulic, human-induced, constructional loading. For this Special Issue, we invite original research articles on the analysis, calculations, evaluations, and controls of high-rise/large-span structures, as well as comments and case studies. The submitted materials may include computational mechanics, vibration analyses and controls, performance evaluations of infrastructures, testing techniques, design methods, etc. Specifically, we are seeking original research articles on one or more of, but not limited to, the following topics:

- Resilience analysis of high-rise/large-span structures;
- Modeling of engineering loads;
- Performance improvement techniques and methodologies;
- Full-life evaluation of infrastructures

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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