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# **Vibration Prediction and Noise Assessment of Building Structures**

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## **Message from the Guest Editors**

Dear Colleagues,

Daily operations within living and working spaces in urban areas are frequently disturbed by the sounds and shakes stemming from civil engineering structures. This poses a significant challenge to the functionality and comfort of buildings, which may suffer from floor vibrations and noise due to nearby traffic, construction activities or mechanical systems in operation. These disturbances are not only a concern for those residing or working in these structures, but also pose significant issues for developers, designers and researchers alike. Particularly at risk are research labs and medical facilities that perform delicate tasks, as well as manufacturing units focused on nanotechnology, which can easily be thrown off by even slight vibrations.

This Special Issue is dedicated to showcasing the latest discoveries in the vibration prediction and noise assessment of building structures. For more information about this special issue, please visit the link:

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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, 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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