

## Special Issue

# Low-Frequency Behaviour of Civil Engineering Structures—Application to Human-Induced Excitations

### Message from the Guest Editor

This Special Issue focuses on recent developments in the low-frequency responses of civil structures to human-induced excitation. High-strength materials have enabled the design of longer spans and taller, more slender buildings, which are more susceptible to low-frequency vibrations from human activities, such as walking, running, or dancing. For example, a person walking produces vertical vibrations at around 1.8 Hz, with lateral vibrations at half that frequency. Human activities cause unwanted vibrations in buildings, where people are both the source and the receiver. Knowledge on vibrations in floors used for events with active crowds is limited, mainly focusing on stadiums. However, issues with vibrating floors have also emerged in concert halls, nightclubs, shopping centers, and sports halls, affecting buildings of various sizes and configurations. These slender structures often exhibit non-linear behavior and poor damping. This Special Issue aims to explore recent advancements in data processing techniques for low-frequency man-made vibrations in civil engineering, with a focus on multidisciplinary contributions.

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### Guest Editor

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### Deadline for manuscript submissions

31 December 2025



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CiteScore 6.0



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