Shock and Vibration

Special Issue on

Vibration Control Techniques for Dynamic Response Mitigation of Civil Structures under Multiple Hazards

CALL FOR PAPERS

When old and weak structures are subjected to dynamic loads imposed from winds, waves, and seismic hazards, there is an increased likelihood of damage and loss of life. To address this issue, numerous inventions are being introduced, for example, (a) smart structures, which are premeditated and instrumented with multifunctional apparatuses to integrate sensing, control, and actuation within the structural system; and (b) adaptive structures, which can adjust their formations and/or properties to better respond to uncertainties in hazards and structural properties. Yet these innovative structures show a new sequence of complexities and involve additional development in our fundamental understanding of dynamic response, vibration mitigation, life-cycle assessment, and risk mitigation when structures are exposed to multiple hazards. As such, dynamic response control and the assessment of civil structures in multihazard scenarios have pertinently attracted the attention of researchers worldwide.

This special issue will provide an opportunity for contemporary researchers to share their original research and review articles based on current findings in regards to the vibration response mitigation of structures exposed to different hazards typically categorized as (a) independent, (b) cascading, and (c) concurrent multiple hazards. Research that uses conceptual, theoretical, computational, experimental, and/or methodological approaches in the analysis and design of dynamic response mitigation are particularly welcome. Novel and practical case studies that consider extensive field applications with a specific focus on the multihazard dynamic response control of civil structures are also encouraged.

Potential topics include but are not limited to the following:

- Active/semiactive/passive/hybrid techniques for the vibration mitigation of structures in multiple hazard scenarios
- Experimentation, validation, and verification methods for the vibration mitigation of civil structures exposed to multihazards

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/sv/ngvce/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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