



Vibration Damping

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Message from the Guest Editors

This Special Issue is dedicated to the topic of vibration damping and seeks the most recent advances recorded therein. It particularly focuses on passive damping systems such as constrained layer damping, shunted piezoelectric treatments, damping layers with shunted piezoelectric treatments, magnetic constrained layer damping, shape memory alloy damping, active vibration control systems with piezoelectric layers such as active constrained layer damping, active piezoelectric damping composites, electromagnetic damping composites, active shunted piezoelectric networks and finally on vibration energy harvesting devices using piezoelectric, electromagnetic, electrostatic or hybrid conversion mechanisms. It emphasizes approaches based on mathematical modeling, nonlinear dynamical system analysis, finite element modeling and simulation, optimal design, uncertainty quantification, nonlinear recovery circuits and experimental proof of concepts for vibration damping purposes. The main objective is to provide a broad overview of recent developments and results in this field, as well as an idea of the potential for their extension and generalization to current and future industry applications.

