Special Issue

Passive Seismic Control of Structures with Energy Dissipation Systems

Message from the Guest Editor

The traditional seismic design approach is based on providing structures with a combination of strength and plastic deformation capacity to resist major earthquakes. Yet this approach implies structural damage throughout the structure after the earthquake. In many cases, repairing this damage is not economically feasible. In recent decades, an alternative design trend has been growing: Dissipate energy in special passive energy dissipating devices, thereby reducing (or even cancelling) the energy dissipation demand (damage) on the primary structural elements that support the gravity loads. This Special Issue aims to cover recent advances in the development/implementation of energy dissipation devices and appropriate design methods that take full advantage of the benefits of these innovative technologies.

Keywords:

- energy dissipation device
- displacement-dependent damper
- velocity-dependent damper
- structures with damping systems
- passive control
- energy-based design
- damage control
- innovative technologies

Guest Editor

Prof. Dr. Amadeo Benavent-Climent

Department of Mechanical Engineering, Technical University of Madrid, 28006 Madrid, Spain

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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