Symmetry in Nonlinear Structural Dynamics: Topic and Advance

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Message from the Guest Editors

This Special Issue aims at presenting new developments in nonlinear structural dynamics as well as methods for the solution of nonlinear governing equations of special structures. Papers of both a theoretical and experimental nature are welcome. Symmetric and anti-symmetric properties are commonly inherent in numerous physical and engineering systems and have been studied by various researchers. Thus, the scope of this Special Issue is broad and includes papers of mathematical background, involving dynamic modeling and vibration of structural elements; adaptive computational methods; nonlinear dynamic behaviors of smart structures/materials; dynamic stability of discrete and continuous systems; application of numerical techniques in studying nonlinear dynamics of beams, arches, cables, plates and shells; dynamic systems involving clearances, impacts and friction; dynamics of micro-scale systems; nonlinear behaviors of soil–structure, structural–acoustic, and fluid–structural interactions and so on. Experimental studies as verification of theoretical results are also of the particular interest.

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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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