



symmetry



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Symmetry/Asymmetry in Damage Detection, Wavelet Transformation and Applied Mechanics

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Deadline for manuscript submissions:

closed (1 September 2022)

Message from the Guest Editors

The issue of early detection, location, and estimation of structural damage is one of the most important engineering problems because it is closely related to the safety and durability of a facility. New directions of research are indicated, different approaches are used, and many advanced methods are developed. Many of these are based on the analysis of structural response signals. Some approaches are based on, e.g., optimization of loads, information on natural frequencies, heat transfer, inverse analysis, and acoustic emission. A very promising tool for signal analysis, based on mathematical theory, is a wavelet transform (WT), which allows non-stationary signals to be effectively analyzed.

Among the many problems considered, as well as in the methods of analysis themselves, we find several aspects of the presence of symmetry or asymmetry. We encourage authors and *Symmetry* readers to submit scientific papers to the Special Issue, with particular emphasis on papers supported by experimental research or examples of applications of various methods of analysis.



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Special Issue



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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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