Special Issue

Applications Based on Symmetry/Asymmetry in Solid Mechanics

Message from the Guest Editors

Symmetry is a fundamental principle in solid mechanics, shaping material behavior, structural integrity, and mechanical performance under different loading conditions. It simplifies mathematical modeling, enabling efficient computational and analytical approaches for stress analysis, fracture mechanics, and material deformation. In contrast, asymmetry is crucial for understanding anisotropic materials, composite structures, and irregular loading scenarios. These concepts are widely applied in aerospace, biomedical, and structural engineering. The balance between symmetry and asymmetry is particularly important in advanced materials like metamaterials and soft matter, where controlled asymmetry can lead to unique mechanical properties. This Special Issue invites contributions that explore theoretical, experimental, and computational advancements in solid mechanics, emphasizing symmetry-driven design strategies and their practical applications in engineering.

Guest Editors

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About the Journal

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.

Editor-in-Chief

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