

# Special Issue

## Applications Based on Symmetry/Asymmetry in Structural Analysis

### Message from the Guest Editors

This Special Issue explores innovative applications of symmetry and asymmetry in structural analysis, emphasizing their impact on efficiency, performance, and safety in engineering design. Symmetry is widely used to simplify models, reduce computational effort, and optimize structural behavior under loads. It allows for elegant mathematical formulations and clear interpretations of results in mechanics. In contrast, asymmetry—whether geometric, material, or loading-induced—often reveals critical behaviors not captured in idealized models. It is especially relevant in real-world scenarios like irregular buildings, bridges with varying spans, or structures exposed to nonuniform environmental conditions. This Special Issue will bring together contributions that demonstrate how symmetry can be leveraged for simplification and how asymmetry can lead to unique challenges and insights. Topics of interest include finite element modeling, dynamic analysis, buckling, fracture mechanics, and structural optimization. The goal of this issue is to foster a deeper understanding of how symmetry principles inform modern structural engineering practice.

### Guest Editors

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### Deadline for manuscript submissions

30 June 2026



## Symmetry

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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.

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### Editor-in-Chief

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