

Special Issue

Advances in Mechanics of Rigid and Flexible Systems: Mathematical Models, Numerical Modelling, Experiments, Symmetry and Applications

Message from the Guest Editors

This Special Issue aims to showcase the latest developments in mechanics, within both fundamental research and the industrial sector. It focuses on the essential triad of modern research, namely analytical modeling, numerical validation (such as finite element or multibody analyses), and experimentation. A noteworthy feature of this issue is the exploration of symmetry as a fundamental concept in both mathematical and numerical modeling. This focus provides a platform for contributions that delve into the intricate balance and contrasts between symmetry and asymmetry, spanning a broad spectrum of mechanical topics, including but not limited to: • Nonlinear mathematical models • Finite element modeling • The dynamics of rigid and flexible multibody systems • A kinematic analysis and synthesis of compliant mechanisms • The vibrations of beams, plates and shells • Experimental mechanics The goal of this Special Issue is to serve as a comprehensive collection of original research on the mechanics of rigid and deformable systems, providing the scientific community and readers with the latest insights and advancements.

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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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