



Symmetry in Quantum Fields, Gravitation, and Cosmology

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Message from the Guest Editors

Dear Colleagues,

It is a great pleasure to launch this Special Issue dedicated to exploring the many aspects of symmetry in contemporary high-energy physics, namely in field theory (classical and quantum), gravitation and cosmology.

Symmetry is a foundational concept in theoretical physical construction, and its appreciation has served as the fulcrum to many deep developments in physics. Extensions of symmetry concepts as well as the investigation of symmetry breakings have also found relevance in the physical endeavor of describing nature in several energy scales.

This volume intends to contemplate different aspects of symmetry in the physical formulation, such as (but not restricted to) gauge symmetries, space–time symmetries, diffeomorphisms, and breaking of symmetries in many branches of High Energy Physics.





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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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