



Particle Physics and Symmetry

Guest Editor:

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Message from the Guest Editor

Symmetries are one of the fundamental concepts that have guided the development of particle physics over several decades. On one hand, symmetries defined theoretical developments and identifications of interactions, and on the other hand, symmetries and their violation have been an important area of measurements in experimental particle physics. In this Special Issue, we gather the leading ideas about the application of symmetries in future theoretical development and how they will shape the experiments of the future. We would like to invite contributions from both experimentalists and theorists on the study and application of symmetries in particle physics and innovative ideas of physics beyond the Standard Model built on the foundations of extended symmetries. Ideas on how larger global and local symmetries can bring about novel dynamics, or on new sources for the breaking of discrete symmetries like CP or T are especially welcome, along with ideas on how to measure these dynamics.





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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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