Special Issue

Duality Symmetry

Message from the Guest Editor

Symmetry is one of the most general concepts in physics. Symmetry arguments are used to explain and predict observations at all length scales, from elementary particles to cosmology. The generality of symmetry arguments, often combined with simplicity, makes them a powerful tool for both fundamental and applied investigations. In electrodynamics, one of the symmetries is the invariance of the equations under exchange of electric and magnetic quantities. The continuous version of this symmetry is most commonly known as electromagnetic duality symmetry. It has been known for more than a century, and, throughout this time, has influenced other areas of physics, like high energy physics and gravitation. Duality symmetry is inherently attached to its generator and conserved quantity, helicity, which is yet another concept that transcends electrodynamics.

Guest Editor

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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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