



symmetry



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Parity-Time (PT) Symmetry in Classical and Quantum Domains

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Message from the Guest Editors

Dear Colleagues,

Symmetries play an essential role in determining the constraints that all physical systems—classical or quantum, open or isolated—must abide by. Continuous symmetries manifest themselves through corresponding conserved quantities (charges) and provide global information about the dynamics of a system. In open systems (where energy, momentum, or mass conservation may not hold), the role played by symmetries, if any, is even more important. In recent years, open systems with a “balanced gain and loss”, called parity-time (PT) symmetric systems, have become a subject of intense research. With well-established realizations in the classical domain and emerging ones in the quantum domain, PT-symmetric systems will continue to be explored across greater depth and breadth in the coming years.

This Special Issue will be focused on recent advances in the field of PT-symmetry in the classical and quantum domains...



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Special Issue



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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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