



Symmetry/Asymmetry in Topological Phases

Guest Editors:

Dr. Tian Chen

Prof. Dr. Daohong Song

Prof. Dr. Fuchuan Lei

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Message from the Guest Editors

Dear Colleagues,

Topological phenomena have been widely discussed in recent years, involving research fields ranging from Hermitian systems to non-Hermitian systems, from satisfying Euclidean geometry to non-Euclidean geometry. When studying topological phenomena, symmetry plays a very important role. The topological phase transition emerges, accompanying the change in symmetry. Especially when extended to non-Hermitian or non-Euclidean systems, the novel topological phenomena have a close relation with special symmetries.

The relationship between topological phenomena and symmetry is not only limited to theoretical discussions, but has also been extensively elaborated on multiple experimental platforms, for example, condensed matter materials, cold atoms, superconducting systems, optical platforms, acoustic crystals, electric circuits, etc. On these platforms, by measuring the corresponding physical quantities specific to the platform, it is possible to demonstrate the changes in topological properties as symmetry changes. Moreover, observing the relationship between topological phase and symmetry can not only verify the correctness of the theory, but also provide guidance...





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Prof. Dr. Sergei Odintsov

1. Institució Catalana de Recerca
i Estudis Avançats (ICREA),
Passeig Luis Companys, 23,
08010 Barcelona, Spain
2. Institute of Space Sciences
(ICE-CSIC), C. Can Magrans s/n,
08193 Barcelona, Spain

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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Contact Us

Symmetry Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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symmetry@mdpi.com
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