Special Issue

Phase Transitions in Complex and Nonequilibrium Systems: From Criticality to Topological and Active Matter

Message from the Guest Editors

This Special Issue aims to gather contributions exploring the forefront of phase transitions in complex systems, with emphasis on, but not limited to, the following topics:

- Nonequilibrium phase transitions, absorbing states, and dynamic order parameters;
- Topological phase transitions, including Kosterlitz–Thouless-type behavior and topologically protected states;
- Phase transitions in complex networks, such as explosive percolation and synchronization phenomena;
- Self-organized criticality and its relevance to natural and engineered systems;
- Phase transitions in active matter and systems with collective motility;
- Universal behavior in disordered systems, glasses, and jamming transitions;
- Quantum phase transitions at zero temperature and their critical phenomena;
- Machine learning and data-driven approaches to detect and classify phase transitions;
- New frameworks for criticality beyond traditional universality classes;
- Interdisciplinary applications, from biology to social systems and artificial intelligence.

The goal is to provide a broad and inspiring perspective on how concepts of phase transitions are evolving to address the complexity of modern science.

Guest Editors

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Editor-in-Chief

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