

## Special Issue

# Emergent Dynamics of Complex Systems: From Synchronization to Clustering

### Message from the Guest Editor

Complex systems, which are prevalent in nature and human society, exhibit fascinating emergent behaviors, e.g., phase transition, synchronization, clustering, chimeras, nonlinear waves, and swarming dynamics. Understanding the mechanism embedded in these behaviors is crucial for various fields, including physics, biology, and engineering. This Special Issue aims to bring together researchers to explore the emergent dynamics of complex systems, focusing on the dynamics and statistical physics of synchronization, clustering, and swarming phenomena. We invite submissions that investigate the underlying mechanisms, mathematical models, and real-world applications related to these topics. We are interested in a wide range of research areas, such as the synchronization of coupled oscillators, the formation of clusters in social and biological networks, and the swarming dynamics of active particles. Both theoretical and empirical studies are welcome. We also encourage interdisciplinary approaches that combine methods from different disciplines to provide new insights into the emergent dynamics of complex systems.

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### Guest Editor

Prof. Dr. Zhigang Zheng  
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### Deadline for manuscript submissions

15 June 2026



## Entropy

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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.

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### Editor-in-Chief

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