Special Issue

Trends in Phase Transitions, Synchronization, Irreversibility, and Critical Phenomena in Chaotic Dynamics

Message from the Guest Editors

Chaos is a feature of some dynamical systems that has been extensively studied for several years due to its ubiquity in many natural phenomena and because of its multiple applications in mathematics, physics, biology, engineering, and many other disciplines. In recent years, there has been a great success in the development of a rigorous and solid mathematical framework for chaotic dynamics; nonetheless, most of this framework deals with systems that can be considered systems in equilibrium. On the other hand, most real-life phenomena is nonlinear, non-reversible, and out-of-equilibrium. In such states, systems have critical behaviors that are interesting to study, but whose mathematical comprehension is far from being achieved. The aim of the present Special Issue is to bring together knowledge about these critical phenomena in simple and not-so-simple models of dynamical systems, complex networks, and stochastic processes. Our purpose is to bridge the knowledge gaps around out-of-equilibrium systems, as well as to contribute towards research areas such as phase transitions, synchronization, time-irreversibility, and many other critical phenomena in dynamics.

Guest Editors

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Axioms is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

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