Special Issue

Dynamics of Quantum Correlations in Open Systems

Message from the Guest Editor

Quantum correlations represent one of the most characteristic traits of quantum mechanics. The unavoidable interaction of quantum systems with their environment implies the necessity to deeply understand and characterize the dynamics of open quantum systems. The proposed Special Issue aims to address these crucial aspects of quantum physics and collect contributions studying or reviewing both fundamental aspects and applications of quantum correlations in discrete and continuous variable open quantum systems. Possible topics may cover but are not limited to the following research areas: -⯀Description and characterization of quantum correlations (steering, entanglement, discord);-⯀Quantification and entropic/geometric measures of quantum correlations;-⯀Markovian and non-Markovian dynamics of quantum correlations in open systems;-⯀Applications of quantum correlations to quantum information processing and communication;-⯀Quantum correlations as a resource for quantum technology applications;-⯀ Evolution of quantum coherence in open systems;-⯀ Quantum decoherence and transition from quantum to classical.

Guest Editor

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Deadline for manuscript submissions

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About the Journal

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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