



entropy



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Quantum Entropies and Complexity

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Revolutionary recent advances in quantum information, communication, and computation have involved the ubiquitous use of entropy-related concepts as fundamental tools to monitor and quantify the complex behavior of quantum systems, by themselves as in quantum dynamics and quantum phase-transitions, and in relation to the manipulation of information they can carry. Quantum entropy, relative entropy, mutual information, and their dynamics are at the core of many disciplines. In all these different scenarios, entropy-related concepts stand out as fundamental tools with which to capture the complexity of the processes involved and to harness them to the advantage of increasing the efficiency of protocols, by establishing and reaching their ultimate quantum limits.

Prof. Fabio Benatti
Guest Editor



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Special Issue



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Editor-in-Chief

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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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