Special Issue

On the Role of Geometric and Entropic Arguments in Physics: From Classical Thermodynamics to Quantum Mechanics

Message from the Guest Editor

Geometric formulations of classical and quantum evolutions along with geometric descriptions of classical and quantum mechanical aspects of thermal phenomena are becoming increasingly important in science. Concepts, such as thermodynamic length, area law, and statistical volumes are omnipresent in geometric thermodynamics, general relativity, and statistical physics, respectively. The concept of entropy finds application in essentially any realm of science, from classical thermodynamics to quantum information science. For instance, concepts such as Shannon entropy, von Neumann entropy, and Umegaki relative entropy are ubiquitous in classical information science, quantum information theory, and information geometric formulations of mixed quantum state evolutions, respectively. The aim of this Special Issue is to collect works exhibiting novel connections among geometry, thermodynamics, and quantum information theoretic concepts. Special attention to the role played by entropic arguments in such connections will be warmly welcomed.

Guest Editor

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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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