Special Issue

Applications of Fisher Information in Sciences II

Message from the Guest Editor

It is well recognized that Ronald A. Fisher originally presented Fisher information in his statistical estimation theory a century ago, and that it has offered an indispensable tool with which to analyze statistical systems. To date, it has also received extensive attention from researchers working in fields beyond statistics. Statistical physics, thermodynamics, and quantum science are, indeed, intimately associated with this measure. In addition, astronomy and biological sciences reap most of the benefits of this tool for big data analysis. The applications of Fisher information are in fact vast, and have played expanding roles in the advancement of each discipline. For example, precise temperature measurement and its development are becoming crucial tasks in modern quantum technologies and the advancement of thermodynamics in the quantum region. In this renewed Special Issue, we would like to compile articles addressing the fundamental aspects of Fisher information and its applications in various fields. We welcome submissions that shed new light on the scope of this information's in-depth features and unreported useful applications.

Guest Editor

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Deadline for manuscript submissions

closed (21 March 2025)

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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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