

## Special Issue

# Information Geometric Characterization of Classical and Quantum Complex Systems

### Message from the Guest Editors

In this Special Issue, we propose the discussion of information geometric descriptions of both classical and quantum complex phenomena, from both an applied and theoretical perspective. Several types of scientists undertake these types of investigations, including applied mathematicians, quantum physicists, and statistical physicists. The mathematical and physical tools needed to investigate such problems are quite diverse and include, in particular, inference methods, information theory, probability theory, quantum physics, Riemannian geometry, and statistical physics. More importantly, the role that the concept of entropy plays in such information geometric formulations of natural phenomena is becoming increasingly important. It is our great pleasure to welcome your contributions to this Special Issue with the main aim of advancing our search for a unifying information geometric complexity measure of universal applicability. Finally, we hope to highlight the entropic aspects uncovered by means of the information geometric modeling of natural complex phenomena, including special scenarios covered by either classical or quantum methods of theoretical physics.

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### Guest Editors

Prof. Dr. Nihat Ay

Dr. Carlo Cafaro

Prof. Dr. Ariel Caticha

Dr. Domenico Felice

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### Deadline for manuscript submissions

closed (30 April 2021)



## Entropy

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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.

*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.

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### Editor-in-Chief

Prof. Dr. Kevin H. Knuth

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