Entropy in Foundations of Quantum Physics

Guest Editor:

Dr. Marcin Pawłowski

Institute of Theoretical Physics and Astrophysics, University of Gdańsk, 80-952 Gdańsk, Poland

Deadline for manuscript submissions:
closed (31 May 2019)

Message from the Guest Editor

Recently, the interest in foundational research in physics has been rekindled, mostly due to the advances of quantum information. Not only does it provide versatile tools, but also ways to link this field with practical applications. Probably, the best example of such a connection is Ekert's cryptographic protocol from 1991.

Since entropy can be used, among other things, to measure uncertainty and information capacity, it has been widely used in that field. Some of its applications include Bell inequalities, nonlocality, causal structures, system complexity and uncertainty relations. Moreover, presence of entropy in other areas of research allows it to become a bridge between foundations and these fields.

Current trends seem to indicate that the role of entropy in the studies of the foundations of quantum physics will only increase and lead to many new exciting discoveries. I, therefore, encourage you to submit your work to this Special Issue.

mdpi.com/si/12040

Special Issue

Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

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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