Special Issue

Physical Information and the Physical Foundations of Computation

Message from the Guest Editor

Nearly six decades have passed since Landauer declared that “information is physical” and proposed a fundamental thermodynamic link between information erasure and heat generation in computing processes. At present, deep in this information age, we have highly sophisticated and widely used models of computing machines as physical systems. Yet, we remain without a comprehensive and widely accepted fundamental understanding of computation as a distinct physical process with information as its physical currency.

This Special Issue aims to clarify and advance the physical understanding of information and computation. We invite a broad range of original, high-quality contributions from a variety of disciplinary perspectives —including but not limited to engineering, physics, computer science, neuroscience, information science, biological physics, and the philosophy of science—that explicitly address fundamental links between physics, information, and computation.

Guest Editor

Prof. Neal G. Anderson

Department of Electrical & Computer Engineering, University of Massachusetts Amherst, Amherst, MA 01003-9292, USA

Deadline for manuscript submissions

closed (31 January 2021)

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/si/35154

Entropy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
entropy@mdpi.com

mdpi.com/journal/entropy

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/journal/entropy

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.

Editor-in-Chief

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, PubMed, PMC, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Physics, Multidisciplinary) / CiteScore - Q1 (Mathematical Physics)

MDPI