entropy

an Open Access Journal by MDPI

IMPACT FACTOR 2.0

Indexed in: PubMed

CITESCORE 5.2

Quantum Transport in Mesoscopic Systems

Guest Editors:

Dr. David Sánchez
Institute for Cross-Disciplinary Physics and Complex Systems IFISC (UIB-CSIC), E-07122 Palma de Mallorca, Spain

Dr. Michael Moskalets
Department of Metal and Semiconductor Physics, NTU "Kharkiv Polytechnic Institute", 61002 Kharkiv, Ukraine

Deadline for manuscript submissions:
closed (15 December 2019)

Message from the Guest Editors

Mesoscopic physics has now become a well-established, mature field. The techniques developed in the 1980s and 1990s to understand electronic transport in small conductors form a standard toolbox that is available for theoreticians and experimentalists alike. Importantly, the electrical properties of mesoscopic conductors happen to be governed directly by the quantum properties of carriers, hence the term "quantum transport". However, the advent of new materials with exotic properties poses serious challenges for the understanding of novel phenomena using standard formalisms. Further, today's possibility of designing different setups and measurement schemes offers the opportunity of investigating transport effects lying at the interface between condensed matter, thermodynamics, and quantum information.

This issue attempts to review recent trends in quantum transport and mesoscopics with a rich variety of topics: nanoscale heat and dissipation, coherent single-electronics, semiconductor spintronics, topological quantum matter, quantum Hall effects, graphene structures, strongly interacting systems, noise and fluctuations, etc.

entropy

IMPACT FACTOR 2.0 | Indexed in: PubMed | CITESCORE 5.2

an Open Access Journal by MDPI

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.

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.

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)

Contact Us

Entropy Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/entropy
entropy@mdpi.com
𝕏@Entropy_MDPI