



an Open Access Journal by MDPI

(Quantum) Physical Informatics

Guest Editors:

Prof. Dr. David K. Ferry

School of Electrical, Computer,
and Energy Engineering, Arizona
State University, Tempe, AZ
85287-5706, USA

Prof. Dr. Laszlo B. Kish

Department of Electrical &
Computer Engineering, Texas
A&M University, TX 77843, USA

Prof. Dr. He Wen

College of Electrical and
Information Engineering, Hunan
University, Changsha 410082,
China

Deadline for manuscript
submissions:

closed (31 May 2019)

Message from the Guest Editors

Dear Colleagues,

- What are the key quantum computer chips and prospects?
- What is the difference between information entropy and physical entropy?
- Are quantum key distribution schemes unconditionally secure? Under what conditions?
- What are the true dissipation limits in real quantum computers?
- How will physical noise limit quantum computing at various level?
- What is the truth of Landauer's and Brillouin's limiting principles?
- Can classical physical systems provide exponential speedup and random algorithm implementations?
- Are there analog computing schemes that could provide exponential speedup?
- Are Brownian computers possible, and are they sufficiently energy efficient?
- In what situations might stochastic resonance, noise excitation, give a viable method of enhanced performance?
- What effects of computational complexity have an effect on dissipation?



mdpi.com/si/17011

Prof. Dr. David K. Ferry

Prof. Dr. Laszlo B. Kish

Prof. Dr. He Wen

Guest Editors

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

Contact Us

Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

mdpi.com/journal/applsci
applsci@mdpi.com
[X@Applsci](#)