

# Special Issue

## (Quantum) Physical Informatics

### Message from the Guest Editors

- 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?

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### Guest Editors

Prof. Dr. David K. Ferry

Prof. Dr. Laszlo B. Kish

Prof. Dr. He Wen

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### Deadline for manuscript submissions

closed (31 May 2019)



## Applied Sciences

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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