# Special Issue

# Quantum Information and Quantum Simulation

## Message from the Guest Editor

Quantum simulation is a founding idea of the field of quantum computation. Since its inception by Feynman, quantum simulation has grown to encompass simulation of condensed matter, quantum chemistry, and nuclear and high-energy physics. The power of quantum computation, when applied to the simulation of physical systems, means that a single set of techniques can be applied across disparate quantum systems. Advances in the mapping of different physical systems, to qubits and quantum gates, have been complemented by advances in simulation algorithms. Progress in experimental implementations of quantum computing have resulted in many demonstrations of quantum simulation on both analog simulators and NISQ devices. Quantum simulation is a major focus of commercial efforts to implement quantum computation and of publicly funded efforts such as the National Quantum Initiative. In this Special Issue, we wish to showcase work at the cutting edge of quantum simulation—from algorithms to software to experimentation.

## Guest Editor

Prof. Dr. Leong Chuan Kwek

Centre for Quantum Technologies, National University of Singapore, Singapore 117543, Singapore

## Deadline for manuscript submissions

closed (21 June 2022)

**Entropy**

**an Open Access Journal by MDPI**

**Impact Factor 2.0**
**CiteScore 5.2**
**Indexed in PubMed**

mdpi.com/si/42289

*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