



## Theoretical Physics and Quantum Information

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (21 June 2022)**

### Message from the Guest Editor

Topics of the Special Issue:

- The relationship between quantum information and theoretical physics;
- The role of quantum information in understanding theoretical physics (quantum information, simulations, many-body physics, entanglement, quantum correlations, uncertainty relationships, hidden variables, violation of Bell inequalities, quantum gravity, superpositions, decoherence, quantum cosmology, black holes);
- The relationship between quantum information and theoretical physics (locality, causality, quantum contextuality, quantum fields theory, quantum entropies, quantum noise, entanglement entropy, information scrambling, quantum speed limit, black holes);
- Quantum structures and their applications in information (quantum communication, quantum security, quantum measurements, quantum computation, quantum machine learning, noisy intermediate-scale quantum (NISQ) machine learning, quantum decoherence)





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## Editor-in-Chief

### **Prof. Dr. Kevin H. Knuth**

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## 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.

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