



*entropy*



an Open Access Journal by MDPI

## Quantum Causal Networks

Guest Editors:

**Prof. Dr. Miguel Navascues**

Institute for Quantum Optics and  
Quantum Information (IQOQI), A-  
1090 Vienna, Austria

**Dr. Zizhu Wang**

Institute for Quantum Optics and  
Quantum Information (IQOQI), A-  
1090 Vienna, Austria

Deadline for manuscript  
submissions:

**closed (31 March 2019)**

### Message from the Guest Editors

The recent progress in quantum optics experiments allows us to implement quantum information protocols where several distant parties can exchange, measure and process quantum systems. Understanding the limits of what can be experienced in such scenarios, as well as how they differ from their classical counterparts, is the goal of quantum causal network theory.

In recent years, we have seen impressive advances towards limiting the correlations which can be achieved within a given causal network. In the classical realm, these advances have inspired powerful new methods to solve the classical inference problem. At the same time, we have identified theoretical configurations involving a number of independent quantum agents whose behavior, despite being logically consistent, cannot be explained by any causal model. Are these scenarios physically realizable? If so, what can we learn from them?

In this Special Issue, we solicit both reviews of recent progress and original work on new methods or protocols in quantum causal networks.



[mdpi.com/si/11554](https://mdpi.com/si/11554)

# Special Issue



# entropy



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, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/entropy](http://mdpi.com/journal/entropy)  
[entropy@mdpi.com](mailto:entropy@mdpi.com)  
[X@Entropy\\_MDPI](#)