



Application of Information Theory and Entropy in Cardiology

Guest Editor:

Dr. Hiroshi Ashikaga

Department of Medicine, Division
of Cardiology, Johns Hopkins
University School of Medicine,
Baltimore, MD, USA

Deadline for manuscript
submissions:

closed (31 March 2020)

Message from the Guest Editor

Dear Colleagues,

The human heart is a complex system composed of 5 billion autonomous cardiomyocytes that interact with each other with simple rules of operation and minimal central control. This interaction leads to system behaviors at multiple scales. At the microscopic scale, the system behavior is characterized by transitions of cardiomyocyte states between excitation and relaxation. This creates a series of traveling waves and a multitude of arrhythmia at the macroscopic scale that controls the life and death of millions of human beings worldwide.

This Special Issue will focus on the application of information theory in Cardiology to understand 1) the relationship between micro- and macro-scale behaviors of the heart, 2) phase transitions in the cardiac system, and 3) the mechanism of heart disease.

Papers exploring topics from molecular to population scales will be considered.





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 \(Web of Science\)](#), [MathSciNet](#), [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

mdpi.com/journal/entropy
entropy@mdpi.com
[X@Entropy_MDPI](#)