



Information Theory in Neuroscience

Guest Editors:

Prof. Dr. Stefano Panzeri

Neural Computation Laboratory,
Center for Neuroscience and
Cognitive Systems@UniTn,
Istituto Italiano di Tecnologia,
38068 Rovereto (TN), Italy

Dr. Eugenio Piasini

Computational Neuroscience
Initiative, University of
Pennsylvania, Philadelphia, PA
19104, USA

Deadline for manuscript
submissions:

closed (30 April 2018)

Message from the Guest Editors

Dear Colleagues,

As the ultimate information processing device, the brain naturally lends itself to be studied with information theory. Application of information theory to neuroscience has spurred the development of principled theories of brain function, has led to advances in the study of consciousness, and to the development of analytical techniques to crack the neural code, that is to unveil the language used by neurons to encode and process information. In particular, advances in experimental techniques enabling precise recording and manipulation of neural activity on a large scale now enable for the first time the precise formulation and the quantitative test of hypotheses about how the brain encodes and transmits across areas the information used for specific functions.

This Special Issue emphasizes contributions on novel approaches in neuroscience using information theory, and on the development of new information theoretic results inspired by problems in neuroscience. Research work at the interface of neuroscience, Information Theory and other disciplines is also welcome.

Prof. Stefano Panzeri
Dr. Eugenio Piasini
Guest Editors





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, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/entropy
entropy@mdpi.com
[X@Entropy_MDPI](https://twitter.com/Entropy_MDPI)