



Multiscale Entropy Approaches and Their Applications

Guest Editor:

Dr. Anne Humeau-Heurtier

Laboratoire Angevin de
Recherche en Ingénierie des
Systèmes (LARIS), GEII
Department, University of Angers,
IUT, 4 Boulevard Lavoisier, BP
42018, 49016 Angers CEDEX,
France

Deadline for manuscript
submissions:

closed (15 October 2019)

Message from the Guest Editor

Dear Colleagues,

Multiscale entropy measures have been proposed from the beginning of the 2000s to evaluate the complexity of time series, by taking into account the multiple time scales in physical systems. Since then, these approaches have received a great deal of attention and have been used in a large range of applications. Multivariate approaches have also been developed.

The algorithms for a multiscale entropy approach are composed of two main steps: i) a coarse-graining procedure to represent the system's dynamics on different scales; ii) the entropy computation for the original signal and for the coarse-grained time series to evaluate the irregularity for each scale. Moreover, different entropy measures have been associated with the coarse-graining approach, each one having its advantages and drawbacks: approximate entropy, sample entropy, permutation entropy, fuzzy entropy, distribution entropy, dispersion entropy, etc.

In this Special Issue, we would like to collect papers focusing on both the theory and applications of multiscale entropy approaches. Any kind of entropy measure is considered (see above).

Dr. Anne Humeau-Heurtier
Guest Editor





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](#)