Special Issue

Complexity and Synchronization in Time Series

Message from the Guest Editors

A wide variety of complex systems exhibit behaviors that can be characterized by means of nonlinear dynamics, including methodologies such as fractality, multifractality, entropy, complex networks, etc. On the other hand, synchronization phenomena in coupled systems usually manifest themselves in collective coherent regimes that exhibit features such as the presence of avalanches, temporal correlations, and information theory processes. The study of the complexity displayed by the systems and their synchronization levels has become highly relevant, both from the point of view of dynamical models and experimentally in signals. Both complexity and synchrony also represent robust mechanisms that enhance communication in complex systems.

This Special Issue aims to bring together and disseminate recent research on new and improved techniques for modeling, analysis, and synchronization studies of complex systems. In particular, the analysis and interpretation of complex systems and applications in engineering based on information processing fall within the scope of this Special Issue.

Guest Editors

Dr. Lev Guzmán-Vargas

Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Instituto Politécnico Nacional, Mexico City 07340, Mexico

Dr. Daniel Aguilar-Velázquez

Centro de Investigación y de Estudios Avanzados, Laboratorio de Neurogénesis y Neuroplasticidad, Departamento de Fisiología, Biofísica y Neurociencia, Ciudad de Mexico 07360, Mexico

Deadline for manuscript submissions

10 December 2025

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/si/218110

Entropy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
entropy@mdpi.com

mdpi.com/journal/entropy

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/journal/entropy

About the Journal

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.

Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

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)

MDPI