Special Issue

Robustness and Resilience of Complex Networks

Message from the Guest Editors

This translational topic, which is strongly emerging in pure and applied research, calls for multifaceted approaches, integrating techniques from network theory, control engineering, information theory, and more, as well as applied research from single disciplines like ecology, physics, engineering, management, and so forth.

Natural and artificial systems and networks often share the capability to maintain critical functions and properties despite uncertainties, fluctuations, and perturbations, both in their topology and in their dynamics. Multidisciplinary endeavors are dedicated to unraveling the key characteristics, such as structural, mechanical, and dynamical, that guarantee such behavior, to developing comprehensive frameworks to study it, and to detecting and anticipating losses of robustness and resilience. Additional research avenues in the direction of management and control are also warranted.

We thus ask for contributions around this thrilling topic, both theoretical and applied, in order to frame a comprehensive picture of the quantitative theories and techniques to address the question of dynamical networks persisting in their functions despite alterations.

Guest Editors

Dr. Daniele Proverbio Department of Industrial Engineering, University of Trento, 9 Via Sommarive, 38123 Trento, Italy

Dr. Stefano Boccaletti

CNR, Institute of Complex Systems, Via Madonna del Piano 10, 50019 Sesto Fiorentino, FI, Italy

Deadline for manuscript submissions

15 November 2025



an Open Access Journal by MDPI

Impact Factor 2.0 CiteScore 5.2 Indexed in PubMed



mdpi.com/si/209448

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

mdpi.com/journal/

entropy





an Open Access Journal by MDPI

Impact Factor 2.0 CiteScore 5.2 Indexed in PubMed



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)