



## The Application of Information Theory in Fault Detection and Diagnosis

Guest Editor:

**Dr. José de Jesús Rangel-Magdaleno**

Digital Systems Group, National Institute for Astrophysics, Optics and Electronics, Puebla 72840, Mexico

### Message from the Guest Editor

This Special Issue provides a forum for the presentation of new and improved techniques for signal processing applied to fault detection and classification in power systems and industrial machines based on information theory, entropy, and machine learning.

The topics include but are not limited to the following:

- fault diagnosis and prognosis
- application of entropy in instrumentation and fault diagnosis
- application of entropy in power systems for fault diagnosis
- intelligent instrumentation
- artificial intelligence and IoT in instrumentation
- compressed sensing
- early detection of incipient faults
- signal processing for monitoring and diagnosis
- information theory for patterns classification
- multi-sensor information fusion for instrumentation and fault diagnosis
- embedded systems for information theory processing
- machine learning for fault detection and classification

Deadline for manuscript submissions:

**closed (30 December 2023)**





# 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, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/entropy](http://mdpi.com/journal/entropy)  
[entropy@mdpi.com](mailto:entropy@mdpi.com)  
[X@Entropy\\_MDPI](#)