

## Special Issue

# Information-Theoretical Methods in Data Mining

### Message from the Guest Editor

Data mining is a rapidly growing field with the aim of analyzing big data in academia and industry. In it information-theoretical methods play a key role in discovering useful knowledge from a large amount of data. For example, probabilistic modeling of data sources based on information-theoretical methods such as maximum entropy, the minimum description length principle, rate-distortion theory, Kolmogorov complexity, etc. have turned to be very effective in machine learning problems in data mining such as model selection, regression, clustering, classification, structural/relational learning, association/causality analysis, transfer learning, change/anomaly detection, stream data mining, sparse modeling, etc. This special issue specifically emphasizes research that addresses data mining problems using information-theoretical methods. It includes research on a novel development of information-theoretical methods for specific applications to data mining, and a new data mining problem using information theory. Submissions at the boundaries of information theory, data mining, and other related areas such as machine learning, network science, etc. are also welcome.

---

### Guest Editor

Prof. Kenji Yamanishi

Department of Mathematical Informatics, Graduate School of Information Science and Technology, The University of Tokyo, Tokyo, Japan

---

### Deadline for manuscript submissions

closed (20 September 2019)



## Entropy

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.1  
CiteScore 4.9  
Indexed in PubMed



[mdpi.com/si/19084](https://mdpi.com/si/19084)

*Entropy*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[entropy@mdpi.com](mailto:entropy@mdpi.com)

[mdpi.com/journal/  
entropy](https://mdpi.com/journal/entropy)





# Entropy

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.1  
CiteScore 4.9  
Indexed in PubMed



[mdpi.com/journal/  
entropy](https://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)