

Special Issue

Mathematical Modeling of Signal Processing and Analysis in Light of Deep Learning

Message from the Guest Editors

Deep neural networks are gaining widespread attention due to their ability to provide performance gains in several real-world problems, largely those related to image data. Mathematical theory of deep learning networks would illuminate their mechanisms, allow the assessment of the strengths and weaknesses of different network architectures and lead to major improvements. The future state of the art in the field, if efficient and effective deep learning algorithms are developed, could be represented by several types of advanced signal processing methods.

The aim of this Special Issue is to introduce readers to the emerging concept of mathematical modeling deep learning algorithms for signal processing and analysis. In the expanded technical scope of signal processing, the signal input is not limited to traditional signal types such as audio, speech, image and video, but extends to additional sensory data that convey high-level, semantic information. Overcoming model overfitting, data augmentation techniques for high-quality training data, prediction results and the interpretability of deep models are of special interest.

Guest Editors

Dr. Eleni Vrochidou

Prof. Dr. Vladan Papić

Prof. Dr. George A. Papakostas

Deadline for manuscript submissions

closed (20 December 2023)



Axioms

an Open Access Journal
by MDPI

Impact Factor 1.6



mdpi.com/si/163443

Axioms

Editorial Office

MDPI, Grosspeteranlage 5

4052 Basel, Switzerland

Tel: +41 61 683 77 34

axioms@mdpi.com

mdpi.com/journal/

axioms





Axioms

an Open Access Journal
by MDPI

Impact Factor 1.6



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



About the Journal

Message from the Editor-in-Chief

Axioms is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Humberto Bustince

Department of Statistics, Computer Science and Mathematics, Public
University of Navarra, 31006 Pamplona, Spain

Author Benefits

Open Access

— free for readers, with article processing charges (APC) paid by authors or their institutions.

High visibility:

indexed within SCIE (Web of Science), dblp, and other databases.

Journal Rank:

JCR - Q2 (Mathematics, Applied)