

Special Issue

Advances, Challenges, and Applications of Deep Learning Models in Computer Vision and Image Processing and Analysis

Message from the Guest Editors

Deep learning (DL) models have gained crucial importance in the field of machine learning, especially in the research areas of computer vision and image processing and analysis. Despite numerous obstacles facing DL models, such as the need for massive amounts of labeled data, high training costs, scale, translation and rotation invariance in object recognition, adversarial attacks, and their increasing mathematical complexity, recent advances continue to push DL models forward, addressing one or more of the aforementioned challenges. These advances include more robust convolutional neural networks, recurrent neural networks, generative adversarial networks, capsule neural networks, novel deep transfer learning techniques, vision transformers, and hybrid DL architectures, among others. This Special Issue calls for original research articles and reviews that contribute to the latest advances and applications of DL models in computer vision and image processing and analysis, particularly those focused on real-world problems, as well as articles that explore the challenges of DL models along with trends and ways to address them.

Guest Editors

Dr. Carlos Soubervielle-Montalvo

Faculty of Engineering, Autonomous University of San Luis Potosi, San Luis Potosi 78290, Mexico

Dr. Cesar Puente

Faculty of Engineering, Autonomous University of San Luis Potosi, San Luis Potosi 78290, Mexico

Deadline for manuscript submissions

31 August 2025



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



mdpi.com/si/224168

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

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





Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



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



About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).