

# Special Issue

## Mathematics in Machine Learning-Based Image Processing with Their Applications

### Message from the Guest Editors

In recent years, we have observed the rapid development of artificial intelligence, especially deep learning architectures within the machine learning research area, being a part of Mathematical Sciences. It has resulted in the increased accuracy of novel solutions as observed in ImageNet challenges. Therefore, machine learning-based algorithms comprise multiple applications in the field of computer vision, especially image-processing tasks in areas that include medical image analysis, autonomous driving, robotic vision, and cybersecurity. These techniques are commonly used for image pre-processing, registration, detection, segmentation, classification, reconstruction, retrieval, and feature extraction. Being robust and repeatable, they appropriately support the scientist in his or her daily work. This Special Issue aims to collect all the works reflecting the latest developments in machine learning, emphasizing their usage in image analysis. We invite the authors to submit original articles addressing the significant issues and new concepts in the field of image processing.

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### Guest Editors

Dr. Joanna Czajkowska

Dr. Jan Juszczuk

Dr. Joanna Jaworek-Korjakowska

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### Deadline for manuscript submissions

closed (31 October 2024)



## Mathematics

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

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## 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.

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### Editor-in-Chief

Prof. Dr. Francisco Chiclana

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

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