Special Issue

Mathematical Foundations and Innovations in Advanced Image and Video Processing

Message from the Guest Editor

Advanced Image and Video Processing (AIVP), synergized with Generative AI for Content Creation (AIGC), has emerged as a paradigm shift. AIGC, powered by deep learning (e.g., GANs, diffusion models), redefines content generation (e.g., text-to-image synthesis and video evolution) and mathematical theory. This Special Issue aims to encourage research that explores innovative techniques and theoretical frameworks at the intersection of mathematical theory and AIGC media generation. We are particularly interested in studies that bridge mathematical rigor with AIGC innovation, such as developing generative models rooted in differential geometry, optimization theory, or algebraic topology; or advancing mathematical tools to enhance content diversity, semantic coherence, and computational efficiency in media synthesis. Furthermore, we invite submissions that investigate the application of these mathematical-AIGC synergies in diverse domains, including artistic content creation, dynamic scene generation, and multimodal data representation.

Guest Editor

Dr. Qiang Xu

School of Computer Science, Shanghai Jiao Tong University, Shanghai 200240, China

Deadline for manuscript submissions

15 April 2026



Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



mdpi.com/si/245482

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

mdpi.com/journal/ mathematics





Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



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).

