# Special Issue

## Applications of Computational Intelligence, Computer Vision and Pattern Recognition

### Message from the Guest Editor

This Special Issue focuses on cutting-edge technological innovations in this field and their practical breakthroughs in scenarios. It aims to showcase the latest achievements in the integration of theory and application and to explore the challenges and future directions of technological implementation. Application areas include, but are not limited to:

- Optimization and innovation of deep learning in medical imaging-assisted diagnosis;
- Application of multimodal fusion in autonomous driving environment perception;
- Application of Generative Adversarial Networks (GANs) in image generation and enhancement;
- Improvement and expansion of the Transformer architecture in computer vision tasks;
- Application of few-shot learning in industrial defect detection;
- Application and performance enhancement of self-supervised learning in unlabeled data;
- Optimization of semantic segmentation techniques in satellite remote sensing image analysis;
- Feature extraction and data dimensionality reduction in unsupervised learning;
- Importance and implementation of model interpretability in high-risk applications;
- Optimization and innovation of deep learning architectures.

### Guest Editor

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### Deadline for manuscript submissions

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### 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

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