

## Special Issue

# Symmetry and Asymmetry in Computer Vision Under Extreme Environments

### Message from the Guest Editor

The Special Issue on "Symmetry and Asymmetry in Computer Vision under Extreme Environments" addresses the unique challenges and innovations of computer vision when applied to extreme conditions, such as underwater environments, extreme weather, and low-light situations. These conditions significantly impact visibility and image quality, necessitating advanced techniques in image processing and various computer vision tasks. This Special Issue aims to explore the roles of symmetry and asymmetry in overcoming these challenges. We welcome original research articles and reviews in this Special Issue. Research areas may include (but are not limited to) the following:

- **Imaging and Sensing Techniques:** Advanced optical, sonar, and hyperspectral methods to enhance visibility and clarity in extreme environments.
- **Image Processing and Enhancement:** Development of algorithms for improving image quality, color correction, and contrast enhancement to mitigate the effects of light absorption and scattering.
- **Object Detection and Classification.**
- **Vision Systems for Autonomous Vehicles...**

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### Guest Editor

Dr. Peng Liu

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### Deadline for manuscript submissions

31 October 2025



## Symmetry

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**Impact Factor 2.2**  
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## About the Journal

### Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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### Editor-in-Chief

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