Special Issue

Symmetric/Asymmetric Study in Medical Imaging

Message from the Guest Editor

This Special Issue titled "Symmetric/Asymmetric Study in Medical Imaging" focuses on the fundamental and applied aspects of symmetry and asymmetry in medical imaging. We are pleased to invite you to contribute to this Special Issue. This Special Issue aims to bring together novel research that leverages symmetric and asymmetric properties for improved image processing, machine learning, and deep learning approaches in clinical imaging. We welcome submissions addressing theoretical models, algorithm development, and clinical applications that demonstrate the importance of symmetry or asymmetry in medical imaging workflows. Symmetry plays a pivotal role in medical image analysis, especially in anatomical structures like the brain, lungs, and breasts, where bilateral symmetry is often expected. Deviations from symmetry—whether due to disease, injury, or anatomical variability-can serve as early indicators of pathology. Asymmetric analysis is increasingly being used to improve diagnostic accuracy in neuroimaging, oncology, and organ segmentation. Advanced algorithms are now capable of detecting subtle asymmetries in PET, MRI, and CT scans...

Guest Editor

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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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