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## Asymmetric and Symmetric Studies on Medical Imaging

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### Message from the Guest Editor

Dear Colleagues,

Symmetry is ubiquitous throughout the human body, with notable examples including tubular structures whose symmetry axis is of vital importance for tracking and segmentation, and two hemispheres in the brain whose anatomical structures serve as signals for the characterization of diseases. Asymmetric and symmetric learning can serve as important prior knowledge and assist in more comprehensive studies in medical images. This Special Issue aims to study 1) how to best utilize the asymmetric and symmetric prior knowledge to handle medical imaging data, 2) how to perform asymmetric or symmetric designed machine learning algorithms, and 3) how to improve the interpretability of medical imaging algorithms with regard to asymmetric and symmetric studies.



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# Special Issue



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## 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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