Special Issue

Symmetry and Asymmetry Operators in Computer Vision

Message from the Guest Editor

Computer vision has emerged as a vibrant and rapidly evolving field over the recent decade, with operators playing a pivotal role in its development. Symmetry and asymmetry operators, in particular, have unfurled a wealth of possibilities and challenges, fueling remarkable progress in diverse applications. The inherent symmetry in natural scenes and objects has long been harnessed to simplify complex visual tasks, allowing for more efficient algorithms and models. Symmetry operators can distill essential features, reducing computational loads and enhancing the robustness of computer vision systems. For instance, in facial recognition, symmetry-based descriptors help in precisely identifying key facial landmarks, even under varying poses and lighting conditions. Conversely, asymmetry operators have carved out their field, proving invaluable in scenarios where irregularities and differences carry crucial information. In medical imaging, detecting minute asymmetrical changes in anatomical structures can be the early warning sign of diseases, making asymmetry operators indispensable for accurate diagnosis...

Guest Editor

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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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