



Symmetry in Intelligent Algorithms

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Message from the Guest Editors

Dear Colleagues,

Intelligent Algorithms, which range from machine learning to evolutionary computation, are pivotal in modern computing. However, challenges persist in understanding their intricacies, ensuring fairness, and maximizing efficiency. From swarm intelligence to evolutionary computation and machine learning, symmetry can be leveraged to optimize algorithmic behavior, streamline computational processes, and enhance the quality of solutions. Understanding and harnessing symmetry can lead to more robust, scalable, and interpretable algorithms. This Special Issue aims to explore the integration of symmetry into the design and application of intelligent algorithms. By providing a platform for sharing insights and fostering collaboration, this Special Issue seeks to advance the understanding and application of symmetry in intelligent algorithms, addressing current challenges and setting the stage for future developments.





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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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