Special Issue

Advances in Neural Network/Deep Learning and Symmetry/Asymmetry

Message from the Guest Editors

We are presently experiencing a profound utilization of Artificial Intelligence techniques across human society. At the core of this epochal shift stands the Deep Learning methodology, serving as a pivotal enabling technology. Deep neural networks thrive on the abundance of extensive datasets and accessible computing resources. Deep Learning grapples with vast volumes of data, extracting pertinent information and latent knowledge embedded within. Its pervasive influence extends across virtually all facets of contemporary society, notably revolutionizing voice and image recognition, healthcare, and, more recently, natural language processing. This Special Issue aims to provide a platform for researchers to share their latest advances in neural networks, deep learning, generative adversarial networks, symmetry/asymmetry, and their applications in solving real-world problems. Topics of interest for this Special Issue include, but are not limited to: New architectures and algorithms for neural networks and deep learning;
Advances in fuzzy neural networks, deep learning and ensemble;
Advances of symmetry/asymmetry in neural networks and deep learning;
etc.

Guest Editors

Prof. Dr. Roberto Celio Limao de Oliveira

Prof. Dr. José Alfredo F. Costa

Prof. Dr. Rafael Stubs Parpinelli

Prof. Dr. Eduardo F. Simas Filho

Deadline for manuscript submissions

closed (31 October 2025)

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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.

Editor-in-Chief

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