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# Advances in the System of Higher-Dimension-Valued Neural Networks

Guest Editors:

## Dr. Jianying Xiao

School of Electronic Information and Electrical Engineering, Chengdu University, Chengdu 610106, China

#### Prof. Dr. Shiping Wen

Australian Artificial Intelligence Institute, Faculty of Engineering and Information Technology, University of Technology Sydney, Ultimo, NSW 2007, Australia

Deadline for manuscript submissions:

closed (15 May 2024)

# **Message from the Guest Editors**

Neural networks have developed and flourished in aspects such as signal processing, image operation, pattern recognition and so on. Today, the lower-dimension-valued neural networks can no longer meet the increasing demands of the real world. Therefore, systems of higher-dimension-valued neural networks, such as complex-valued, quaternion-valued ones or octonion-valued networks, are gaining traction because they can be applied in more areas.

This Special Issue welcomes submissions of original research articles and reviews. Research areas may include (but not limited to) the following:

- (1) Dynamic analysis for fractional-order neural networks;
- (2) Dynamic analysis and scientific application for memristor-based neural networks;
- (3) Stability analysis;
- (4) Complex-valued neural networks; Quaternion-valued neural networks; Octonion-valued neural networks;
- (5) Synchronization and controllers;
- (6) Deep learning theory and applications;
- (7) Pattern recognition; Image processing;
- (8) Fuzzy logic;
- (9) Complex systems.











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#### Prof. Dr. Flavio Canavero

Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

# **Message from the Editor-in-Chief**

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