# **Special Issue**

# Bio-Inspired Approaches in Artificial Intelligence: Innovations in Machine Learning and Multi-Agent Systems

# Message from the Guest Editors

Artificial Intelligence (AI) has been significantly influenced by biological systems, leading to innovative and robust methodologies that mimic natural processes. Bio-inspired AI leverages principles from biological evolution, neural mechanisms, swarm intelligence, and ecological interactions to develop more adaptive and scalable learning algorithms. As machine learning and multi-agent systems continue to evolve, bio-inspired approaches provide promising solutions to enhance intelligence, efficiency, and autonomy in AI applications.

We are pleased to invite researchers and experts to contribute to this Special Issue, which will focus on the latest advancements in bio-inspired machine learning and multi-agent systems. We encourage high-quality submissions that present theoretical developments, empirical studies, and real-world applications in this rapidly growing field.

The scope of this Special Issue aligns with the journal's focus on Al innovations, computational intelligence, and autonomous decision-making frameworks.

### **Guest Editors**

Prof. Dr. Elhadi Benkhelifa

Prof. Dr. Brij B. Gupta

Prof. Dr. Tamara Zhukabayeva

Prof. Dr. Chirine Ghedira Guegan

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### Deadline for manuscript submissions

30 November 2025



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# Message from the Editor-in-Chief

### **Editor-in-Chief**

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