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Bio-Inspired and Biomimetic Intelligence in Robotics

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Message from the Guest Editors

The aim of this Special Issue is to highlight the roles of advanced bio-inspired and biomimetic intelligence for robotics applications and prior knowledge in achieving successes and, especially, how they contribute to the taming of the complexity of the linked domains. It includes but is not limited to the following topics:

- Behavioral and biological learning and control;
- Computational neuroscience;
- Cognitive robotics and computation;
- Evolutionary robotics, multi-robot systems, and swarm intelligence;
- Computational modeling of biological systems;
- Biomechanics, biomechatronics, and bioengineering;
- Smart materials;
- Soft robotics and sensing;
- Human–robot interaction and collaboration;
- Bio-inspired approaches for robot design, control, and optimization;
- Morphological computation and embodied intelligence;
- Bio-inspired spiking neural networks;
- Bio-inspired vision systems;
- Imitation learning, Bayesian/probabilistic learning;
- Bio-inspired legged robotics;
- Bio-inspired/biomimetic underwater robotics;
- Micro- and Nano-robotics;
- Healthcare and rehabilitation;
- Flexible electronics and piezoelectric actuators.

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