

Special Issue

Embodied AI for Soft and Bio-Inspired Robotics

Message from the Guest Editors

The integration of Embodied Artificial Intelligence (AI) with soft and bio-inspired robotics is opening new frontiers for creating adaptive, intelligent, and resilient robotic systems.

This Special Issue has a broad and inclusive scope that aims to bring together contributions that will advance the design, modeling, control, and application of embodied AI in robotics.

Potential topics include, but are not limited to, the following:

Safety and trustworthiness in embodied AI for soft and bio-inspired robotics;

Learning-based control, reinforcement learning, and adaptive decision-making in robotics;

Embodied multimodal perception (vision, tactile, proprioception, audio);

Human-robot interaction, social embodiment, and trust in autonomy;

Generative design, simulation-to-reality transfer, and digital twins for embodied systems;

Multi-agent systems, swarm robotics, and collective intelligence in embodied AI and bio-inspired systems;

Safety, ethics, and explainability in AI-driven robotics;

Self-supervised and unsupervised learning for robotic systems;

Tactile sensing, haptics, and embodied manipulation;

Energy-efficient and sustainable robotic systems.

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Deadline for manuscript submissions



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About the Journal

Message from the Editor-in-Chief

It is my great pleasure to welcome you to our open access journal, *Robotics*, which is dedicated to both the foundations of artificial intelligence, bio-mechanics and mechatronics, and the real-world applications of robotic perception, cognition and actions. The 21st century is the robotics century and intelligent robots will change our lifestyle forever. Let us work together toward the realization of intelligent robots step by step. It is great fun to create intelligent robots and imagine their practical applications. *Robotics* is now ready to serve you in the long journey towards such a goal.

Editor-in-Chief

Prof. Dr. Marco Ceccarelli

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