# **Special Issue**

# Advances in Robotic Micro/Nano Sensing and Human-Machine Interaction

## Message from the Guest Editors

The convergence of micro/nano sensing technologies and human-machine interaction is revolutionizing robotic systems, enabling machines to perceive and adapt to dynamic environments with unprecedented precision. Recent breakthroughs in embodied intelligence (EAI) and AI-enhanced robotic platforms have accelerated the development of MEMS sensors. such as piezoelectric and triboelectric devices. Additionally, human-machine interaction is evolving beyond traditional gesture and voice controls. Innovations such as brain-computer interfaces (BCIs). micro/nanofiber-based haptic feedback systems, and AR/VR-integrated tactile gloves bridge cognitive decision making with robotic execution. This Special Issue seeks cutting-edge research on micro/nano sensing architectures (e.g., optical, electrochemical, and self-powered systems), intelligent interaction frameworks and their applications in robotics, healthcare, and autonomous systems. Contributions may explore novel fabrication methods, bioinspired material designs, or Al-enhanced tactile perception systems that advance collaborative intelligence between humans and machines.

#### **Guest Editors**

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# Deadline for manuscript submissions

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#### Editor-in-Chief

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