

Special Issue

Recent Advances in Soft Miniature Robotics: Design, Fabrication, Control, and Application

Message from the Guest Editors

Soft robotics, inspired by the adaptability and resilience of biological systems, has emerged as a transformative field, facilitating the development of machines that safely interact with dynamic environments. These systems use compliant materials, biohybrid structures, and intelligent actuation mechanisms to attain unprecedented flexibility, enabling applications in medical devices, wearable technologies, environmental monitoring, and human–robot collaboration. By integrating advances in functional materials, additive manufacturing, and AI-driven control, soft robots bridge the gap between rigid automation and biological adaptability. They offer solutions for intricate tasks such as minimally invasive surgery, fragile object manipulation, and adaptive locomotion in unstructured terrains. This Special Issue aims to explore innovations in soft robotics, fabrication, control strategies, and real-world applications, realized experimentally or computationally. We welcome contributions addressing the following topics:

- **Bioinspired Design**
- **Different Actuation Systems**
- **Advanced Materials**
- **Fabrication Techniques**
- **Control and Intelligence**
- **Human–Robot Interaction**
- **Medical and Industrial Applications**

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