Special Issue

Advanced Sensing and Control Technologies for Microrobots

Message from the Guest Editors

Sensing and control technologies are critical components for the design and operation of microrobots, enabling the microrobots to interact with their environment and perform tasks effectively. There has been significant progress over the years. Researchers have developed algorithms that allow nanorobots to perform autonomous control, enabling them to navigate and operate without direct human intervention. Despite these advances, the development of sensing and control technologies for microrobots is still in its early stages. There are needs for more advanced sensing and control technologies to handle the complexities of small-scale environments, as well as for methods to miniaturize the control systems.

This Special Issue will cover the design, system integration, novel micro-mechatronics, MEMS tools and control of robots with components that operate at small scales, from micro- to nano-scale sensors and actuators. Advanced sensing and control technologies allow microrobots to perform complex tasks with greater dexterity and efficiency and open up new possibilities in fields such as medicine, manufacturing, and exploration.

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