# **Special Issue**

# Small-Scale Medical Robots: Trends and Challenges

## Message from the Guest Editor

Innovative new research on small-scale medical robotics, including micro- and nano-robots, has emerged with a promise to enable minimally invasive medical therapy in hard-to-access areas of the body. Researchers have already shown exciting applications of micro/nanorobots in targeted cargo/drug delivery. microsurgery, and thrombus ablation, among many others. Nevertheless, to facilitate the transition of the prototypes and innovations in clinical settings, this field needs to integrate interdisciplinary research efforts from engineering and the physical sciences to biomedicine. Currently, the pressing challenges that hinder the development of true medical micro/nanorobots include but are not limited to: (1) efficient locomotion at a small scale in biological media. (2) real-time imaging and control, (3) adaptable design and scalable fabrication methods, and (4) application-specific medical functions. Therefore, this Special Issue aims to present research papers, communications, and review articles that demonstrate recent advancements and solutions in any aspects of the above-mentioned research challenges. We look forward to receiving your submissions.

#### **Guest Editor**

Dr. Amirreza Aghakhani

Department of Mechanical Engineering, Newcastle University, Newcastle upon Tyne NE17RU, UK

## Deadline for manuscript submissions

closed (20 January 2023)



# **Micromachines**

an Open Access Journal by MDPI

Impact Factor 3.0 CiteScore 6.0 Indexed in PubMed



mdpi.com/si/136555

Micromachines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
micromachines@mdpi.com

mdpi.com/journal/ micromachines





an Open Access Journal by MDPI

Impact Factor 3.0 CiteScore 6.0 Indexed in PubMed



# **About the Journal**

## Message from the Editor-in-Chief

You are invited to contribute research articles or comprehensive reviews for consideration and publication in *Micromachines* (ISSN 2072-666X). *Micromachines* is published in the open access format. Research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the general public have unlimited free access to the content as soon as it is published. As an open access journal, *Micromachines* is supported by the authors or their institutes by payment of article processing charges (APC) for accepted papers. We are pleased to welcome you as our authors.

#### Editor-in-Chief

Prof. Dr. Ai-Qun Liu

- 1. Department of Electrical and Electronic Engineering, The Hong Kong Polytechnic University, Hong Kong, China
- 2. School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore 639798, Singapore

#### **Author Benefits**

### **High Visibility:**

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, dblp, and other databases.

#### **Journal Rank:**

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Mechanical Engineering)

#### **Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.2 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).

