Special Issue

Biologically Inspired Sensor and Actuator (BioSA) Platforms

Message from the Guest Editor

The basic understanding of in-vivo sensing/actuating mechanisms inspires novel ideas to addressing challenges in various life science applications including point-of-care disease diagnostics (PoCD), environmental monitoring, automation of biological and chemical laboratories, pharmacological and food industries and etc. This special issue shall consider the publication of research or review papers papers that address the challenge of developing Biologically Inspired Sensor and Actuator (BioSA) systems such as nanopore DNA sequencers or micr-robots respectively. BioSA is a multidisciplinary research approach to mimick the biological micro-environments using standard Integrated Microelectronic Circuitsuch as complementary metal oxide semiconductors (CMOS), Micro-electromechanical System (MEMS) and Microfluidic techniques. This Special Issue addressing the design, implementation, modeling, characterization, validation, and/or optimization of BioSA platforms consisiting of CMOS, MEMS or Microfluidic devices for bioengineering or biomedical engineering applications such as drug testing or other fundamental biological studies.

Guest Editor

Prof. Dr. Ebrahim Ghafar-Zadeh
BioSA Laboratory, Department of Electrical Engineering & Computer Science, York University, Toronto, ON, Canada

Deadline for manuscript submissions

closed (31 March 2021)

Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed

mdpi.com/si/45413

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

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