

IEEE BNM 2024

2024 IEEE BioNanotechnology and BioMEMS Conference

Hong Kong, China | December 2-4, 2024

Engineering in Medicine and Biology

Emerging topics: 3D/4D printing and bioprinting, Machine Learning in BNM, Microphysiological Systems, Clinical Applications of Devices track.

BNM 2024 is the premier conference of the IEEE Engineering in Medicine and Biology Society that focuses on the interface between micro/nanotechnologies and medical/life sciences. This conference highlights the latest technical and translational advances that are shaping the healthcare technologies of tomorrow, bringing together communities from across the engineering, medical and life sciences disciplines. This 2-day single track multidisciplinary conference will cover topics including but not limited to:

Micro, nano and hybrid nanofabrication

- Photolithography
- Silicon microfabrication
- Laser microfabrication
- Two photon polymerisation and other additive manufacturing techniques
- Hybrid fabrication and Hybrid printing
- Polymer microfabrication (embossing, electrospinning etc.)
- Fabrication characterisation techniques
- Packaging technologies

Microfluidics

- Design and modelling of microfluidics
- Lab on chip
- Electrofluidics
- Acoustofluidics
- Microarrays

BioMEMS

- Design and modelling of BioMEMS
- Microsensors
- Microrobotics
- Microsurgical instruments
- Drug Delivery Systems

BioNanotechnology

- Nanomaterials
- Self assembly and functionalisation of nanomaterials
- Nucleic acid nanotechnology
- Biomimetic nanotechnology
- Applications of bionanotechnology

Biomaterials

- Bioresorbable polymers
- Hydrogels
- Biocompatible polymers
- Additive manufacturing of biomaterials

Integration of cells and biomaterials with devices

- Tissue scaffolds
- Microphysiological systems technologies
- Organ on chip
- Biohybrid implants

Translation of Micro and Nanotechnologies

- Safety of Micro and Nanotechnologies in-vivo
- Testing of Micro and Nanotechnologies in-vivo
- in-vitro platforms for drug development
- Impact of fouling and the foreign body response on devices

IMPORTANT DATES

- Special Session Proposal Deadline:
Friday, August 15, 2024
- Regular Paper Submission Deadline:
Friday, July 1, 2024
- Author Notification Date:
Friday, August 15, 2024
- BNM2024 Student Travel Grants Application Deadline:
Friday, October 15, 2024
- Author Registration/Final Paper Submission Deadline:
Friday, November 1, 2024
- Conference Registration:
Friday, November 15, 2024

ORGANIZERS

General Co-Chairs

Levent Yobas

Hong Kong University of Science and Technology, China

Xingyu Jiang

Southern University of Science and Technology, China

Gerard Cummins

University of Birmingham, UK

Technical Program Co-Chairs

Jie Chen

Fudan University, China /
University of Alberta, Canada

Michelle Khine

University of California, US

Michael Hughes

University of Surrey, UK

Shirley Tang

University of Waterloo, Canada

Special Session Co-Chairs

Abhishek Dutta

University of Connecticut, US

Eyad Hamad

German Jordanian University, Jordan