BICT 2023 Technical Program at a Glance

DAY 1 (April 11)

11:30 – 13:00	Registration and lunch
13:00 – 13:10	Opening
13:10 – 14:00	Keynote: William C. Tang (National Taiwan University, Taiwan)
14:15 – 15:30	Session I
15:45 – 16:45	Session II
17:00 – 18:15	Session III
19:00 – 21:00	Banquet

DAY 2 (April 12)

9:00 – 9:10	Day 2 Opening
9:10 – 10:00	Keynote: Winston K.G Seah (Victoria University of Wellington, New Zealand)
10:15 – 11:30	Session IV
11:30 – 13:00	Lunch
13:00 – 14:15	Molecular Communication Workshop
14:20 – 14:30	Closing
15:00 – 18:00	Wrap up

Paper Presentation Guidelines

Presentation time
- 15 minutes, including QAs

Equipment available
- Projector
- Connection to a projector
- Microphone
- (Please bring your own laptop. PCs will NOT be available at presentation rooms.)

Session chairs
- Arrive early.
- Ensure your session runs strictly on schedule.
- Give a 5-minute-remaining warning to each paper presenter.

BICT 2023 Full Program

DAY 1 (April 11)

11:30 – 13:00 Registration and lunch

13:00 – 13:10 Opening

Yifan Chen (The University of Electronic Science and Technology of China, China); Tadashi Nakano (Osaka Metropolitan University, Japan)

13:10 – 14:00 Keynote:

Subnetwork Communications within the Hippocampus and High-Efficiency Computing
William C. Tang (National Taiwan University, Taiwan)

14:15 – 15:30 Session I

Chair: *Tadashi Nakano (Osaka Metropolitan University, Japan)*

High-Speed Molecular Communication in Vacuum: The Role of Velocity Filters
Sajjad, Taha (York University, Canada); Eckford, Andrew (York University, Canada)

Mechanism of Directional Fluctuations of Molecular Shuttle Movements Driven by Motor Proteins
Nitta, Takahiro (Gifu University, Japan); Sweet, (Gifu University, Japan); Kang'iri, Samuel Macharia (Gifu University, Japan)

Collective Bio-nanomachine Rotation via Chemical and Physical Interactions: A Three- dimensional Model
Wang, Jiewen (Osaka Metropolitan University, Japan); Nakano, Tadashi (Osaka Metropolitan University, Japan)

A Intelligent Nanorobots Fish Swarm Strategy for Tumor Targeting
Wen, Shanchao (Chengdu University of Technology, China); Sun, Yue (Chengdu University of Technology, China); Chen, Siyang (Chengdu University of technology, China); Chen, Yifan (University of Electronic Science and Technology of China, China)

Electromagnetic-induced Calcium Signal with Network Coding for Molecular Communications
Su, Mengnan (Chongqing University of Posts and Telecommunications, China); He, Peng (Chongqing University of Posts and Telecommunications, China)

15:45 – 16:45 Session II

Chair: *Yue Sun (Chengdu University of Technology, China)*

Reinforcement Learning for Multifocal Tumour Targeting
Hao, Yi (University of Electronic Science and Technology of China, China); Wang, Zhijing (University of Electronic Science and Technology of China, China); Liu, Minghao (University of

Electronic Science and Technology of China, China); Chen, Yifan (University of Electronic Science and Technology of China, China); Sun, Yue (University of Electronic Science and Technology of China, China)

A Novel Visualization Method of Vessel Network for Tumour Targeting: A Vessel Matrix Approach
Zhai, Mengsheng (University of Electronic Science and Technology of China, China); Liu, Minghao (University of Electronic Science and Technology of China, China); Wang, Zhijing (University of Electronic Science and Technology of China, China); Chen, Yifan (University of Electronic Science and Technology of China, China); Sun, Yue (University of Electronic Science and Technology of China, China)

Wet-laboratory Experiments and Computer Simulation of Interacting Cell Spheroids
Matsushita, Karin (Osaka Metropolitan University, Japan); Nakano, Tadashi (Osaka Metropolitan University, Japan); Koujin, Takako (National Institute of Information and Communications Technology, Japan); Kobayashi, Shouhei (National Institute of Information and Communications Technology, Japan)

Design and Implementation of a General-purpose Multicellular Molecular Communication Simulator
Saiki, Takanori (Osaka City University, Japan); Nakano, Tadashi (Osaka Metropolitan University, Japan)

17:00 – 18:00 Session III

Chair: *Douglas E. Dow (Wentworth Institute of Technology, USA)*

Instant Messaging Application for 5G Core Network
Tseng, Fan-Hsun (Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan); Wu, Tung-Yi (Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan); Chang, I-Lung (Information Engineering, National Cheng Kung University, Taiwan); Hsu, Chia-Chen (Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan); Chen, Yi-Cen (Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan)

Genetic Algorithm-based Fair Order Assignment Optimization of Food Delivery Platform
Cho, Hsin-Hung (National Ilan University, Taiwan); Lin, Guo-Yu (National Ilan University, Taiwan); Zeng, Jiang-Yi (National Ilan University, Taiwan); Yu, Chia-Mu (National Yang Ming Chiao Tung University, Taiwan); Tsai, Min-Yan (National Yang Ming Chiao Tung University, Taiwan); Chen, Chi-Yuan (National Ilan University, Taiwan)

A Novel Durable Fat Tissue Phantom for Microwave Based Medical Monitoring Applications
Särestöniemi, Mariella (University of Oulu, Finland); Dessai, Rakshita (Microelectronic research unit, University of Oulu, Finland); Myllymäki, Sami (Microelectronics research unit,Finland); Myllylä, Teemu (Health Sciences and Technology research unit, University of Oulu, Finland)

Smart Farm Teaching Aids Based on STEM Concepts
Wu, Hsin-Te (National Ilan University, Taiwan); Tseng, Kuo-Chun (National Ilan University, Taiwan)

Automatic Soil Testing Device for Agriculture

Dow, Douglas E. (Wentworth Institute of Technology, USA); Vakati, Vikranth (Wentworth Institute of Technology, USA); Rosado, Mark A. (Wentworth Institute of Technology, USA); Bohra, Nitin Singh (Wentworth Institute of Technology, USA)

19:00 – 21:00 Banquet

DAY 2 (April 12)

9:00 – 9:10   Opening

9:10 – 10:00 Keynote:

Quantum Internet
Winston K.G Seah (Victoria University of Wellington, New Zealand)

10:15 – 11:30 Session IV

Chair: *Yifan Chen (The University of Electronic Science and Technology of China, China)*

Ensembles of Heuristics and Computational Optimisation in Highly Flexible Manufacturing System
Ogunsakin, Rotimi (Alliance Manchester Business School, UK); Mehandjiev, Nikolay (University of Manchester, UK); Marin, cesar (Information Catalyst)

Management of the Medical File in Case of Emergency
Mbaye, Mouhamadou Moustapha (Universite Alioune Diop de Bambey, Senegal); Gaye, Abdourahime (University Alioune DIOP of Bambey, Senegal); Konate, Pr. Karim (University Cheikh Anta DIOP of Dakar, Senegal); Ndao, Dr. Mamour (EL Hadji Ibrahima Niasse regional hospital (CHEIN))

Features of Audio Frequency Content of Respiration to Distinguish Inhalation from Exhalation
Dow, Douglas E. (Wentworth Institute of Technology, USA); Katti, (Wentworth Institute of Technology, USA); Aveta, Federica (Wentworth Institute of Technology, USA); Basnet, Saurav (Wentworth Institute of Technology, USA)

Wearable Vibration Device to Assist with Ambulation for the Visually Impaired
Dow, Douglas E. (Wentworth Institute of Technology, USA); Robbins, Jared J. (Wentworth Institute of Technology, USA); Roberts, Kelley C. (Wentworth Institute of Technology, USA); Bannish, Seth G. (Wentworth Institute of Technology, USA); Cote, Bailey J. (Wentworth Institute of Technology, USA)

Development of Capacitive Sensors to Detect and Quantify Fluids in the Adult Diaper
Tanweer, Muhammad (Aalto University, Finland); Sepponen, Raimo (Aalto University, Finland); Tanzer, Ihsan Oguz (Aalto University, Finland); Halonen, Kari A (Aalto University, Finland)

11:30 – 13:00 Lunch

13:00 – 14:00 Molecular Communication Workshop

Chair: *Lin Lin (Tongji University, China)*

Modeling and Simulation of a Bio-inspired Nanorobotic Drug Delivery System
Zhao, Qingying (Changshu Institute of Technology, China); Lin, Lin (Tongji University, China)

Signal Transmission Through Human Body Via Human Oxygen Saturation Detection
Zhang, Chengyi (Tongji University, China); Yan, Hao (Shanghai Jiao Tong University, China); Liu, Qiang (University of Electronic Science and Technology of China, China); Yang, Kun (University of Essex, UK); Lin, Lin (Tongji University, China)

Simple ISI-Avoiding and Rate-Increasing Modulation for Diffusion-base Molecular Communications
Lin, GuoYing (University of Electronic Science and Technology of China, China); Yang, Kun (University of Essex, UK); Liu, Qiang (University of Electronic Science and Technology of China, China)

ISI Mitigation with Molecular Degradation in Molecular Communication
Jing, Dongliang (Northwest A&F University, China); Li, Linjuan (Northwest A&F University, China); Wang, Jingjing (Northwest A&F University, China)

14:00 – 14:10 Closing

15:00 – 18:00 Wrap up

Video Presentations

Monte Carlo Simulation of Arbitrium and the Probabilistic Behavior of Bacteriophages
Nieto-Chaupis, Huber (UNIVERSIDAD AUTÓNOMA DEL PERÚ, Peru)

Covid-19 Versus Monkeypox-2022: The Silent Struggle of Global Pandemics
Nieto-Chaupis, Huber (UNIVERSIDAD AUTÓNOMA DEL PERÚ, Peru)

Heterogeneous Group of Fish Response to Escape Reaction
Mwaffo, Violet (United States Naval Academy, USA)

Preliminary Considerations on Non-Invasive Home-Based Bone Fracture Healing Monitoring
Parviainen, Roope (University of Oulu, Finland); Kumpuniemi, Timo (University of Oulu, Finland); Mäkelä, Juha-Pekka (University of Oulu, Finland); Hämäläinen, Matti (University of Oulu, Finland); Sinikumpu, Juha-Jaakko (University of Oulu, Finland); Iinatti, Jari (University of Oulu, Finland)

Energy Cyber Attacks to Smart Healthcare Devices: A Testbed
Al-Waisi, Zainab (IMT school for advanced studies, Italy); Soderi, Simone (IMT School for Advanced Studies, Italy); De Nicola, Rocco (IMT School for Advanced Studies, Italy)

Cooperative Relaying in Multi-Hop Mobile Molecular Communication via Diffusion
Cheng, Zhen (Zhejiang University of Technology, China); Zhang, Zhichao (Zhejiang University of Technology, China); Sun, Jie (Zhejiang University of Technology, China)

Range Expansion in Neuro-spike Synaptic Communication: Error Performance Analysis

Singh, Abhinav (VNIT Nagpur, India); Chouhan, Lokendra (IIIT Sricity, India); Sharma, Prabhat (Netaji Subhas Institute Of Technology, New Delhi, India)