

22nd MDBS-15th BHE Technical Programme (Tentative)

The zoom link for presentations and attending the conference: <https://cuhk.zoom.us/j/93274506970>

20 November, 2024		
Time	Speakers	Titles and Affiliations
Opening Ceremony (Chair: Fa WANG)		
09:00 - 09:20	May WANG	Georgia Institute of Technology Vice President for Conferences of IEEE Engineering in Medicine and Biology Society
Plenary Session (Chair: Yuanting ZHANG)		
09:20 - 09:55	Zhanfeng CUI	“Molecular Diagnostics for Point of Care Testing (POCT)” University of Oxford
09:55 - 10:30	Yong ZHANG	“Engineered Materials and Devices for Enhanced Light-based Therapy” City University of Hong Kong
10:30 - 10:45	Tea / Coffee Break	
Keynote Session (Chair: Ting MA)		
10:45 - 11:10	Fa WANG	“General Purpose vs Special Purpose: the System-on-chip of Wearable Device in Industry World” Shanghai United Imaging Healthcare Co., LTD
11:10 - 11:35	Geng YANG	“Robot Tactile Perception: Enhancing a Safer Human-Robot Interaction” Zhejiang University
11:35 - 12:00	Fei CHEN	“Temporal Characterization and Analysis of Photoplethysmography (PPG) Signal” Southern University of Science and Technology
12:00 - 14:00	Lunch Break	
Special Session (Chair: Xiaorong DING)		
14:00 - 14:25	Fen MIAO	“Cuffless Blood Pressure Measurement: Large Models vs. Small Models” University of Electronic Science and Technology of China
14:25 - 14:50	Lisheng XU	“New Technology for Integrated Non-invasive Intelligent Diagnosis, Treatment and Rehabilitation of Cardiovascular System” Northeastern University
14:50 - 15:15	Yali ZHENG	“Cuffless and Continuous Blood Pressure Monitoring Under Dynamic Conditions” Shenzhen Technology University
Plenary Session (Chair: David CLIFTON, Yuanting ZHANG)		
15:15 - 15:50	Alison NOBLE	University of Oxford
15:50 - 16:00	Tea / Coffee Break	
Special Session (Chair: Xiaorong DING)		
16:00 - 16:25	Nan JI	“Objective Performance Evaluation of Wearable, Cuffless Blood Pressure Measuring Devices: Insights from IEEE Std 1708” The Chinese University of Hong Kong
16:25 - 16:50	Yiming ZHANG	“AI-Empowered Personalization: Tracking Blood Pressure Trends with Single-Channel PPG” The Chinese University of Hong Kong
16:50 - 17:15	Hanjie CHEN	“An Auto-calibration System for Long-term Cuffless BP Measurement Using Cross-modal Knowledge Distillation” Hong Kong Centre for Cerebro-cardiovascular Health Engineering
17:15 - 17:40	Xiaoman XING	“Towards More Reliable Blood Pressure Estimation Using Physiological Backbones” Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences
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Keynote Session (Chair: Fei CHEN)		
09:00 - 09:25	Paolo BONATO	“Digital Health and Machine Learning Techniques to Enable Precision Rehabilitation Interventions” Spaulding Rehabilitation Hospital, Harvard Medical School, Boston, USA
Special Session (Chair: Xiaorong DING)		
09:25 - 09:45	Zhan SHEN	“Uncertainty Quantification of Cuffless Blood Pressure Estimation Model” City University of Hong Kong
09:45 - 10:10	Ming HUANG	“Limitations of Cuffless Blood Pressure Estimation During Exercise by Linear Models” Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences
10:10 - 10:35	Yelei LI	“Continuous Blood Pressure Monitoring and Hypertension Risk Screening Using Smart Watch” OPPO Health

10:35 - 10:55	Ting XIANG	“A Novel Multimodal Physiological Model for the Noninvasive and Continuous Measurements of Arterial Blood Pressure” City University of Hong Kong
10:55 - 11:15	Zijun LIU	“A Novel Photo-electro-mechano Sensing Array for the Visualization and Estimation of Tonoarteriogram” City University of Hong Kong
11:15 - 11:40	Kaan Sel	“Physics-informed Neural Networks for Modeling Physiological Time Series for Cuffless Blood Pressure Estimation” Massachusetts Institute of Technology
11:40 - 12:05	Alberto AVOLIO	Macquarie University
Keynote Session (Chair: Xiaorong DING)		
12:05 - 12:30	Chenjien XU	City University of Hong Kong
12:30 - 14:00	Lunch Break	
Keynote Session (Chair: Ting MA)		
14:00 - 14:25	Wei CHEN	The University of Sydney
14:25 - 14:50	Sio Hang PUN	University of Macau
14:50 - 15:15	Ting MA	“Blood Pressure Estimation from Wearable Data: Demographic Fairness and Generalization” Harbin Institute of Technology (Shenzhen)
Plenary Session (Chair: Yuanting ZHANG)		
15:15 - 15:50	David CLIFTON	University of Oxford
Keynote Session (Chair: Ni ZHAO)		
15:50 - 16:15	Ni ZHAO	The Chinese University of Hong Kong
16:15 - 16:40	Ye LI	Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences
16:40 - 17:05	Tingrui PAN	University of Science and Technology of China

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Keynote Session (Chair: Ting MA)		
09:00 - 09:25	Quan ZHANG	Massachusetts General Hospital, Harvard Medical School, Boston, USA
09:25 - 09:50	Ho Man CHAN	“Blood Pressure Estimation from Wearable Data: Demographic Fairness and Generalization” City University of Hong Kong
09:50 - 10:15	Shaun ZHAO	“Consolidate the Digital and Intelligent Healthcare Foundation for an Inclusive Future” HUAWEI TECHNOLOGIES CO., LTD.
Invited Talks (Chair: Bing FU, Nan JI)		
10:15 - 10:40	Bing FU	City University of Hong Kong
10:40 - 11:05	Qinrong ZHANG	City University of Hong Kong
11:05 - 11:25	Xiaorong DING	University of Electronic Science and Technology of China
11:25 - 11:45	Xiaoling HU	“Mobile Exoneuromusculoskeletons for Telerehabilitation Poststroke” The Hong Kong Polytechnic University
11:45 - 13:40	Lunch Break	
Invited Talks (Chair: Lin LIN)		
13:40 - 14:00	Can CHENG	“Study on Mechanical Properties of Cardiomyocytes Based on Nanotechnology” AICARE Bay Lab at Guangdong Medical University
14:00 - 14:20	Shaocan FAN	“Research on Vital Signs Monitoring Technology and Application of Millimeter-wave Radar” AICARE Bay Lab at Guangdong Medical University
14:20 - 14:40	Lei ZHAO	“Research on Key Technologies of Multimodal Image-guided Disc Ablation Navigation” AICARE Bay Lab at Guangdong Medical University
14:40 - 15:00	Xiongfeng ZHU	“Research on Disease Classification and Posture Assessment for Chest Radiographs” AICARE Bay Lab at Guangdong Medical University
Plenary Session & Closing Remarks (Chair: Lin LIN, Yuanting ZHANG)		
15:00 - 15:35	Dimitrios I. FOTIADIS	University of Ioannina & FORTH
END		