

AIS-I3S 2024 Detailed Program

Updated: 5 August 2024

Main Conference Hall:

UTOWN AUDITORIUM 2 UT25-01-19

Meeting Rooms for Sessions:

LECTURE THEATRE 50 UT25-01-12

LECTURE THEATRE 51 UT25-01-13

LECTURE THEATRE 52 UT25-02-07

LECTURE THEATRE 53 UT25-02-08

Program Overview:

Day 1 – Thursday, 01 August					
	AUDITORIUM 2	LECTURE THEATRE 50	LECTURE THEATRE 51	LECTURE THEATRE 52	LECTURE THEATRE 53
7:30-9:00	Registration				
9:00-9:15	Opening Speech				
9:15-10:00	Plenary Speech Chwee Teck Lim: Smart Wearable Technologies for AI Healthcare and the Health Metaverse				
10:00-10:15	Move to Symposium and Workshop rooms/Tea Break				
10:15-12:00	SYM 5	WSP 2	WSP 10	WSP14	SYM 4
12:00-13:00	Lunch Break				
13:00-15:00	SYM 5	WSP 2	WSP 10	WSP 1	SYM 3
15:00-15:30	Tea Break				
15:30-18:00	SYM 5	WSP 2	WSP 10	WSP 1	SYM 3
18:00	Refreshment				

Day 2 – Friday, 02 August					
	AUDITORIUM 2	LECTURE THEATRE 50	LECTURE THEATRE 51	LECTURE THEATRE 52	LECTURE THEATRE 53
8:30-9:15	Plenary Speech Ray-Hua Horng: Sensors Applications of ZnGaO Ultra Wide Bandgap Semiconductors				
9:15-9:25	Move to Symposium and Workshop rooms				
9:25-10:15	WSP 9	SYM 2	WSP 4	SYM 5	WSP 1
10:15-10:30	Tea Break				
10:30-12:00	WSP 9	SYM 2	WSP 4	SYM 5	WSP 1
12:00-13:00	Lunch Break				
13:00-15:00	WSP 9	SYM 2	WSP 4	SYM 5	WSP 13
			WSP 6&8		
15:00-15:30	Tea Break				
15:30-18:00	WSP 9	SYM 2	WSP 6&8	SYM 5	WSP 13

Day 3 – Saturday, 03 August					
	AUDITORIUM 2	LECTURE THEATRE 50	LECTURE THEATRE 51	LECTURE THEATRE 52	LECTURE THEATRE 53
8:30-9:15	Plenary Speech Inkyu Park: Smart Environmental Monitoring by Low-Power / Self-Powered Gas Sensors and Artificial Intelligence				
9:15-9:25	Move to Symposium and Workshop rooms				
9:25-10:15	WSP 9	WSP 6&8	WSP 7	WSP 3	WSP 4
10:15-10:30	Tea Break				
10:30-12:00	WSP 9	WSP 6&8	WSP 7	WSP 3	WSP 4
12:00-13:00	Lunch Break				
13:00-15:00	Poster Session				
15:00-15:30	Gathering for Shuttle Bus				
15:30-18:30	Social Activity				
18:30	Banquet Dinner				

Day 4 – Sunday, 04 August					
	AUDITORIUM 2	LECTURE THEATRE 50	LECTURE THEATRE 51	LECTURE THEATRE 52	LECTURE THEATRE 53
8:30-9:15	Plenary Speech Chengwei Qiu: Metasurface-integrated Learning-enabled Photodetectors				
9:15-9:25	Move to Symposium and Workshop rooms				
9:25-10:15	SYM 1	WSP 3	WSP 12	WSP 7	WSP 11
10:15-10:30	Tea Break				
10:30-12:00	SYM 1	WSP 3	WSP 12	WSP 7	WSP 11
12:00-13:00	Lunch Break				
13:00-15:00	SYM 1	WSP 3	WSP 12	WSP 5	WSP 11
15:00-15:30	Tea Break				
15:30-17:05	SYM 1		WSP 12	WSP 5	WSP 11
17:15-17:35	Award Ceremony @ Auditorium 2				
17:35	Refreshment				

Notes:

1. On 01 Aug, Day 1, the registration counter will commence operations promptly at 7:30 am. The opening ceremony will start at 9:00 am.
2. The registration counter will also be operational on 31 July from 14:00 to 19:00 pm.

Symposium 1: Wearable AI Sensors			
Day 4 – Sunday, 04 August			
Chaired by Bin Yang			
9:25-9:55	S1-1	Itoh Toshihiro Keynote Speaker	Wristwatch-type device with AI-enhanced sensing functions and intuitive information display through the skin
9:55-10:15	S1-2	Kai Tao Invited Speaker	Deep-learning Enabled Biomimetic Hydrogel Electronic Skin for Human-Machine Interaction System
10:15-10:30	Tea Break		
10:30-11:00	S1-4	Jianping Li Invited Speaker	Research on blood analysis based on electrical impedance spectroscopy
11:00-11:20	S1-5	Xiangjun Liu Invited Speaker	Surface engineering for the modulation of interfacial thermal transport in micro- and nanoelectronics
11:20-11:35	S1-6	Liyun Zhen	High-Resolution, Conformable Piezoelectric Interfaces for Motion Detection and Voice Recognition
11:55-13:00	Lunch Break		
Chaired by Kai Tao			
13:00-13:30	S1-7	Chuanfei Guo Keynote Speaker	Iontronic skins and their applications in robotics and healthcare
13:30-13:50	S1-8	Wenfeng Xiang Invited Speaker	Preparation and sensing properties of flexible Ni nanowire composites
13:50-14:10	S1-9	Yan Xu Invited Speaker	Nanofluidics: Evolving and Pioneering the Future of Sensing
14:10-14:30	S1-10	Weijin Guo Invited Speaker	Fabrication of Off-stoichiometry Thiol-ene (OSTE) Microchips and Their Applications in Point-of-care Diagnostics
14:30-14:45	S1-11	Xinge Guo	Fingertip E-Skin with Holistic Touch Awareness Empowered by Zero-Biased Artificial Neurons
14:45-15:00	S1-12	Yunlong Xu	Bio-inspired e-skin for droplet sliding perception
15:00-15:30	Tea Break		
Chaired by Wenfeng Xiang			
15:30-15:50	S1-13	Quan Wen Invited Speaker	Tunable Micro-Nano Optics device and its Processing and Integration Technology
15:50-16:05	S1-14	Chia Chun Hu	Optimization of optical packaged structure for wide-angle chip-scale package LEDs
16:05-16:20	S1-15	Xi Zhao	AI-enhanced Tactile Sensors Aiming at Augmented Recognition for Intelligent Robotic Fingers
16:20-16:35	S1-16	Youm Minkyoo	Real-time construction site worker safety monitoring using IoT sensors
16:35-16:50	S1-17	Yangyang Zhuge	Investigation of Bayesian Neural Network Using Tuneable Photonic Integrated Circuits
17:15-17:35	Award Ceremony @Auditorium 2		
17:35	Refreshment		

Symposium 2: Energy Harvesting Technology for Self-Sustained AIoT System			
Day 2 – Friday, 02 August			
Chaired by Hailing Fu			
9:25-9:55	S2-1	Yuji Suzuki Keynote Speaker	Machine-learning-based Design of Amorphous Polymer Electret for Vibration Energy Harvesting
9:55-10:15	S2-2	Hailing Fu Invited Speaker	Rotational Energy Harvesting and Power Transfer for Self-Powered Sensing
10:15-10:30	Tea Break		
10:30-10:50	S2-3	Dibin Zhu Invited Speaker	Self-powered in-pipe wireless monitoring systems enabled by flow energy harvesting
10:50-11:10	S2-4	Jian Lu Invited Speaker	Advancement in Direct Electrification Devices for Distributed AI Sensors in the IoT Era
11:10-11:30	S2-5	Choi Kyungwho Invited Speaker	Functional Composites for Energy Harvesting and Smart Sensors
11:30-11:50	S2-6	Hojin Lee Invited Speaker	Energy Harvesting Metasurface-based Self-Sustained Sensor System
12:00-13:00	Lunch Break		
Chaired By Huicong Liu			
13:00-13:30	S2-7	Yunlong Zi Keynote Speaker	Tribo-photonics: an Emerging Field toward Fully-Self-Powered Wireless Sensing
13:30-13:50	S2-8	Baik Sangyul Invited Speaker	Bioinspired Adhesive Interfaces Based on Multiscale Mechanical Design for Versatile Wearable Energy Devices
13:50-14:10	S2-9	Kangqi Fan Invited Speaker	Low-frequency energy harvesting and its applications
14:10-14:30	S2-10	Younghoon Lee Invited Speaker	Ionic materials for soft devices
14:30-14:45	S2-11	Reema Altwaijri	Optimizing ITO Annealing Conditions on Silicon Wafer for Enhanced Electrostatic Dust Cleaning in Solar Panels
15:05-15:30	Tea Break		
Chaired by Dukhyun Choi			
15:30-16:00	S2-12	Jae Yeong Park Keynote Speaker	Energy harvesting and wearable patch sensor technologies for battery-free and eco-friendly smart IoT systems
16:00-16:20	S2-18	Peng Xu Keynote Speaker	Underwater triboelectric nanogenerator
16:20-16:40	S2-13	Jeong Hyung Mo Invited Speaker	Regulating and Concentrating Ion-flux/Electric-field on Electrode Materials for Energy Storage and Conversion System
16:40-17:00	S2-14	Zhengbao Yang Invited Speaker	Triboelectric junction and self-charging face masks
17:00-17:15	S2-15	Siowling Soh Invited Speaker	Ionic Molecular Fragments are the Charge Species of Triboelectrification
17:15-17:30	S2-16	Yi Xi	Pursuing high performance dielectric material of triboelectric nanogenerator
17:30-15:45	S2-17	Barnali Ghatak	Different Harvesting circuits for triboelectric nanogenerators for wearable applications

Symposium 3: Enabling Technologies for Neuromorphic Computing and Photonics Neural Networks

Day 1 – Thursday, 01 August

Chaired By Aaron Danner			
13:00-13:20	S3-1	Joshua Yang Invited Speaker	Analog computing with high precision and programmability enabled by memristors
13:20-13:40	S3-2	Kai Liu Invited Speaker	Single-gate programmable graded doping for 2D reconfigurable MoTe ₂ devices
13:40-14:00	S3-3	Yida Li Invited Speaker	BEOL Compatible Oxide Semiconductors and Memories for Integrated Circuits and Memory Centric Computing in the Post-Moore Era
14:00-14:20	S3-4	Chii-Chang Chen Invited Speaker	Design of memory based on electro-optical NAND gates
14:20-14:40	S3-5	Xuwei Feng Invited Speaker	Neuromorphic computing using 2D materials-based memtransistor
14:40-14:55	S3-6	Zian Xiao	Artificial Intelligence-Enhanced Silicon Photonic Near-Infrared Multimodal Sensor Based on Mach-Zehnder Interferometer
14:55-15:10	S3-7	Xinmiao Liu	A mid-infrared optoelectronic computing unit enabled by waveguide-integrated graphene photodetector
15:10-15:30		Tea Break	
Chaired By Chii-Chang Chen			
15:30-16:00	S3-8	Aaron Danner Keynote Speaker	Ising Computers with Chip-Based Photonics
16:00-16:20	S3-9	Linfeng Sun Invited Speaker	Memristive two-dimensional materials for in-memory/sensor computing
16:20-16:40	S3-11	Ngoc Thanh Duong Invited Speaker	Ferroelectric Retinomorphonic Hardware for In-sensor Computing
16:40-17:00	S3-12	Hui Zhang Invited Speaker	On-Chip Training of Programmable Photonic Neural Networks
17:00-17:20	S3-13	Han Wang Invited Speaker	Van der Waals Material Devices for Memory and AI Hardware Acceleration
17:20-17:40	S3-14	Chai Yang Invited Speaker	Bioinspired in-sensor computing for artificial vision
18:00		Refreshment	

Symposium 4: Haptic Technology for Future Metaverse Applications			
Day 1 – Thursday, 01 August			
Chaired by Xinge Yu			
10:15-10:35	S4-1	Joonbum Bae Invited Speaker	Wearable Interface Systems for Seamless Integration of Multiple Realities: From Metaverse to Avatar Robots
10:35-10:55	S4-2	Minglu Zhu Invited Speaker	Modular Sensing and Feedback Techniques aiming at VR and Robotic Teleoperation
Chaired by Lim Chwee Teck			
10:55-11:10	S4-3	Zhongda Sun	Multimodal tactile perception and sensation rings for VR/AR/MR applications
11:10-11:25	S4-4	Benish Jan	Wearable Haptic Interface for Contact Force Feedback using Electrotactile Stimulation
11:25-11:40	S4-5	Priscilla Hong	Empowering Smart Surfaces: Optimizing Dielectric Inks for In-Mold Electronics
11:40-13:00	Lunch Break		

Symposium 5. Advances in Intelligent Sensors and Robots for AI-Enhanced Applications - Industry 5.0, Digital Twin, Smart Homes, Healthcare, and Rehabilitation			
Day 1 – Thursday, 01 August			
Chaired by Tao Chen			
10:15-10:35	S5-1	Tao Jin Invited Speaker	Wearable Triboelectric Sensors Enabled Human-machine Interface for AIoT-Based Applications
10:35-10:55	S5-2	Zhen Wen Invited Speaker	Triboelectric Tactile Sensors
10:55-11:15	S5-3	Jaehong Lee Invited Speaker	Wireless 1D soft mechanical sensors for personalized rehabilitation
11:15-11:35	S5-4	Sanghoon Lee Invited Speaker	Imperceptible and reusable dermal surface electromyography for lower extremity neuro-prosthetic control and clinical assessment
11:35-11:50	S5-5	Youngjun Cho	Long-term stability of hybrid bionic interface and its applications
11:50-12:05	S5-6	Zhihao Ren	Aluminium Nitride-Silicon Multilayer Photonic Integrated Circuits for Near-sensor AI Computing
12:05-13:00	Lunch Break		
Chaired by Haotian Chen			
13:00-13:20	S5-7	Yingzhong Tian Invited Speaker	Multimodal Sensors Enabled Soft Robotic System Aiming at Intelligent Manipulation
13:20-13:40	S5-8	Fengxia Wang Invited Speaker	A multi-module sensing and bi-directional HMI integrating interaction, recognition and feedback system
13:40-13:55	S5-9	Tianning Chu	A Dynamic Instruction Obfuscation Method Based on LLVM
13:55-14:10	S5-10	Yongchao Zou	Miniature High-Sensitivity Vector Hydrophone Based on Micro-Opto-Mechanical Resonators
14:10-14:25	S5-11	Nuha Alekhmimi	An innovate of EIS free redox MMP-2 and MMP-9 based sensing platform for detecting ALI / ARDS and sepsis
14:25-14:40	S5-12	Hemant Kumar	Development of AI-Enabled Sensors for Detecting Adulterants in Mandi Milk Samples
14:40-14:55	S5-13	Veena Shivanna	Accident Detection and Emergency Support System for Scooters Based on Edge AI technology
14:55-15:30	Tea Break		
Chaired by Xuan Li			
15:30-15:50	S5-14	Xinkai Xie Invited Speaker	Enabling advanced gesture control of remote vehicles with an intelligent electronic glove

15:50-16:10	S5-15	Qiongfeng Shi Invited Speaker	Advances in Robotic E-Skin for Multimodal and Intelligent Perception Systems
16:10-16:25	S5-16	Nan Jiang	A Dual-Mode Wearable Sensor with Coupled Electrophysiological and Pressure Sensing
16:25-16:40	S5-17	Abhra Chowdhury	Deep-Learning based Robot Navigation using LSTM based Human Activity Sensing and Recognition
16:40-16:55	S5-18	Girolamo Di Francia	Robots for advanced Operation and Management process in photovoltaic large utilities
16:55-17:10	S5-19	Sahil Sawhney	CareTaker.ai – A Smart Health Monitoring and Caretaker Assistant System for Elder Healthcare
17:10-17:25	S5-21	Sujata Joshi	RPA to Drive Healthcare Automation
17:25-17:40	S5-22	Minami Ashikaga	Classification and Application of Microvascular Geometry Using Image Processing
18:00	Refreshment		

Day 2 – Friday, 02 August			
Chaired by Yifan Wang			
9:25-9:55	S5-23	Jin Xie Keynote Speaker	Applications of piezoelectric micromachined ultrasonic transducers in human health monitoring and human-machine interaction
9:55-10:15	S5-24	Haotian Chen Invited Speaker	Mimicking Psychophysical Dimensions of Human Touch with Soft Tactile Sensors and actuators
10:15-10:30	Tea Break		
10:30-11:00	S5-25	Zhou Li Keynote Speaker	Self-Power Cardiovascular Medical Sensors and Devices
11:00-11:20	S5-26	Cheol Song Invited Speaker	Noninvasive Diabetes Classification using DSCA and Machine Learning
11:20-11:35	S5-27	Yu-Chien Lee	Design and Application of Multimodal Intelligent Robotic Arm Grasping System Based on Generative Artificial Intelligence
11:35-11:50	S5-28	Beenish Bakhtawar	Multi-Sensing IoT Platform for Smart Leak Diagnostics
11:50-12:05	S5-29	Azmath Mubeen	Enhanced Skin Lesion Classification Using Deep Learning, Integrating with Sequential Data Analysis: A Multiclass Approach
12:05-13:00	Lunch Break		
Chaired by Sanghoon Lee			
13:00-13:20	S5-30	Hui Huang Invited Speaker	Printed Electronics and Sensors for AI Healthtech
13:30-13:50	S5-31	Yifan Wang Invited Speaker	Multimodal Artificial Skins for Soft Robotic Perception
13:50-14:10	S5-32	Bo Meng Invited Speaker	Machine Learning-Assisted Haptic Intelligence with hybridized Tactile Sensors
14:10-14:25	S5-33	Jaichandar Kulandaiaaasan Sheba	Easiness of Acceptance Metric for Gamification of Elderly Rehabilitation using Virtual Reality.
14:25-14:40	S5-34	Anna Joseph	Wearable Real-Time Obstacle Detection, Distance And Size Estimation Using A Custom Trained Yolov8 Model And Time Of Flight Technique
15:00-15:30	Tea Break		
Chaired by Jun Wu			
15:30-16:00	S1-3	Xinge Yu Keynote Speaker	Skin electronics as haptic interface for VR and human-machine interaction

16:00-16:20	S5-36	Quan Yuan Invited Speaker	Oven-Controlled Piezoelectric MEMS Resonator for Timing Applications
16:20-16:35	S5-37	Azamt Yeshmukhametov	Design and development self-powered TENG sensor embedded robotic hand with ML based signal processing
16:35-16:50	S5-38	Vishwesh Mishra	ECG Analysis Using Data Based ML Techniques to Predict Patients Heart Condition
16:50-17:05	S5-39	Alessandro Leone	Deep Transfer Learning approach in smartwatch-based fall detection system
17:05-17:20	S5-40	Gulnur Kalimuldina	Self-powered triboelectric sensors for healthcare applications
17:20-17:35	S5-41	Husnain Arshad	IoT-Based Multi-Sensing Monitoring System for MiC Modules Safety During Transportation and Assembly
17:35-17:50	S5-42	Liang Xu	AIoT-enhanced health management system using soft and stretchable triboelectric sensors for human behavior monitoring
17:50-18:05	S5-20	Sathya Duraisamy	Edge Computing and Blockchain based data security in IoMT

Workshop 1: MEMS, NEMS and Edge Applications			
Day 1 – Thursday, 01 August			
Chaired By Hemin Zhang			
13:00-13:30	W1-1	Ting Zhang Keynote Speaker	The Vacuum Interconnected Nanotech Workstation (Nano-X): A New Paradigm for Nano-fabrication
13:30-13:50	W1-2	Chen-Kuei Chung Invited Speaker	Advances in the Fabrication of Nanoporous Anodic Aluminum Oxide and Its Applications to Sensors
13:50-14:10	W1-3	Chun-Wei Tsai Invited Speaker	Advanced Light Emitting Diode Packaging with MEMS Technology
14:10-14:25	W1-5	Zhou Qiang	Improving the Performance of Quartz Crystal Resonator based Torque Sensor by Metalizing Method
14:25-14:40	W1-6	Cheng Yi Wu	Development of a High Resolution Quartz Crystal Resonator Force/Torque Sensor in Wrench Sleeve Extension Rod
15:00-15:30	Tea Break		
Chaired by Jin Xie			
15:30-16:00	W1-7	Huajun Liu Keynote Speaker	Developing high-performance piezoelectric thin films for MEMS
16:00-16:20	W1-8	Xining Zang Invited Speaker	Laser extreme manufacturing for biomedical and harsh environment Applications
16:20-16:40	W1-9	Hemin Zhang Invited Speaker	Energy Transfer in Coupled Microelectromechanical Resonators
16:40-17:00	W1-10	Sagnik Ghosh Invited Speaker	Near-zero power event-driven MEMS sensor switches: a step towards an extended battery life for Internet-of-Things (IoTs) applications
17:00-17:15	W1-11	Zhongbin Zhang	A Multi-parameter Wireless MEMS Sensing System with High Flexibility and Integration for Servo Mechanism
17:15-17:30	W1-12	Haoqi Lyu	The degenerate mode of free-standing Hf _{0.5} Zr _{0.5} O ₂ NEMS piezoelectric resonators for 1:1 internal resonance
17:50	Refreshment		

Day 2 – Friday, 02 August			
Chaired by Ting Zhang			
9:25-9:55	W1-13	Huicong Liu Keynote Speaker	MEMS based energy harvesting and sensing technology for self-sustained and intelligent systems
9:55-10:15	W1-14	Zaifa Zhou Invited Speaker	System-level modeling of MEMS and Its MEMS-IC Collaborative Design Applications
10:15-10:30	Tea Break		
10:30-11:00	W1-15	Nan Wang Keynote Speaker	Design of Piezoelectric MEMS Thin-Film Acoustic-Wave devices for RF Applications
11:00-11:20	W1-16	Cheng Tu Invited Speaker	Monolithic Integrated Multisensor Technology based on TPoS Resonators
11:20-11:35	W1-17	Eiko Nakazawa	An ultrasonic imaging sensor with a single transmitter/receiver system based on spatial encoding using selective activation of distributed electrodes
11:35-11:50	W1-18	Ryoichi Morita	Development of a Miniaturized Switching Voltage Divider Circuit Using PhotoMOS Relay for Estimation of Brain Source Localization in Brain-Machine Interface Applications
11:50-13:00	Lunch Break		

Workshop 2: Metamaterials and Nanophotonics			
Day 1 – Thursday, 01 August			
Chaired by Jinghua Teng			
10:15-10:45	W2-1	Xin Zhang Keynote Speaker	Towards dynamic metamaterials and metadevices
10:45-11:05	W2-2	Qin Chen Invited Speaker	On-chip integrated plasmonic sensors
11:05-11:25	W2-3	Prakash Pitchappa Invited Speaker	Dynamic access to the third dimension for advanced electromagnetic wave manipulation
11:25-11:40	W2-4	Cheng Xu	Revealing the origin of circular dichroism from planar chiral metamaterials via tailored near-field coupling strengths
11:40-11:55	W2-5	Hiroyuki Takei	Ubiquitous chemical sensors; low-cost high-performance nano-structured sensors for surface-enhanced Raman spectroscopy (SERS)
11:55-13:00	Lunch Break		
Chaired by Sunmi Shin			
13:00-13:30	W2-6	Jinghua Teng Keynote Speaker	Surface Enhanced Resonance Raman, Plasmon and Infrared Absorption Spectroscopy for Bio-Sensing
13:30-13:50	W2-7	Lip-Ket Chin Invited Speaker	Nanoplasmonic biosensor for multiplex molecular profiling in plasma samples
13:50-14:10	W2-8	Hyoungsoo Kim Invited Speaker	Plasmonic metasurfaces of cellulose nanocrystal matrices with quadrants of aligned gold nanorods for photothermal anti-icing
14:10-14:25	W2-9	Junsheng Xie	Metamaterial-mediated Graphene Photodetectors in Long-Wave Infrared for Polarization Detection and Chemical Sensing
14:25-14:40	W2-10	Md Islam	Design and Analysis of A Tunable Metal-Dielectric-Graphene-Dielectric-Metal Stack for Sensing Application In Visible Range
14:40-14:55	W2-11	Weixin Liu	Subwavelength-engineered suspended silicon waveguide platform for long-wave infrared gas spectroscopy

14:55-15:30	Tea Break		
Chaired By Prakash Pitchappa			
15:30-15:50	W2-12	Sunmi Shin Invited Speaker	Quantifying mid-IR radiation from a single nano-object: the next generation thermal engineering using phonon polaritons
15:50-16:05	W2-13	Kai-Chieh Chang	New scheme of electrically tunable metasurface based on dual-gate MOS structure for LiDAR sensor application
16:05-16:20	W2-14	Yinpeng Wang	THz MEMS based multifunctional reconfigurable intelligent surfaces
16:20-16:35	W2-15	Hong Zhou	Surface plasmon-phonon polaritons for de-overlapping infrared vibrations
16:35-16:50	W2-16	Yi Xu	Highly sensitive refractive index sensors based on surface exciton polariton-enhanced Goos-Hänchen and Imbert-Fedorov shifts
16:50-17:05	W2-17	Siyu Xu	Unveiling Efficient Acousto-Optic Modulation In Silicon Photonics Through Heterogeneous Integration With Lithium Niobate
17:05-17:20	W2-18	Qiqi Dai	Deep Generative Model-Assisted Terahertz Metamaterial Design for Beam Steering
17:20-17:35	W2-19	Dongxiao Li	Overcoupled plasmonic nanoantennas for broadband molecular fingerprint retrieval
17:35-17:50	W2-20	Zhihao Ren	Ultrasensitive Mid-infrared Plasmonic Nanoantenna Sensors Empowered by Machine Learning
17:50-18:05	W2-21	Jingkai Zhou	Mixture Spectroscopy Analysis using Artificial-Intelligence-Enhanced Mid-infrared Lab-on-a-Chip Integrating Graphene Photodetector
18:05	Refreshment		

Workshop 3: Sensors and IC Sensors Using CMOS MEMS and CMOS Compatible Materials			
Day 3 – Saturday, 03 August			
Chaired By Jianlin Chen			
9:25-9:55	W3-1	Mario Lanza Keynote Speaker	Hybrid 2D/CMOS microchips
9:55-10:15	W3-2	Wei-Chang Li Invited Speaker	Energy Localization for Ultra-Sensitive Sensors in CMOS-MEMS technology
10:15-10:30	Tea Break		
10:30-10:50	W3-3	Chih-Ting Lin Invited Speaker	CMOS-Based Field-Effect Biochemical Sensing Device
10:50-11:05	W3-4	Nan Wang	RF MEMS Surface Acoustic Wave sensor based on the AlN/Sapphire for High-Temperature Applications
11:05-11:20	W3-5	Jingyi Xu	SEU Array: A Fully Integrated and High-Throughput Microelectrode Array Platform for Electrochemical Sensing Applications
12:00-13:00	Lunch Break		

Day 4 – Sunday, 04 August			
Chaired by Wei-Chang Li			
9:25-9:45	W3-7	Jianlin Chen Invited Speaker	Next-Generation Inertial Sensors: Monolithic Integration for Acceleration and Angular Velocity Measurements
9:45-10:05	W3-8	Yi Zou Invited Speaker	Coupling Manipulation Enabled Ultra-Dense Waveguide Array

10:05-10:30		Tea Break	
Chaired by Nan Wang			
10:30-11:00	W3-9	Chang-Po Chao Keynote Speaker	High-Accuracy Prediction of Ventricular Tachycardia Based on PPGs Towards Effective Pre-warning of Sudden Cardiac Death
11:00-11:20	W3-10	Ying Zhang Invited Speaker	ScAlN RFMEMS Filter on RFSOI Circuitry
11:20-11:40	W3-11	Zhiqiang Mu Invited Speaker	Single Crystal Aluminum Nitride Piezoelectric Film for Acoustic Applications
11:40-11:55	W3-12	Ji Xia	A MEMS Fiber-Optic Acoustic Sensor Based on Extrinsic Fabry-Perot Interferometer
12:00-13:00		Lunch Break	
13:30-13:50	W3-13	Xudong Zou Invited Speaker	MEMS Resonator Based Reservoir Computing for Intelligent Sensors
13:50-14:10	S3-10	Kelvin Xuanyao Fong Invited Speaker	Towards a scalable energy efficient hardware accelerator for neuromorphic computing
14:10-14:35	W3-14	Hong Liu	Development of Electrochemical Sensing Mega-array on the Order of Ten Thousand and Resolution of Its Complex Signals for Applications

Workshop 4: Si Photonics for Sensing and Edge Computing			
Day 2 – Friday, 02 August			
Chaired by Yan Yang			
9:25-9:55	W4-1	Yunfeng Xiao Keynote Speaker	Ultrahigh-Q microcavity optics and photonics - sensing applications
9:55-10:15	W4-2	Daquan Yang Invited Speaker	Microcavity multimode spectral sensing and intelligent detection
10:15-10:30		Tea Break	
10:30-11:00	W4-3	Xianshu Luo Keynote Speaker	Next-generation photonic technology with multiple material system for photonic computing and sensing
11:00-11:30	W4-4	Kah Wee Ang Keynote Speaker	Neural Network Accelerator based on Compute-in-Memory Hardware
11:30-11:50	W4-5	Yongjun Huang Invited Speaker	High-precision inertial sensing based on 2D PhC cavity optomechanics
11:50-12:05	W4-6	Haoyang Sun	MEMS-enabled ultralow power consumption programmable arbitrary order mode switch
12:05-13:00		Lunch Break	
Chaired by Bowei Dong			
13:00-13:20	W4-7	Bowei Dong Invited Speaker	High-dimensional convolutional processing using an integrated photonic in-memory computing platform with continuous-time data
13:20-13:35	W4-8	Siyu Xu	Enabling Silicon-On-Lithium-Niobate Mid-Infrared Electro-Optic Modulator With Micro-Transfer Printing Technique

Day 3 – Saturday, 03 August

Chaired by Guangya Zhou and Yunfeng Xiao			
9:25-9:55	W4-9	Guangya Zhou Keynote Speaker	On-chip integrated MEMS tunable silicon nanophotonic devices and their applications
9:55-10:15	W4-10	Yiming Ma Invited Speaker	High-Performance and Generalized On-Chip Fourier Transform Spectrometer Using MEMS In-Plane Reconfiguration
10:15-10:30	Tea Break		
10:30-10:50	W4-11	Yan Yang Invited Speaker	Si photonic technology for quantum computing
10:50-11:10	W4-12	Guanyu Chen Invited Speaker	High-Speed Photonic Devices for Optical Transmission and Computing
11:10-11:30	W4-13	Niall James Tumilty Invited Speaker	P-type multilayered hexagonal boron nitride; electrical properties and pn junction device
11:30-11:45	W4-14	Ji Xia	Optomechanical Frequency Comb in a Nonlinear Cavity Optomechanical System
11:45-12:00	W4-15	Angel Diéguez	Microscopes all around
12:00-13:00	Lunch Break		

Workshop 5: Advanced Semiconductors and Heterogeneous Integration for Sensing Systems and Applications in 6G (e.g., compound semiconductors, 2D materials, chiplet, and system-in-package, etc.)			
Day 4 – Sunday, 04 August			
Chaired by Po-Liang Liu			
13:00-13:20	W5-2	Cheng-Mu Tsai Invited Speaker	Large Field-of-View Scanning in LiDAR using Computer-Generated Holography with a Spatial Light Modulator
13:20-13:40	W5-3	Jenchuan Tung Invited Speaker	Electronic, magnetic, and optical properties of the Zn _{1-0.125x} T _{0.125x} Ga ₂ O ₄ (T=Fe, Co, Ni, x=0, 1,2,3,4,5,6,7) spinel oxide: a first-principle study
13:40-14:00	W5-4	Fong-Zhi Chen Invited Speaker	Gas Sensor Technology Development and Collaboration Cases Study in TIRI, NARLabs
14:00-14:20	W5-5	Tatsuo Hasegawa	Flexible two-dimensional piezoelectric sensor array based on extremely sharp switching printed organic transistors
14:20-14:35	W5-6	Xue-Wen Liu	Numerical Analysis of Avalanche Breakdown Characteristics in InGaAs/AlGaAsSb Single-Photon Avalanche Diodes
15:00-15:30	Tea Break		
Chaired by Jen-Chuan Tung			
15:30-16:00	W5-7	Po-Liang Liu Keynote Speaker	Advancements in Gas Sensing Technologies: Surface Modifications in ZnGa ₂ O ₄ (111) and Transition Metal Doping in SnO ₂ Analyzed via Ab Initio Studies
16:00-16:20	W5-8	Chang-Hong Shen Invited Speaker	Wafer-scale Monolithic 3D Integration of 2D materials-based FETs with Si FinFET
16:20-16:40	W5-9	Chiao-Chi Lin Invited Speaker	Triggering fields of self-powered Wiegand sensors for the applications in 6G sensing and IoT networks
16:40-17:00	W5-10	Takenori Fujiwara Invited Speaker	Development of Novel Polymer Materials for Advanced Packaging -Including Cavity Formation for MEMS
17:00-17:15	W5-11	Zong-Ying Shen	Optimized Surface Modification of MOCVD-Grown ZnO film with Silver Nanoparticles for Highly Selective NO ₂ Detection
17:15-17:35	Award Ceremony @ Auditorium 2		

17:35	Refreshment
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**Workshop 6: Sensors, Implanted Energy Harvesters and Devices, and In-body IoT
Technology for Prosthesis and Electroceuticals
Workshop 8: Biosensors and Chemosensors**

Day 2 – Friday, 02 August

Chaired By Xuemin Du			
13:40-14:10	W6/8-1	Alexander Star Keynote Speaker	Carbon nanotube-based field-effect transistor biosensors
14:10-14:30	W6/8-2	Dongsheng Li Invited Speaker	Virtual Sensor Array for Identification and Selective Detection of VOCs
14:30-14:45	W6/8-3	Cheng Xu	Metamaterials-enabled ultrasensitive biomolecule sensing via enhanced vibrational circular dichroism spectroscopy
14:45-15:00	W6/8-4	Prastika Krisma Jiwanti	Electrochemical sensor of fluoroquinolone antibiotic using modified screen-printed carbon electrode
15:00-15:30	Tea Break		
Chaired by Dongsheng Li			
15:30-15:50	W6/8-6	Xuemin Du Invited Speaker	Adaptive neural interface materials and devices
15:50-16:05	W6/8-7	Sylwia Karon	The development of customizable biosensing platforms for multiplex immunodetection of various infection-related biomarkers based on DNA-directed immobilization
16:05-16:20	W6/8-8	Hong Zhou	AI-enhanced mid-infrared hyperspectral imaging of SARS-CoV using plasmon-phonon-based nanosensors
16:20-16:35	W6/8-9	Mahmoud Almasri	An impedance biosensor for rapid detection of chronic wasting disease prion protein
16:35-16:50	W6/8-10	Moon Il Kim	Highly Innovative Biosensing via Active Site Engineered Nanozymes
16:50-17:05	W6/8-11	Anwasha Mukherjee	Machine learning enabled selective determination of gases using a single electrostatically formed silicon nanowire sensor
17:05-17:30	W6/8-12	Han Yan	Investigating the expansion behavior of silicon nitride nanopores

Day 3 – Saturday, 03 August

Chaired by Ray-Hua Horng			
9:25-9:45	W6/8-13	Faezeh Arab Hassani Invited Speaker	Frontiers in Organ-assist Solutions: Pioneering Soft Device Technologies for Tomorrow's Healthcare
9:45-10:00	W6/8-14	Dongxiao Li	Tailoring light-matter interactions in metamaterials for ultrasensitive and ultra-broadband biosensing
10:15-10:30	Tea Break		
10:30-10:45	W6/8-16	Sivaramakrishnan Ganesan	Label-free Optical Biosensor for Real-time Early Detection of Multiple Autoimmune Diseases
10:45-11:00	W6/8-17	Dezhi Feng	Gel-based electrochemical DNA synthesis for quasi-solid-state data storage
11:00-11:15	W6/8-18	Kaylyn Leung	Increasing the In Vivo Stability of Electrochemical-Aptamer Based Sensors
11:15-11:30	W6/8-19	Sushama Agarwalla	Integration of AI-Enhanced PCR on Chip for Improved Pathogen Detection and Diagnosis in Bloodstream Infections
11:30-13:00	Lunch Break		

Workshop 7: Sensors for Agriculture Applications and Harsh Environment			
Day 3 – Saturday, 03 August			
Chaired by Ryutaro Maeda			
9:25-9:45	W7-1	Wataru Iwasaki Invited Speaker	Rapid analysis of blood retinol level in cattle
9:45-10:00	W7-2	Junsheng Xie	Artificial Intelligence-Enhanced Mid-Infrared Multi-Band Plasmonic Platform for Spectroscopic Analysis of Trace Volatile Organic Compound Mixtures
10:00-10:15	W7-3	Lidiya wilwet	Development Of A DNA Biosensor For The Authentication Of Pacific white shrimp (<i>Penaeus vannamei</i>) In Raw And Processed Shrimps
10:15-10:30	Tea Break		
10:30-10:45	W7-4	Luwei Wang	Development of Self-sustainable Multimodal IoT Sensing System for Plant Monitoring
10:45-11:00	W7-5	Ziqi Zhao	A Wireless Passive Multiparameter Sensor for Cryogenic Applications
11:00-11:15	W7-6	Mangaka Matoetoe	Fabrication of gold cysteine Zeoliticimidazole framework sensor for epidermal growth factor biomarker
11:15-11:30	W7-7	Yanqin Yang	A transparent electronic skin sensor for digital-twin enhanced vertical farming technology
12:00-13:00	Lunch Break		

Day 4 – Sunday, 04 August			
Chaired By Wataru Iwasaki			
9:25-9:45	W7-8	Naoki Shiraishi Invited Speaker	Development of agricultural soil sensors for data-driven variable fertilization system
9:45-10:00	W7-9	Yifei Luo	Wearable Electrophysiology Sensors for Plant Health Monitoring and Beyond
10:00-10:30	Tea Break		
Chaired by Itoh Toshihiro			
10:30-10:50	W7-10	Nogami Hirofumi Invited Speaker	Wireless photoplethysmographic sensor nodes designed for wear on a cow's tail
10:50-11:10	W7-11	Michitaka Yamamoto Invited Speaker	Development of Microbial Fuel Cells for Sustainable Power Supply of Dairy Cattle Rumen Bolus
11:10-11:25	W7-12	Haobo Qi	Tough organic hydrogels with multimodal sensing capabilities
11:25-11:40	W7-13	Daniele Giusto	Enhancing Wildfire Risk Management through Sensor-Based AI Integration in Social IoT Frameworks
12:00-13:00	Lunch Break		

Workshop 9: Flexible, Stretchable and Wearable Sensors			
Day 2 – Friday, 02 Aug			
Chaired by Hyoungsoo Kim and Joonbum Bae			
9:25-9:55	W9-1	Ying-Hao Chu Keynote Speaker	MICAtronics for flexible and transparent sensors
9:55-10:15	W9-2	Hoon Eui Jeong	Skn-mountable wearable sensors with smart adhesion properties

		Invited Speaker	
10:15-10:30	Tea Break		
10:30-11:00	W9-3	Jianyong Ouyang Keynote Speaker	Conducting Polymers for Flexible and Wearable Electronics
11:00-11:20	W9-4	Yajing Shen Invited Speaker	Magnetic Field Based Soft Tactile Sensor for Robotic Manipulation
11:20-11:40	W9-5	Wei Zhai Invited Speaker	Highly Sensitive and Mechanically Robust Hierarchical Conductive Soft Materials for Flexible Electronics
11:40-11:55	W9-6	Tian Li	Robust and Skin-Integrated In-Situ Conductive Biogel with Enhanced Detection Capability for Electrophysiological signals
12:00-13:00	Lunch Break		
Chaired by Hoon Eui Jeong			
13:00-13:30	W9-7	Swee Ching Tan Keynote Speaker	Engineering Stretchable Conducting Fiber and Film for Enhanced Sensing Capabilities
13:30-14:00	W9-8	Xuhui Sun Keynote Speaker	Self-Powered Sensing Based on Triboelectric Effect and Impedance Matching Effect
14:00-14:20	W9-9	Yan Wang Invited Speaker	Ultrathin gas-permeable electronic skins for health monitoring
14:20-14:35	W9-10	Yuyang Sun	Three-dimensional flexible electronic armor with bimodal sensory ability toward an intelligent colonoscopic continuum robot
14:35-14:50	W9-11	Hao Jin	Deep Learning-Assisted Triboelectric Whisker for Online State Estimation of An Underwater Vehicle
14:50-15:30	Tea Break		
Chaired by Inkyu Park			
15:30-16:00	W9-12	Caofeng Pan Keynote Speaker	Design of Flexible Smart Materials for Human-Machine Interactions
16:00-16:20	W9-13	Bingpu Zhou Invited Speaker	Magnetism-coupled Flexible Devices as Wearable Interactive and Sensing Interfaces
16:20-16:35	W9-14	Shuto Hayashi	Non-contact sleep stage estimation using millimeter-wave sensor
16:35-16:50	W9-15	Jyoti Jaiswal	On-skin flexible pH sensor based on a working Sb ₂ O ₃ /Sb and a reference AgIO ₃ /Ag thin film electrode for real-time sweat sensing
16:50-17:05	W9-16	Wenlong Xu	Hydrogel-based flexible wearable sensors and human-computer interaction

Day 3 – Saturday, 03 Aug			
Chaired by Chuanfei Guo			
9:25-9:55	W9-17	Sheng Xu Keynote Speaker	Wearable ultrasound technology
9:55-10:15	W9-18	Zhuo Li Invited Speaker	Flexible pressure/strain sensors and quantum tunneling effect
10:15-10:30	Tea Break		
10:30-11:00	W9-19	Xiong Pu Keynote Speaker	Mechanoionic effect-based iontronics for sensing and energy harvesting
11:00-11:20	W9-20	Yang Li Invited Speaker	Intelligent Cognitive Electronic Skin and System
11:20-11:40	W1-4	Kaichen Xu Invited Speaker	Hybrid Laser Manufacturing of Flexible and Conformal Electronics
11:40-11:55	W9-21	Xingfu Wan	A triboelectric-based proprioceptive sensor for wake classification
11:55-12:10	W9-22	Yuyao Lu	A Stretchable and Thin Laser-Induced Graphene and Hydrogel Composite for Wearable Electronics
12:10-13:00	Lunch Break		

Workshop 10: Self-Powered Sensors and Sensing Systems

Day 1 – Thursday, 01 August

Chair Kai Tao			
10:15-10:45	W10-1	Sang-Woo Kim Keynote Speaker	Powering Implantable Medical Devices and Manipulating Pathogens Based on Contact Electrification
10:45-11:05	W10-2	Ruiyuan Liu Invited Speaker	Flexible self-charging power sources
11:05-11:25	W10-3	Pengbo Wan Invited Speaker	Flexible Multifunctional Polymer Nanocomposites-Based Electronic Sensing Wearables
11:25-11:40	W10-4	Xinge Guo	Deep-Learning Empowered Self-Sustainable Caregiving Walking Stick
11:40-13:00	Lunch Break		
Chaired by Xuhui Sun			
13:00-13:30	W10-5	Chenguo Hu Keynote Speaker	Rational Strategies for Harvesting Mechanical Energy by Triboelectric Nanogenerator
13:30-14:00	W10-6	Tingrui Pan Keynote Speaker	FAST: An Iontronic Intelligence-Enabled Medical Wearable
14:00-14:20	W10-7	Xin Xia Invited Speaker	From triboelectric charge generation and discharge to high performance triboelectric nanogenerator
14:20-14:40	W10-8	Haiyang Zou Invited Speaker	Real-time monitoring of health status based on self-powered triboelectric nanogenerator for healthcare products
14:40-15:00	W10-9	Mingfa Peng Invited Speaker	Solution-processed quantum dots based heterostructure for high-performance photodetectors
15:00-15:30	Tea Break		
Chaired by Xiong Pu			
15:30-16:00	W10-10	Dukhyun Choi Keynote Speaker	Mechanical energy conversion systems and Interfacial designs for commercial IoT applications via high-performance triboelectrification
16:00-16:20	W10-11	Kai Xiao Invited Speaker	Neuro-inspired ionic computing materials and devices
16:20-16:40	W10-12	Yao Wang Invited Speaker	Flexible Thermoelectrics: From Energy Harvesting to Human-Machine Interaction
16:40-16:55	W10-13	Zhongda Sun	E-brace enabled wearable diagnosis platform for the treatment of adolescent idiopathic scoliosis
16:55-17:10	W10-14	Yina Liu	A 3D Charge Model for Triboelectric Nanogenerators
17:10-17:25	W10-15	Lingshuang Kong	Solvent-Free Ion Conductive Elastomer Thermoelectric Self-Powered Sensors
17:25-17:40	W10-16	Xuecheng Qu	Bias-free Cardiac Monitoring Capsule
18:00	Refreshment		

Workshop 11: IoT Sensors and System Integration			
Day 4 – Sunday, 04 Aug			
Chaired by Mehmet Rasit Yuce			
9:25-9:55	W11-1	Fei Wang Keynote Speaker	Energy Harvesting Devices for Self-powered Wireless Sensing Applications
9:55-10:15	W11-2	Yun-Ju Lee Invited Speaker	Wearable Inertial Sensing: Human Performance and Environmental Monitoring
10:15-10:30	Tea Break		
10:30-11:00	W11-3	Sam Ge Keynote Speaker	Spiral advancement of robotics and Artificial Intelligence
11:00-11:20	W11-4	Yang Yang Invited Speaker	Design and Development of Marine Biotelemetry Tags for Animal and Environmental Monitoring
11:20-11:35	W11-5	Dan Fang	Eigenfrequency-based Wearable Interface for One-step Reconstruction of Surface Topology through One Channel without Crosstalk
11:35-13:00	Lunch Break		
Chaired By Yun-Ju Lee and Yang Yang			
13:00-13:30	W11-6	Mehmet Rasit Yuce Keynote Speaker	Energy Harvesting and Sensing for Wearables and Smart IoT Applications
13:30-13:50	W11-7	Nagarajan Ganapathy Invited Speaker	Smart Platform to offer Evidence-based Personalized Support for Healthy and Independent Living in Private Spaces
13:50-14:05	W11-8	Sahil Sawhney	Secure IoT Device with Single Channel Communication for Resource Constrained Applications
14:20-14:35	W11-9	Cheikh Mohamed	Multi-Sensor Fusion Positioning System for Connected Vehicles
14:35-14:50	W11-10	Prithvi Krishna Chittoor	AI-Enhanced Mosquito Surveillance and Targeted Robotic Fumigation for Efficient Disease Vector Control in Urban Landscapes
14:50-15:30	Tea Break		
17:15-17:35	Award Ceremony @ Auditorium 2		
17:35	Refreshment		

Workshop 12: Advances in Sensor Applications			
Day 4 – Sunday, 04 Aug			
Chaired by Sang-Seok Lee and Changsheng Wu			
9:25-9:55	W12-1	Sang-Seok Lee Keynote Speaker	Thermoelectric Generation, Sensors and Systems for Water Quality Monitoring
9:55-10:15	W12-2	Changsheng Wu Invited Speaker	Contact-free, wireless wearable physiological sensors based on plasmonic metamaterials
10:15-10:30	Tea Break		
10:30-10:50	W12-3	Kyung-In Jang Invited Speaker	Bio-to-Byte: Stealthy Neural Recorder for primates
10:50-11:10	W12-4	Christian Pedersen Invited Speaker	Confocal LiDAR for volumetric monitoring and classification of microplastic and zoo plankton in the water column
11:10-11:25	W12-5	Anna Kurzych	Fiber-Optic Seismograph performance investigation during artificial explosions at the field test performed at the Szopowe, Poland
11:25-11:40	W12-6	Zixuan Zhang	Deep Learning Enabled Multimodal Sensory Face Masks for Decoding Lip Language and Biological Signals
11:40-11:55	W12-7	Chimwemwe Miti	Electromechanical Sensors as a Precise Needle Entry Notification System in Surgery
12:00-13:00	Lunch Break		
Chaired By Xianjie Pu			
13:00-13:20	W12-8	Monica Florescu Invited Speaker	Enhancing Biosensing Capabilities: Enzyme-Based and Nanomaterial-Modified Sensors for Molecular Analysis
13:20-13:35	W12-9	Wanjia Han	Multilayer ceramics sensing microsystem for the inside pressure and temperature monitoring of lithium battery
13:35-13:50	W12-10	Jikai Zhang	Ultra-thin Surface Acoustic Wave Sensor for Wireless Ultra-high Temperature Strain Sensing and Temperature Decoupling
13:50-14:05	W12-11	Wenning Di	New Type of High Performance Magnetoelectric Sensors Based on Piezoelectric/Magnetostrictive Materials
14:05-14:20	W12-12	Jianwei Chen	Novel pyroelectric infrared detector and its application in toxic gas monitoring for harsh environment
14:20-15:30	Tea Break		
Chaired by Monica Florescu			
15:30-15:50	W12-13	Xianjie Pu Invited Speaker	Deep learning enabled triboelectric motion and feedback sensors
15:50-16:05	W12-14	Keshav Kaushik	Understanding the Impact of Signal Quality on Remote Photoplethysmography
16:05-16:20	W12-15	Naoya Yamamoto	Completely Non-Contact Detection of NICU Neonates in Need of Care by Video Analysis
17:15-17:35	Award Ceremony @ Auditorium 2		
17:35	Refreshment		

Workshop 13: MicroTAS and Lab-on-a-chip			
Day 2 – Friday, 02 Aug			
Chaired by Chia-Hung Chen / Michinao Hashimoto			
13:00-13:30	W13-1	Chia-Hung Chen Keynote Speaker	Uncovering functional single cells through intelligent microfluidic analysis
13:30-13:50	W13-2	Kento Yamagishi Invited Speaker	Direct ink writing for flexible and stretchable microfluidic electronics
13:50-14:10	W13-3	Zhugen Yang Invited Speaker	Origami-paper microfluidic devices for point-of-care diagnostics
14:10-14:30	W13-4	Yuya Morimoto Invited Speaker	Biohybrid system formed by integration of cultured tissues and microdevices
14:30-14:50	W13-5	Moeto Nagai Invited Speaker	Image Cytometry and Targeted Light Irradiation for High-throughput Process of Single Cells
14:50-15:10	W13-6	Tiantian Kong Invited Speaker	Self-Enriching Coacervate Droplets with Selectively Diffusive Interfaces for Ultra-Sensitive Digital Bioassays
15:10-15:30	Tea Break		
Chaired by Michinao Hashimoto / Chia-Hung Chen			
15:30-16:00	W13-7	Michinao Hashimoto Keynote Speaker	Light and Extrusion-based 3D Printing for Fabricating Microfluidic Devices
16:00-16:20	W13-8	Ting-Hsuan Chen Invited Speaker	Quantitative At-home Rapid Tests Based on Microfluidic Particle Dam: Sample-to-Result on a Single Chip for Remote Healthcare
16:20-16:40	W13-9	Daisuke Yoshino Invited Speaker	Construction of microfluidic devices/lab-on-a-chip with high aspect ratio structures based on CNC micro milling
16:40-17:00	W13-10	Kerwin Kwek Zeming Invited Speaker	Translation of integrated microfluidic devices for rapid detection of severe host immune responses in clinics
17:00-17:20	W13-11	Kenta Iitani Invited Speaker	Enzyme-based biofluorometric gas sensing systems for analysis of human metabolism
17:20-17:40	W13-12	Kenichi Funamoto Invited Speaker	Microfluidic devices to control oxygen and pH for cellular experiments
17:40-18:00	W13-13	Shireen Goh Invited Speaker	Innovative Micro-bioreactor Technologies Integrating Real Time Sensors and Microfluidics

Workshop 14: Industry Forum and Commercialization of Sensors and AI-Enabled Service			
Day 1 – Thursday, 01 August			
Chaired by J. Andrew Yeh			
10:15-10:45	W14-1	Da-Jeng Yao Keynote Speaker	Next generation of Intelligent Factories
10:45-11:15	W14-2	Yu-Cheng Lin Keynote Speaker	From Science to Business – Using In Vitro Diagnostic Rapid Tests
11:15-11:30	W14-3	Yanqin Yang	Multi-Modality Deep Learning assisted Robust Mat Monitoring System for Smart Home
11:30-11:45	W14-4	Riku Saito	The Effect of Emotional Changes on Performance during a Baseball Game Based on Wearable Heart Rate Measurement
11:45-12:00	W14-5	Jinlong Xu	Triboelectric Mat Multimodal System for Sleep Pose Monitoring
12:00-13:00	Lunch Break		