



The 2nd International Conference on AI Sensors and Transducers

List of Posters

Day 2 - 31 July 2025 (Thursday) | 16:00-18:00



Name	Title
Azrul Hamzah	Engineering High Signal-to-Noise Performance in TiO ₂ /rGO FET Biosensors through Precise Control of Annealing and rGO Content
Christakis Damianou	MR compatible sensors for a focused ultrasound robotic system for brain cancer.
Minwoo Kim	Nanovesicle-based ultrasensitive biosensor for Drug discovery of CB1 receptor
Ryun Kang	Non-Contact Colorimetric Sensor for Rapid Pre-Screening of Urinary Tract Infection
Solpa Lee	On-Site Screening of Salmonella in Food Using a Polydopamine-Based Lipopolysaccharide Imprinted Polymer
Arifah Abdul Rahman	Process Optimization of Maltose-Based Microneedles for Anesthetic Delivery Using Taguchi Design
Miral Sabry	Using rational in silico design to develop peptide-based sensors for detection of bacteria
Yilin Song	PEDOT:DSS-Modified Microelectrode Arrays for Simultaneous Recording of Neural Activity in Dual Brain Regions
Siqiang Zhao	Lithium Niobate Metasurface for Flexible Color Sensor Application
OUSLIMANI Habiba	Activation of Millimeter-Wave Sensors Based On Surface Currents On 3D Periodic Gratings
Tingwei Wang	Electromagnetically Induced Transparency in Reconfigurable K-Architecture Metamaterials: Toward Multifunctional Optoelectronic Logic and Biochemical Sensing
Wenqing Zheng	Multifunctional electrically tunable split-ring resonator for dynamic modulation applications
Wenwen Yang	Split-Disk Terahertz Metamaterial with Ultra-High Polarization Ratio for Reconfigurable All-Optical Logic

Yan Gong	Thin-Film Lithium Niobate Spatial Light Modulator Based on High-Q Guided Mode Resonance
Aron Michael	2D Wide-Angle Beam Steering with a MEMS Diffraction Mirror for High-Resolution Scanning LiDAR
Tongtian Zhang	A Micromechanical Wide-Range Stiffness-Tuning Mechanism for MEMS Applications
Shih-Yi Yeh	Design and Manufacture of Suspended MEMS-Based Infrared Sensors with 3D Stacking Technology
Chun-Wei Tsai	Efficiency Enhancement and Performance Analysis of Temperature-Responsive Silicon-Based Grating Coupler
Dong Wook Kim	Preliminary test for MEMS-based wearable respiratory self-training system
Jie Liu	Simulation Analysis of MEMS Scanning-Grating-Micromirror-Integrated Quantum Cascade Laser External Cavity Systems
Po-Liang Liu	First-Principles Study of NO Co-adsorbed with Multiple Gases on SnO ₂ (110): Work Function Modulation and Sensing Potential
Danyu Mu	Extract Temperature Coefficients of LGS for High-Temperature Applications Based on the Finite Element Method
Yang Xue	Weakened phonon scattering in Schottky junction of large-area black phosphorus/PtSe ₂ films for high operating temperature broadband photodetectors
Fei Wang	Anti-interference acetone gas detection system for exhaled breath monitoring
Anshu Kashyap	DMPA-GWO++: A Dynamic Multi-Pack Adaptive Grey Wolf Optimizer for IoT Sensor Network Recovery in Smart Farms
Leandro Sacco	From single-element to multicomponent materials: A rapid high-throughput screening method to develop gas-sensing layers based on an automated dry printing technology
Akihiro Yoshifuku	High-dimensional Localized Surface Plasmon Resonance gas sensor with subpixel structure

Ginji Akinaga	Identification of mixed VOC gas species Using Surface-Enhanced Raman Scattering Sensor
Shih-Min Huang	A Portable and Recyclable Biomechanical Sensor Design based on Triboelectrification
Jian Qiu	Cylinder bluff body modified with counter-flow fin-shape rods for enhanced wind-induced vibration energy harvester
Shi Hyeong Kim	Integrated Electrostimulation Cell Culture System Powered by Chemically Modified Twistron Harvesters
Chia-Hung Chang	A wearable non-contact radar sensor with DC offset canceling for vital-sign sensing
Ming-Jong Tsai	Additive Manufacturing of Porous Structure for Flexible Sensors and Multi-objective Optimization using Taguchi-based GRA
Jia Lu	Electret-based Wearable Pressure Sensor for Human Pulse and Blood Pressure Monitoring
Dan Fang	Revisiting the “Stick-slip” Process via Magnetism-coupled Flexible Sensors with Bio-inspired Ridge Architecture
WENXUE DAI	Self-Adhesive Electronic Skin with Bio-inspired 3D Architecture for Mechanical Stimuli Monitoring and Human-machine Interactions
Shi Hyeong Kim	Self-Powered Flexible Sensors Based on Chemo-Mechanical Energy Harvesting for Organ Motion Monitoring
Ting Zhu	Topological Gradients for Metal Film-Based Strain Sensors
Quanyi Cheng	Capacitive Tactile Sensors: Morphological Engineering and Applications
Kyoung Su Park	Advanced Sensing Algorithm for Slewing Bearings Using Multi-Feature Extraction and Self-Attention
Changmin Pyo	Application of AI-Based Surrogate Models Utilizing FEA Data in Advanced Sensors for Unmanned Robots

Changmin Pyo	Sensors for Predicting Structural Failure in Support Arms for Autonomous Welding Robots with a Deep Learning Surrogate Model
Chanyoung Ju	The Design of an AI Vision-Based Recognition System for Welding in Complex Curved-Block Ship Assembly Processes
JIANBANG XIANG	A Novel Approach for Large-Scale Characterization of Residential Cooking-Generated PM with Computer Vision and Low-Cost Sensors
Seong-Cho Hong	A Study Validating an IoT-based Drug Pills Feature Point Extracting Algorithm
Alessandro Leone	An Adaptive IoT-Based Platform for CO2 Forecasting Using Generative Adversarial Networks: Enhancing Indoor Air-Quality Management with Minimal Data
Dohyeong Kim	Development of AIoT-integrated Smart Monitoring Platform for Modular Batteries in Small Electric Vehicles
Ssu-Han Chen	Smartphone-based Oil Drop Counter for Industrial Lubrication Systems
Yang Zhao	The early identification of MCI via the integration of the ensemble learning approach and the depth-sensing technique
Tomonari MASUZAKI	Development of an Integrated Satellite-Based Estimation Method for Water Transparency and Algal Beds in the Mekong River
Sang-Seok Lee	Integration of pH and DO sensor based on ISFET
Fumikazu Mizutani	Submersible Pump Fault Diagnosis Using a Simple Optical Measurement
Moldir Issabek	Implementation of Triboelectric nanogenerator-based wearable sensors for Muscle Activity Monitoring
Jiangshan Zhang	Multiple Sensors aided intelligent control in ironmaking and steelmaking