Bio4Apps 2024

The 10th International Conference on BioSensors, BioElectronics, BioMedical Devices, BioMEMS/NEMS & Applications

Program Book

December 2 -4, 2024
Toyama, Japan

The 10th International conference on BioSensors, BioElectronics, BioMedical Devices, BioMEMS/NEMS & Applications (Bio4Apps2024)

PROGRAM

December 2, 2024

9:30~10:10	**Registration**		
10:10~10:20	**Opening Session**		
Keynote1			
10:20~10:50	**K-1**	Shoji Takeuchi	Biohybrid Robotics
10:50~11:20	**Coffee Break**		
Keynote2			
11:20~11:50	K-2	Chengkuo Lee	Artificial Intelligence (AI)-Enhanced Nanosensors and Applications
11:50~12:00	**Next Bio4Apps2025 Introduction by Dr. Chengkuo Lee**		
12:00~13:30	**Lunch**		
Keynote3			
13:30~14:00	K-3	Dzung Dao	Advanced Sensing Based on Si and SiC Heterojunctions
14:00~14:10	**Break**		
Session 1			
14:10~14:30	**INV-1**	Kazuaki Sawada	Multimodal Bio-Image Sensor and its Application
14:30~14:50	**INV-2**	Toshihiro Itoh	Development of electronic boluses for long-term monitoring of the rumen environment
14:50~15:05	**OR-1A**	Jarred W.Fastier-Wooller	Circuit Design for Monitoring Enteric Methane Production
15:05~15:20	OR-**1B**	Shuhei Tadokoro	Position estimation of the application point of the contact force between an ultrasound probe and an imaging target using a contact force measurement module with multiple MEMS force sensors
15:20~15:50	**Coffee Break**		
Session 2			
15:50~16:10	**INV-3**	Satoshi Konishi	Advanced droplet array sandwiching technology for digital micro fluidics
16:10~16:25	**OR-2A**	Akihiro Isozaki	Theoretical Discussion of Impact of Sorting Latency on Throughput in Image-Activated Cell Sorting
16:25~16:40	**OR-2B**	Takuya Tsukagoshi	MEMS-based Pulse Wave Sensor using a Piezoresistive Cantilever and its Application to Blood Pressure Monitoring

16:40~16:50	**Break**		
Session 3			
16:50~17:10	INV-4	Kouji Mitsubayashi	Biofluorometric gas-sensing & -imaging of human volatile chemicals
17:10~17:25	OR-3A	Yoshikatsu Akiyama	Characterization of poly(N-acryloyl-piperidine-carboxamide) derivatives and its application to biosensor
17:25~17:40	OR-3B	Kenta Ichikawa	Intraoral Salivary Turbidity Measurement Using a Wireless Mouthguard-type Optical Sensor
17:40~17:55	OR-3C	Masaya Miyazaki	Innovative, Low-Cost On-Site Sensing Kits with High Sensitivity for Agricultural Field Applications
18:30~20:30	**Banquet**		

December 3, 2024

9:10~9:30	**Registration**		
Session 4			
9:30~9:50	INV-5	Xiaojun Han	Phospholipid assembly based artificial cells and their collective behaviors
9:50~10:05	OR-4A	Yuna Hachikubo	Water-soluble Resist Materials Using Photolithography Applicable to Biomedical Devices
10:05~10:20	OR-4B	Kenta Iitani	Visual sensing of fruit-emitted ethanol distribution for evaluation of spontaneous fermentation inside La France pears
10:20~10:50	**Coffee Break**		
Session 5			
10:50~11:10	INV-6	Van Dau	Electrohydrodynamics for drug delivery and biomedical application
11:10~11:30	INV-7	Minoru Sasaki	Lithography on non-flat 3D surface and biomimetic applications
11:30~11:45	OR-5A	Yuki Imai	Verification of Protein Detection Using a Current-Detection Surface Plasmon Resonance Sensor with a Gold Grating on Silicon
11:45~12:00	OR-5B	Rio Yamagishi	Biologically and Drug-Friendly Fabrication Technology of Collagen and Hyaluronic Acid-Derived Self-Dissolving Nanoneedle Using Gas-Permeable Mold
12:00~13:30	**Lunch**		
Poster & Coffee Break			
13:30~15:00	P-1	Kaori Yasuda	Application of Biosensors for Drug Discovery Targeting Rickets Caused by Mutations in the Vitamin D Receptor
	P-2	Jiabao Tan	Modulus-matched epidermal electrodes for highly robust sEMG-based gesture recognition

	P-3	Gaochao Cui	Analysis of Cardiopulmonary Resuscitation Compression Effectiveness Based on Electromyography
	P-4	Ei Horiuchi	Comprehensive metabolomic profiling method for disease by non-target LC/IM/MS/MS
	P-5	Tsukumo Ito	The Classification of Ear-EEG SSVEP Using Group Additive Averaging Analysis
	P-6	Keigo Kuroiwa	Mental Stress Load State Estimation Using Integrated Analysis of Group Short-Term ECG Data
	P-7	Ken-ichi Morishige	EEG cortical current estimation based on generalized inverse filter for electrode position errors on different days
	P-8	Hao Liu	Ultra-Flexible, High-Precision Bio-Bending Sensor for Catheters and Endoscopes in Minimally Invasive and Interventional Surgery
	P-9	Yuto Tsujino	A simultaneous analytical method for L- and D-amino acids in blood by LC/IM/MS
	P-10	Chouma Kurihashi	Direct detection of vitamin D analogue by MF-SALDI/MS
	P-11	Riko Takata	Detection of phospholipids and glycerolipids for SALDI/MS with metal film fabricated by mist CVD
	P-12	Miyu Kodama	Analysis of Power Transfer Efficiency in Transcutaneous Capacitive Coupling WPT for Implantable Neurostimulator
	P-13	Hiroko Yamada	Conditions for biofilm of power-generating bacteria maintaining metabolic activity in cutting fluids
	P-14	Jumpei Muramatsu	Live-cell imaging with an ECM-based branched vascular model under perfusion and stretching culture
	P-15	Hiroaki Onoe	In vitro Tube-shaped Intestinal Model with a Crypt-like Inner Surface Created by Electrolytic Microbubbles
	P-16	Ryota Ikegami	Measurement of contractile force of Human iPS cell-derived cardiomyocytes using a piezoresistive MEMS force sensor
	P-17	Taisei Kato	Band type pressure sensor for pulse wave measurement of furred mammals
	P-18	Gakuto Kagawa	Three-dimensional displacement distribution measurement using PDMS patterning and sampling moiré method
15:00~15:10	**Break**		

Session 6

15:10~15:30	INV-8	Feng Chen	Femtosecond Laser Micro-Nano Fabrication and its Application in Flexible Sensors
15:30~15:45	OR-6A	Sumito Nagasawa Chikaaki Honda	Flexible Joint Control of Insect-Inspired Robots Using Origami Structures and Compliant Hinges
15:45~16:00	OR-6B	Yuxiang Qiu	Digital beam forming enhanced simultaneous non-contact vital sign monitoring on multiple moving targets with a single FMCW radar
16:00~16:10	**Break**		

Session 7			
16:10~16:30	INV-9	Norihisa Miki	Medical Device Design from Multiple Perspectives
16:30~16:45	OR-7A	Ashenafi Elyas	Development of PtSi/p-Si Schottky Mid-Infrared Photodetector for Room-temperature Non-Invasive Blood Monitoring applications
16:45~17:00	OR-7B	Kentaro Noda	Open ended photoacoustic sensor using multiple wavelength laser for glucose measurement

17:00~17:05	**Closing Remark**

December 4, 2024

8:30~16:50	**Technical Tour & Excursion**