

# MISW 2025 Program and Contents

## 4<sup>th</sup> August (Monday)

9:00 – 9:10	<b>Opening Remarks</b> by Prof. Yoshitaka Kitamoto, Dean, School of Materials and Chemical Technology
9:10 – 9:15	<b>Photo Session</b>
9:15 – 9:45	<b>Short Presentations</b> Introduction of AOTULE Universities (5 min for each) <ol style="list-style-type: none"><li>1. National Taiwan University</li><li>2. Korea Advanced Institute of Science and Technology</li><li>3. Nanyang Technological University</li><li>4. Chulalongkorn University</li><li>5. Hanoi University of Science and Technology</li><li>6. Indian Institute of Technology Madras</li></ol>
9:45 – 9:55	<b>Short Break</b>
9:55 – 11:10	<b>Oral Presentation Session A1</b> Digital Multi-Purpose Hall Chairperson: <b>Yutaka Yamada</b>

- A1-1 **Effects of Microalgae-derived Carbon Quantum Dots on Microalgae communities**  
ZHANG HAOGUO<sup>1</sup>, CHENG SHUO<sup>1</sup>, Jeffrey S. Cross<sup>1</sup>  
<sup>1</sup>Department of Transdisciplinary Science and Engineering, Institute of Science Tokyo
- A1-2 **Preparation and Characterisation of Polyamide 11/Nanocarbon Composite Nanofibers**  
Gopalan Suresh<sup>1,2</sup>, Shunta Nakamura<sup>1</sup>, Hidetoshi Matsumoto<sup>1</sup>  
<sup>1</sup>Department of Materials Science and Engineering, Institute of Science Tokyo  
<sup>2</sup>Department of Metallurgical and Materials Engineering, Indian Institute of Technology Madras
- A1-3 **Tungsten particle deposition on metal substrates using cold spray**  
Tsubasa Sanada<sup>1</sup>, Kazuki Okada<sup>2</sup>, Masahiro Yano<sup>2</sup>, Toshihiko Matsuo<sup>2</sup>, Hiroki Akasaka<sup>1</sup>  
<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo  
<sup>2</sup>Mitsubishi Materials Corporation
- A1-4 **Thermodynamic calculations for by-product-free ZnS film fabrication by solution process**  
Katsuki Otsuka<sup>1</sup>, Yuta Kubota<sup>1</sup>, Nobuhiro Matsushita<sup>1</sup>  
<sup>1</sup>Department of Material Science and Engineering, Institute of Science Tokyo

**A1-5 Dispersion of Hydrogen Boride (HB) Sheets in Various Solvents**

Andi Mauliana<sup>1</sup>, Akira Yamaguchi<sup>1</sup>, Takahiro Kondo<sup>2,3,4</sup>, Masahiro Miyauchi<sup>1</sup>

<sup>1</sup>Department of Materials Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

<sup>2</sup>Department of Materials Science, Institute of Pure and Applied Sciences, University of Tsukuba

<sup>3</sup>The Advanced Institute for Materials Research, Tohoku University

<sup>4</sup>Hydrogen Boride Research Center and Tsukuba Research Center for Energy Materials Science, Institute of Pure and Applied Sciences and R&D Center for Zero CO<sub>2</sub> Emission with Functional Materials, University of Tsukuba

**9:55 – 11:10 Oral Presentation Session B1**

Collaboration Room

Chairperson: **ZHANG ZHUOHAO**

**B1-1 Measuring the Virtual Touch: Customer Experience of Avatar-mediated Service Encounters in Physical Environments**

Mohamed Al Shaikh<sup>1</sup>, Dai Senoo<sup>1</sup>

<sup>1</sup>Department of Industrial Engineering and Economics, School of Engineering, Institute of Science Tokyo

**B1-2 Promoting Shokuiku Using an AI-Integrated Virtual Reality Game**

Dong Wang<sup>1</sup>, Nopphon Keerativoranan<sup>1</sup>, Jeffrey S. Cross<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B1-3 Optimization of Modular Autonomous Electric Vehicle System**

Chaemin Na<sup>1</sup>, and Toru Seo<sup>2</sup>

<sup>1</sup>Civil and Environmental Engineering, Korea Advanced Institute of Science and Technology

<sup>2</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

**B1-4 User-friendly output model for controlling interfaces**

Kai Higuchi<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**B1-5 Analyzing the Impact of Control System Design on Usability in Robotic Surgery with Consideration of Hand Dominance**

Junnosuke Ichihara<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**11:10 – 11:20 Short Break**

11:20 – 12:35 **Oral Presentation Session A2**

Digital Multi-Purpose Hall

Chairperson: **GUO CHEN**

**A2-1 Drying Shrinkage Mitigation for Fly Ash-Based Geopolymer Mortar Through Microstructure Transformation**

Horhok Lim<sup>1</sup>, Mitsuyasu Iwanami<sup>1</sup>, Kazuhide Nakayama<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

**A2-2 Verification and Redrawing of the Phase Diagram of the CaO-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub> System**

XIAO HONGYI<sup>1</sup>, Takashi Watanabe<sup>1</sup>, Hayashi Miyuki<sup>1</sup>

<sup>1</sup>Department of Materials Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

**A2-3 Magnetic Property Optimization of Electrodeposited CoPt Nanopillars for 3D Domain Wall Motion Memory**

Zihhao Dai<sup>1</sup>, Tongshuang Huang<sup>1</sup>, Shigeki Nakagawa<sup>1</sup>

<sup>1</sup>Department of Electrical and Electronic Engineering, School of Engineering, Institute of Science Tokyo

**A2-4 Monte Carlo simulation Flow characteristics of molten bismuth containing of Ag by MC simulation**

Yamamoto Rintaro<sup>1</sup>, Yamazaki Takahisa<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**A2-5 Analysis of the Influence of Paper Properties on Paper Dimensional Change Behaviour during Cooling Process after Fusing in Electrophotographic Process**

Keigo Furushima<sup>1</sup>, Kimiharu Yamazaki<sup>2</sup>, Shinichi Kuramoto<sup>3</sup>, Kazuyoshi Fushinobu<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Ricoh Company, Ltd

<sup>3</sup>Former Tokyo Institute of Technology

11:20 – 12:35 **Oral Presentation Session B2**

Collaboration Room

Chairperson: **Bo WANG**

**B2-1 Signal Distortion and ToA estimation for localization in airport Multilateration systems**

Lizardo Arias<sup>1</sup>, Nopphon Keerativoranan<sup>1</sup>, Junichi Takada<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B2-2 Thermal imaging technology using ptychography**

Yugo Marutani<sup>1</sup>, Bochao Wang<sup>1,2</sup>, Kazuyoshi Fushinobu<sup>1</sup>, Byunggi Kim<sup>1</sup>

<sup>1</sup>Institute of Science Tokyo

<sup>2</sup>Zhejiang University

**B2-3 Numerical Analysis of Shrinkage and Creep Effects on Shear Connectors in Steel Concrete Hybrid Structures**

YIWEN WANG<sup>1</sup>, Nobuhiro Chijiwa<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

**B2-4 Rational design of PhaC for Enhanced Catalysis and Polymer Diversity**

Nitish Jeyaraj Suja<sup>1,2</sup>, Sivashankari M Ramamoorthi<sup>1</sup>, Takeharu Tsuge<sup>1</sup>, Rupali Reddy<sup>2</sup>, Sierin Lim<sup>2</sup>

<sup>1</sup>Department of Materials Science and Engineering, Institute of Science Tokyo

<sup>2</sup>School of Chemistry, Chemical Engineering and Biotechnology, Nanyang Technological University

**B2-5 Fabrication of bio-actuators to mimic the iris dilator muscle**

Hinata Arakawa<sup>1</sup>, Kenta Shimba<sup>2</sup>, Yoshitaka Miyamoto<sup>3</sup>, Tohru Yagi<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Graduate School of Frontier Sciences, The University of Tokyo

<sup>3</sup>National Center for Child Health and Development

12:35 – 13:55 **Lunch Break**

13:55 – 14:55 **Poster Session**

Media Hall

**P-1 Toward Sustainable Energy Futures for Mongolia: An Integrated Assessment Model-based Scenario Analysis**

Khukhsuvd Batsaikhan<sup>1</sup>, Tatsuya Wakeyama<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**P-2 Computation of Defect-Induced Eigenfrequencies in Two-Dimension Elastic Half Plane Using BEM and Nonlinear Eigensolvers**

Yan Yang<sup>1</sup>, Taizo Maruyama<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

**P-3 Modeling residents' attitudes toward wind power facilities using ABM: The case of Wakkanai City**

Shaoyu Chen<sup>1</sup>, Wakeyama Tatsuya<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**P-4 Structural ordering of stimuli-responsive molecular units using triptycene-based supramolecular scaffolds**

Jiatong Yu<sup>1,2</sup>, Tomoya Fukui<sup>1,2,3</sup>, Takanori Fukushima<sup>1,2,3</sup>

<sup>1</sup>Laboratory for Chemistry and Life Science, Institute of Integrated Research, Institute of Science Tokyo

<sup>2</sup>Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

<sup>3</sup>Research Center for Autonomous Systems Materialogy (ASMat), Institute of Integrated Research, Institute of Science Tokyo

**P-5 Bi-Chealated Silicon Quantum dots for Cell Imaging**

Ya-Han Chan<sup>1</sup>, Yuta Aida<sup>2</sup>, Hayato Laurence Mizuno<sup>1</sup>, Yasutaka Anraku<sup>1</sup>, Shinji Ando<sup>3</sup>, Toshiyuki Ikoma<sup>1</sup>

<sup>1</sup>Department of Materials Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

<sup>2</sup>Department of Biomaterials, Faculty of Dental Science, Kyushu University

<sup>3</sup>Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

**P-6 Building automated research pipelines in social sciences**

Daichi Ishii<sup>1</sup>

<sup>1</sup>Department of Technology and Innovation Management, School of Environment and Society, Institute of Science Tokyo

**P-7 Synthesis of Crystalline Oxide Nanoparticles to Catalyze Oxygen Evolution Reaction**

Ariel Lee<sup>1</sup>, Dr. Takeshi Aihara<sup>2</sup>, Dr. Keiju Wachi<sup>2</sup>, Dr. Keigo Kamata<sup>2</sup>

<sup>1</sup>Department of Chemistry & Biochemistry, University of California

<sup>2</sup>Materials and Structures Laboratory, Institute of Integrated Research, Institute of Science Tokyo

**P-8 Quantification of Tensile and Bending Properties of Thin Polymer Films: A Framework for Analyzing Polymer Film Compression Behavior**

Jiayi Yu<sup>1</sup>, Kyohei Hisano<sup>1</sup>, Atsushi Shishido<sup>1</sup>

<sup>1</sup>Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

14:55 – 15:05 **Short Break**

15:05 – 16:20 **Oral Presentation Session A3**

Digital Multi-Purpose Hall

Chairperson: **Chaemin Na**

**A3-1 Biodegradability of Polyesteramides Based on 2-Pyrone-4,6-Dicarboxylic Acid**

Wei Xin Tan<sup>1,2</sup>, Yijie Jin<sup>2</sup>, Atsushi Isobe<sup>2</sup>, Tsuyoshi Michinobu<sup>2</sup>

<sup>1</sup>School of Materials Science and Engineering, Nanyang Technological University

<sup>2</sup>School of Materials and Chemical Technology, Institute of Science Tokyo

**A3-2 Synthesis of non-fullerene acceptor polymers for organic solar cells**

Kotoki Takahashi<sup>1</sup>, Naomasa Yomogita<sup>1</sup>, Xingyu Yang<sup>1</sup>, Atsushi Isobe<sup>1</sup>, Tsuyoshi Michinobu<sup>1</sup>

<sup>1</sup>Department of Materials and Chemical Technology, Institute of Science Tokyo

**A3-3 Controlling Osteoblast Function on Hydroxyapatite Scaffolds via Co-substitution of Iron(III) and Silicate**

Sihao Lei<sup>1</sup>, Hyato Laurence Mizuno<sup>1</sup>, Yasutaka Anraku<sup>1</sup>, Toshiyuki Ikoma<sup>1</sup>

<sup>1</sup>Department of Material Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

**A3-4 Synthesis and Optimization of Bismuth and Strontium co-substituted Apatite Nanocrystal as Radiosensitizer for Cancer Treatment**

Jing Er Tan<sup>1</sup>, Hayato Laurence Mizuno<sup>1</sup>, Yasutaka Anraku<sup>1</sup>, Toshiyuki Ikoma<sup>1</sup>

<sup>1</sup>Department of Materials Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

**A3-5 Fabrication of CsPbBr<sub>3</sub> Absorption Layer via Close-Spaced Sublimation for High Efficiency CsPbBr<sub>3</sub> Solar Cells**

Yuejie TAN<sup>1</sup>, Shinsuke Miyajima<sup>1</sup>

<sup>1</sup>Department of Electrical and Electronic Engineering, School of Engineering, Institute of Science Tokyo

15:05 – 16:20 **Oral Presentation Session B3**

Collaboration Room

Chairperson: **Woratat LEELAWORASET**

**B3-1 Endoscopic Super-Resolution Ultrasound Imaging for Pancreatic Applications in Clinical Practice**

Junseok AN<sup>1</sup>, Naohiro SUGITA<sup>2</sup>, Masanori KOBAYASHI<sup>3</sup>, Hiromune KATSUDA<sup>4</sup>, Tadahiko SHINSHI<sup>2</sup>

<sup>1</sup>Department of Mechanical Engineering, Institute of Science Tokyo

<sup>2</sup>Institute of Integrated Research, Institute of Science Tokyo

<sup>3</sup>Department of Gastroenterology, Soka Municipal Hospital

<sup>4</sup>Department of Gastroenterology and Hepatology, Institute of Science Tokyo

**B3-2 A compact and low-frequency ultrasound transducer designed for minimally invasive delivery of biopharmaceuticals through skin**

Shinya Yamamoto<sup>1</sup>, Naohiro Sugita<sup>2</sup>, Tadahiko Shinshi<sup>2</sup>

<sup>1</sup>Department of Mechanical Engineering, Institute of Science Tokyo

<sup>2</sup>Institute of Integrated Research, Institute of Science Tokyo

**B3-3 Proposal for a hands-free laparoscope operation system using brain wave analysis**

Naoya Yamashita<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**B3-4 Flood Hazard Assessment in the Chao Phraya River: A Foundation of Risk Management**

Nothrattha Chinnasri<sup>1</sup>, Shinjiro Kanae<sup>2</sup>, Saito Tomoki<sup>2</sup>

<sup>1</sup>Department of Environmental and Sustainable Engineering, Faculty of Engineering, Chulalongkorn University

<sup>2</sup>Department of Civil and Environmental Engineering, School of Engineering, Institute of Science Tokyo

**B3-5 Research on DNA nanotubes that enable ion transport by ultrasound irradiation**

Shota Yoshizaki<sup>1</sup>, Zugui Peng<sup>1</sup>, Kenta Shimba<sup>2</sup>, Yoshitaka Miyamoto<sup>3</sup>, and Tohru Yagi<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, Institute of Science Tokyo

<sup>2</sup>Department of Transdisciplinary Sciences, School of Frontier Sciences, University of Tokyo

<sup>3</sup>Department of Maternal-Fetal Biology, National Research Institute for Child Health and Development

16:20 – 16:30 **Short Break**

16:30 – 17:45 **Oral Presentation Session A4**

Digital Multi-Purpose Hall

Chairperson: **Zain Issa Falah AbuHassan**

**A4-1 Soft Robot-Assisted Liquid Insertion for Enteral Ventilation: Circulation of Oxygenated Fluid and Visualization of Flow**

Hokuto Sakata<sup>1</sup>, Tadahiko Shinshi<sup>1</sup>, Toshio Takayama<sup>1</sup>, Tasuku Fujii<sup>2</sup>, Yosuke Yoneyama<sup>1,3</sup>, Takanori Takebe<sup>1,3</sup>

<sup>1</sup>Institute of Science Tokyo

<sup>2</sup>Nagoya University

<sup>3</sup>Osaka University

**A4-2 Development of an Intuitive Teleoperation System with a Robotic Arm for Pouring Tasks**

Fumiya Kato<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**A4-3 Teleoperation of a Robotic Arm for Disassembly Tasks**

Ryoya Owada<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**A4-4 Proposal for Intuitive Operation of Gastrointestinal Endoscopes**

Tomoya Nakashima<sup>1</sup>, Satoshi Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**A4-5 Simulating a Flapping-Wing Robotic Penguin: An Interactive Exploration of Kinematics and Hydrodynamics Model**

Numan Amri Maliky<sup>1</sup>, Hiroto Tanaka<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**A4-6 Environmental Disclosure Quality and Stock Liquidity**

Ziqi Wang<sup>1</sup>, Yosuke Kimura<sup>1</sup>, Kotaro Inoue<sup>1</sup>

<sup>1</sup>Department of Industrial Engineering and Economics, School of Engineering, Institute of Science Tokyo

16:30 – 18:00 **Oral Presentation Session B4**

Collaboration Room

Chairperson: **QiuHong Huang**

**B4-1 Grid-Based Wireless Channel Emulation: Preliminary Evaluation on Offline Intra-Grid Path Association and Clustering for Channel Interpolation**

Auksarapak Kietkajornrit<sup>1</sup>, Nopphon Keerativoranan<sup>1</sup>, Jun-ichi Takada<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B4-2 Optimization of Binary Reflectors for Coverage Enhancement in mmWave Bands**

Cong Minh Hieu Le<sup>1</sup>, Nopphon Keerativoranan<sup>1</sup>, Hang Song<sup>1</sup>, Andrey S. Andrenko<sup>1</sup>, Jun-ichi Takada<sup>1</sup>

<sup>1</sup>School of Environment and Society, Institute of Science Tokyo

**B4-3 Development of mmWave Passive Channel Sounder using Software-Defined Radio for Integrated Sensing and Communication**

Shiqi Liu<sup>1</sup>, Hang Song<sup>2</sup>, Nopphon Keerativoranan<sup>1</sup>, Jun-ichi Takada<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, Institute of Science Tokyo

<sup>2</sup>Research Institute for Semiconductor Engineering, Hiroshima University

**B4-4 Detection of Motor Imagery by Real Signal Mother Wavelet**

Taiki TERANISHI<sup>1</sup>, Akima CONNELLY<sup>2</sup>, Phurin PANGPONG<sup>2</sup>, Zhuohao ZHANG<sup>1</sup>, Tohru YAGI<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B4-5 Neural Connectivity in Auditory Perception and Imagery for Speech BCIs**

Zhuohao Zhang<sup>1</sup>, Haruto Hamada<sup>1</sup>, Phurin Rangpong<sup>2</sup>, Akima Connelly<sup>2</sup>, Tohru Yagi<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B4-6 Adaptive Neural Network for Inverse Variational Inequalities**

Phung The Anh<sup>1</sup>, Ken Kobayashi<sup>1</sup>

<sup>1</sup>Department of Industrial Engineering and Economics, School of Engineering, Institute of Science Tokyo



## 5th August (Tuesday)

10:00 - 11:00 | **Oral Presentation Session A5**  
Tejima Seiichi Conference Room  
Chairperson: **Numan Amri Maliky**

**A5-1 Crowd-shipping via Train Networks: Optimising Parcel Delivery by Part-timers and Commuters under Varying Occupancy Levels**

QiuHong Huang<sup>1</sup>, Shinya Hanaoka<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**A5-2 A comparative study of global supply chain resilience in the aircraft industry**

Yutaka Yamada<sup>1</sup>, Masako Ikegami<sup>1</sup>

<sup>1</sup>Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo

**A5-3 Understanding delay propagation trees in air transport networks**

Woratat LEELAWORASET<sup>1</sup>, Kashin Sugishita<sup>1</sup>, Shinya HANAOKA<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**A5-4 Observation of droplet deposition with viscoelastic fluid**

Tomoki Sakurai<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

10:00 - 11:00 | **Oral Presentation Session B5**  
Royal Blue Hall  
Chairperson: **Wei Xin Tan**

**B5-1 Proposal of Arranged Column Design and Optimization of the Flow Circuit for a Bioartificial Liver System via Machine Learning-augmented CFD Simulation**

Dingxi Chen<sup>1</sup>, Naohiro Sugita<sup>2</sup>, Tadahiko Shinshi<sup>2</sup>, Kentaro Ichimura<sup>3</sup>, Yosuke Yoneyama<sup>4</sup>, Maki Kumagai<sup>4</sup>, Takanori Takebe<sup>4</sup>

<sup>1</sup>Department of Mechanical Engineering, Institute of Science Tokyo

<sup>2</sup>Institute of Integrated Research, Institute of Science Tokyo

<sup>3</sup>Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

<sup>4</sup>Graduate School of Medicine, The University of Osaka

**B5-2 CFD Analysis of Dynamic Pressure-Induced Stiffness in a Pediatric Magnetically Levitated Ventricular Assist Device**

Khushi Rele<sup>1</sup>, Tadahiko Shinshi<sup>2</sup>

<sup>1</sup>Department of Mechanical Engineering, Indian Institute of Technology Madras

<sup>2</sup>Institute of Integrated Research, Institute of Science Tokyo

**B5-3 Predicting Hydrogen Permeability in Palladium Alloys Using Machine Learning**

Eric KOLOR<sup>1</sup>, Koichi MIKAMI<sup>1</sup>, Jeffrey S. CROSS<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B5-4 Structure-based Adsorption Affinity of PFAAs on Integrated Hydrophobic-electrostatic Surfaces: DFT-D and Molecular Dynamics Simulations**

Thilini Maheshika Herath<sup>1</sup>, Manabu Fujii<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

11:00 - 11:10 **Short Break**

11:10 - 12:10 **Oral Presentation Session A6**

Tejima Seiichi Conference Room

Chairperson: **SIHAO LEI**

**A6-1 Object detection for Advanced-Driver-Assistance-Systems using 5G/6G sensing**

S.J.Karthik<sup>1</sup>, J.Takada<sup>1</sup>, N.Keerativoranan<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**A6-2 Turbo Delay-Doppler Channel Estimation of Orthogonal Time Frequency Space Signal for Integrated Sensing and Communication**

Rong Tang<sup>1</sup>, Nopphon Keerativoranan<sup>1</sup>, Tad Matsumoto<sup>2</sup>, Jun-ichi Takada<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society

<sup>2</sup>School of Information Science, Japan Advanced Institute of Science and Technology

**A6-3 Effect of Tire-Derived Pollutants on Soil Health: Enzymatic and Microbial Responses**

Snehal Wasnik<sup>1</sup>, Shou Cheng<sup>1</sup>, Jeffery Scott Cross<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**A6-4 Evaluation of the Influence of Key Actors Who Changed Opinion within the Organization Using a Dynamics Model**

Naoki Suyama<sup>1</sup>, Masako Ikegami<sup>1</sup>

<sup>1</sup>Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo

11:10 - 12:10 **Oral Presentation Session B6**

Royal Blue Hall

Chairperson: **Yuejie TAN**

**B6-1 Synthesis of SrTiO<sub>3</sub> with Oxygen Vacancies for Photocatalytic Degradation of Methylene Blue in Wastewater Treatment**

M. Rafli Habibillah<sup>1,2</sup>, Tomotaka Sugimura<sup>2</sup>, Akira Yamaguchi<sup>2</sup>, Masahiro Miyauchi<sup>2</sup>

<sup>1</sup>Chemical Engineering, Faculty of Engineering, Chulalongkorn University

<sup>2</sup>Department of Materials Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo

**B6-2 Dispersion analysis of Guided Waves under Radiation Boundary Conditions using perfectly matched layers**

Ruigang QIN<sup>1</sup>, Taizo Maruyama<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of Environment and Society, Institute of Science Tokyo

**B6-3 Influence of Eutrophic Reservoirs on Dissolved Organic Matter and its Photochemical Reactivity in Rivers**

Guo CHEN<sup>1</sup>, Zhongyu GUO<sup>2</sup>, Ye ZHANG<sup>1</sup>, Chihiro YOSHIMURA<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, School of environment and society, Institute of Science Tokyo

<sup>2</sup>IRCELYON, CNRS, France

**B6-4 Measuring the effect of cognitive dissonance induced by waste presented as art on improving perceptions of waste**

Bo Wang<sup>1</sup>, Vinayak Gupta<sup>1</sup>, Fumitake Takahashi<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

12:10 – 13:30 **Lunch Break**

13:30 - 14:30 **Plenary Lecture**

**Turning Materials Informatics into Real-World Solutions – A Startup Journey –**

Mitsuru Irie<sup>1</sup>

<sup>1</sup>MI-6 Ltd.

14:30 - 14:40 **Short Break**

14:40 - 15:40 **Oral Presentation Session A7**

Tejima Seiichi Conference Room

Chairperson: **Horhok Lim**

**A7-1 Study on economic security legislation - A case of military strategic material**

Akifumi Kokabu<sup>1</sup>, Masako Ikegami<sup>1</sup>

<sup>1</sup>Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo

**A7-2 International collaborative development and domestic development of defense equipment: Typhoon and Rafale**

Genyo Takahashi<sup>1,2</sup>

<sup>1</sup>Department of Innovation Science, School of Environment and Society, Institute of Science Tokyo

<sup>2</sup>Education Division, JASDF Commond and Staff College

**A7-3 Enhancing Cross-Cultural Understanding of Waste Bin Pictograms: A Study on Foreign Users' Recognition**

HUANG XIAOYUN<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**A7-4 Conditions under which Nash equilibrium is Pareto efficient and stability analysis in a non-cooperative system with altruism**

Minh Pham Hong<sup>1,2</sup>, Tomohisa Hayakawa<sup>1</sup>

<sup>1</sup>Department of Systems and Control Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Department of Automatic Control, School of Electrical and Electronic Engineering, Hanoi University of Science and Technology

**14:40 - 15:40 Oral Presentation Session B7**

Royal Blue Hall

Chairperson: **ZIQI WANG**

**B7-1 Evaluation of Comfortableness in Urban Street Environment**

Wun-Sin You<sup>1,2</sup>, Yasunori Muromachi<sup>1</sup>

<sup>1</sup>Department of Civil Engineering, School of Engineering, Institute of Science Tokyo

<sup>2</sup>Department of Civil Engineering, School of Engineering, National Taiwan University

**B7-2 Unconventional Articulation of Behaviour on Horizontal Surfaces in Urban Contemporary Japanese Houses**

Zain AbuHassan<sup>1</sup>, Yoshiharu Tsukamoto<sup>1</sup>

<sup>1</sup>Department of Architecture and Engineering, School of Environment and Society, Institute of Science Tokyo

**B7-3 Do spatial, social and cognitive proximity affect Consumers' Ethical Coffee Purchasing Behavior? A comparative study between Colombia and Japan**

Manuela Parra<sup>1</sup>, Naoya Abe<sup>1</sup>

<sup>1</sup>Department of Transdisciplinary Science and Engineering, School of Environment and Society, Institute of Science Tokyo

**B7-4 Control of a robot arm for a laparoscopic simulation**

A. Chalmeau<sup>1</sup>, J. Hichihara<sup>1</sup>, S.Miura<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, School of Engineering, Institute of Science Tokyo

**15:40 - 15:50 Short Break**

**15:50 – 16:50 Game**

**16:50 – 18:20 Award Ceremony & Banquet**