MISW 2017 Program and Contents

8th August (Tue.)

8:30-9:00	**Registration** *@Registration desk, West 9 Building*
9:00-9:10	**Opening Remark** *@Digital Multi-purpose Hall, West 9 Building* by Prof. Yoshinao Mishima, President of Tokyo Institute of Technology
9:10-9:25	**Photo Session** *@Digital Multi-purpose Hall*
9:25-9:30	Short Break
9:30-10:10	**Short Presentation** *@Digital Multi-purpose Hall* Introduction of Overseas Universities (5 min for each) 1. Nanyang Technological University, Singapore 2. Korea Advanced Institute of Science and Technology 3. Hanoi University of Science and Technology 4. National Taiwan University 5. University of Malaya 6. Bandung Institute of Technology 7. The Hong Kong University of Science and Technology
10:10-11:10	**Poster Presentation** *@Collaboration Room, West 9 Building*

P-1 **Last Mile Distribution in Humanitarian Logistics under Stochastic and Dynamic Consideration**
Meilinda F.N. Maghfiroh, Shinya Hanaoka
Department of Transdisciplinary Science and Engineering

P-2 **Competitive Dynamics among Cross Regional Hub Ports for the Container Transhipments: Case Study for the Port of Colombo**
Chathumi Kavirathna, Tomoya Kawasaki, Shinya Hanaoka, Takuma Matsuda
Department of Transdisciplinary Science and Engineering

P-3 **Effects of Oxygen on Furfuryl Alcohol Curing and Mechanical Strength of Furan Resin**
Ketkanok Aphichartsuphapkhajorn, Jun Nakai, Yoshihiko Arao, and Masatoshi Kubouchi
Department of Chemical Science and Engineering

P-4 **A Constant Amplitude OFDM for Wireless Communications**
Liu Yingqing, Kazuhiko Fukawa
Department of Communications and Computer Engineering

P-5 **A study on Arduino based Structural Control System**
Jeonghee Kim, In-Ho Kim, Shi-Baek Park, Hyung-Jo Jung
Department of Civil and Environmental Engineering

P-6 **Study on flexural performance of precast steel-encased concrete piles**
Shreya Thusoo, Susumu Kono, Hiromu Tanaka, Hidekazu Watanabe
Department of Civil and Environmental Engineering

P-7 **Research and Simulate the Heat Transfer in Diesel Engine Piston Cooling Galleries**
Nguyen Van Khang, Hoang Thi Kim Dung
Department of Aeronautical and Space Engineering

P-8 **Tool path optimization for an 8-axis robotic milling system**
Leandro Batista da Silva, Jiang Zhu and Yoshioka Hayato
Department of Mechanical Engineering

P-9 **The Preparation of Polystyrene/Polyaniline Core/Shell Particles and Polystyrene/Polyaniline/Silver Composites**
Bo-Cheng Huang, Wen-Bin Liau
Department of Materials Science and Engineering

P-10 **Synthesis of Clustered Fe_3O_4-chitosan Nanocomposite for Magnetic Hyperthermia**
Maria Emma Villamin, Yoshitaka Kitamoto
Department of Materials Science and Engineering

P-11 **Design of a Rectangular Patch Antenna for Radio Propagation Measurement**
Xin Du, Takuichi Hirano, Kentaro Saito, Jun-ichi Takada
Department of Transdisciplinary Science and Engineering

P-12 **Apply Binarization to CNN-based Seq2seq**
Yen-Ru Chin, Hiroki Nakahara
Department of Electrical and Electronic Engineering

P-13 **Potential of sewage sludge as a biomass resource for bioenergy production in Zimbabwe**
Andile Blessings Maqhuzu, Kunio Yoshikawa, Fumitake Takahashi
Department of Transdisciplinary Science and Engineering

11:10-11:20 | Short Break

11:20-12:20 | **Plenary Lecture by Mr. Norio Murakami** *@Digital Multi-purpose Hall*
"Industry 4.0 developed with IoT, BigData, and AI"

12:20-13:30 Lunch Break

13:30-14:30 **Oral Presentation Session A1** *@Room W934, West 9 Building*
Transdisciplinary Science and Engineering
Presentation 11 min / Q&A 3 min for each

A1-1 **Ultrasonic pre-treatment for hydrothermal liquefaction of microalgae: Enhancing the bio-oil yield and heating value**
Mohammad Saber, Fumitake Takahashi, Kunio Yoshikawa
Department of Transdisciplinary Science and Engineering

A1-2 **Development of Low Cost Indoor Localization System by using Raspberry Pi**
Junming Jiang, Azril Haniz, Junichi Takada
Department of Transdisciplinary Science and Engineering

A1-3 **Dynamic Channel Modeling through Ray Tracing Simulation for Millimeter Wave High-Speed Vehicular Communication System**
Kinh Hung Pham, Kentaro Saito, Junichi Takada
Department of Transdisciplinary Science and Engineering

A1-4 **5G Spectrum Candidates beyond 6 GHz: A Simulation of Jakarta Environment**
Ahmad Salaam Mirfananda, Muhammad Suryanegara
Department of Transdisciplinary Science and Engineering

13:30-14:30 **Oral Presentation Session B1** *@Room W935, West 9 Building*
Chemical Science and Engineering
Presentation 11 min / Q&A 3 min for each

B1-1 **The effect of anatase TiO2 nanosheets with exposed {001} facets introduced in compact titania layer of planer perovskite solar cells**
Mitsuyoshi Takusari, Masato Maitani, Syuntaro Tsubaki, Eiichi Suzuki, Yuji Wada
Department of Chemical Science and Engineering

B1-2 **Photoconductivity of Polyimide Films Containing Diphenyl-Benzidine Structure**
Chiaki Takemasa, Teppei Chino, Sho Fukuchi, Shigeo Asai, Ryohei Ishige, Shinji Ando
Department of Chemical Science and Engineering

B1-3 **DEM-CFD modelling for dehydrogenation of methylcyclohexane on Pt/γ-Al2O3 catalyst**
Lapizar, Maria Precious Paula Suarnaba, Ookawara, Shinichi, Yoshikawa, Shiro
Department of Chemical Science and Engineering

B1-4 **Selective filling with carbon in expanded pores of interlayer-expanded MWW-type zeolite for microwave heating**
Takahiro Sakatsume, Masaki Okamoto
Department of Chemical Science and Engineering

14:30-14:45 Short Break

14:45-16:00 **Oral Presentation Session A2** *@Room W934*
Transdisciplinary Science and Engineering
Presentation 11 min / Q&A 3 min for each

A2-1 **Frequency Characteristics of Propagation Channels for 5G Wireless System**
Panawit Hanpinitsak, Kentaro Saito, Wei Fan, Jun-ichi Takada, Gert F. Pedersen
Department of Transdisciplinary Science and Engineering

A2-2 **Temporal-spatial Information of Sea-breeze Inland Penetration Derived from Himawari-8 Satellite Images**
Muhammad Rezza Ferdiansyah, Manabu Kanda, Atsushi Inagaki, Alvin Galang Christopher Varquez
Department of Transdisciplinary Science and Engineering

A2-3 **12GHz-Band Channel Sounder Development by utilizing Vector Network Analyzer and Radio-on-Fiber Technology**
Kosuke Murakami, Kentaro Saito, Jun-ichi Takada
Department of Transdisciplinary Science and Engineering

A2-4 **Outdoor-to-Indoor Radio Propagation Measurement by using an Unmanned Aerial Vehicle in 2.4GHz band**
Qiwei Fan, Kentaro Saito, Junichi Takada
Department of Transdisciplinary Science and Engineering

A2-5 **GPSDO based Synchronization Method for Channel Sounder on SDR Platform**
Deepak Gautam, Kentaro Saito and Jun-ichi Takada
Department of Transdisciplinary Science and Engineering

14:45-16:00 **Oral Presentation Session B2** *@Room W935*

Mechanical Engineering

Presentation 11 min / Q&A 3 min for each

B2-1 **Multi-physics analysis of the thermal behavior of inductor by using open-source software**

Mengyi Zheng, Byunggi Kim, Hong Duc Doan, Kazuyoshi Fushinobu

Department of Mechanical Engineering

B2-2 **Evaluating the Impact of Magic-based Inspiration Cards on Product Design Ideas**

M. Jiang, L.Haritaipan, R. Garhwal, T. Watanabe and C. Mougenot

Department of Mechanical Engineering

B2-3 **Development of Measurement System for Liquid Contact Angle Based on Analytical Solution**

Du Zhenglin, Yoji Iguchi, Pasomphone Hemthavy and Kunio Takahashi

Department of Mechanical Engineering

B2-4 **Focus control of compound lens by using the fluidic optical device**

Shunya Kiyokawa, Byunggi Kim, Kazuyoshi Fushinobu

Department of Mechanical Engineering

B2-5 **Exploring the Impact of Power Distance on Co-design Workshops in East Asia**

Kaho Kagohashi, Yuki Taoka, Robin Lhommeau, Hisashiro Egashira, Feng Li, Celine Mougenot

Department of Mechanical Engineering

9th August (Wed.)

9:30-10:45 **Oral Presentation Session C1** *@Room W934*

Transdisciplinary Science and Engineering

Presentation 11 min / Q&A 3 min for each

C1-1 **Radio Propagation Prediction Framework in An Agriculture Environment**
Tossaporn Srisooksai, Jun-ichi Takada and Kentaro Saito
Department of Transdisciplinary Science and Engineering

C1-2 **Estimation the Amount of Oil Palm Trees Production Using Remote Sensing Technique**
Anggoro Cahyo Fitrianto, Arif Darmawan, Koji Tokimatsu, M. Sufwandika
Department of Transdisciplinary Science and Engineering

C1-3 **Parametric-based Channel Model for MIMO System Performance Prediction**
Dwi Joko Suroso, Kentaro Saito, Jun-ichi Takada
Department of Transdisciplinary Science and Engineering

C1-4 **Atmospheric Impacts of climate change and urbanization to megacity, Jakarta**
Yinglan Qin, Alvin C.G Varquez, Manabu Kanda
Department of Transdisciplinary Science and Engineering

C1-5 **Modulation Performance for Visible Light Communications**
Ek-amorn Shinwasusin, Chalie Charoenlarpnopparut, Prapun Suksompong, Attaphongse Taparugssanagorn
Department of Transdisciplinary Science and Engineering

9:30-10:45 **Oral Presentation Session D1** *@Room W935*

Materials Science and Engineering

Presentation 11 min / Q&A 3 min for each

D1-1 **Crystallisation behavior of Mould Flux**
Kodai Sasaki, Shunsuke Takahashi, Rie Endo, Takashi Watanabe, Miyuki Hayashi, Masahiro Susa
Department of Materials Science and Engineering

D1-2 **Design optimization of donor-acceptor semiconducting polymers for thin film transistor applications**
Sultan Otepov, Yang Wang, Tsuyoshi Michinobu
Department of Materials Science and Engineering

D1-3 **Exploration of TiO2-MnOx-CeOy catalyst for cleaning up water**
Mimori Shiohara, Toshihiro Isobe, Sachiko Matsushita, Akira Nakajima
Department of Materials Science and Engineering

D1-4 **RAFT Synthesis of Fluorine-Containing Block Copolymers for Porous Membrane Preparation**
Sho Kurimoto, Alvin Chandra and Teruaki Hayakawa
Department of Materials Science and Engineering

D1-5 **Development of Porous Silk Fibroin Scaffold for Cartilage Tissue Engineering**
Untung Ari Wibowo, Hermawan Judawisastra, Anggraini Barlian
Department of Materials Science and Engineering

10:45-11:00 Short Break

11:00-12:00 **Oral Presentation Session C2** *@Room W934*
Civil and Environmental Engineering
Presentation 11 min / Q&A 3 min for each

C2-1 **Shear behavior of RC tapered beams with stirrups**
Teng SHUO, Takuro NAKAMURA, Junichiro NIWA
Department of Civil and Environmental Engineering

C2-2 **Spectrum-based Pushover Analysis Method for Estimating Seismic Demand of Tall Buildings**
Y. Liu, J. S. Kuang, H. Sakata
Department of Civil and Environmental Engineering

C2-3 **Effectiveness of Steel Drainage Pipes Against Seepage-induced Failure of River levee**
Jenisha Singh, Kazuki Horikoshi, Akihiro Takahashi
Department of Civil and Environmental Engineering

C2-4 **Distributions of Viscous Damping Coefficients for Retrofit Existing RC Buildings**
Gobirahavan Rajeswaran and Anil C.Wijeyeckrema
Department of Civil and Environmental Engineering

11:00-12:00 **Oral Presentation Session D2** *@Room W935*
Materials Science and Engineering
Presentation 11 min / Q&A 3 min for each

D2-1 **Development of advaced cement for low-carbon construction system**
Toshinari Mukai, Etsuo Sakai
Department of Materials Science and Engineering

D2-2 **Novel phase-only-light modulator mode based on pre-transitional effect of antiferroelectric liquid crystal**
Zhengyu Feng, Ken Ishikawa
Department of Materials Science and Engineering

D2-3 **Methane Conversion into Valuable Chemicals Using Photon Energy**
Singgih Wibowo, Akira Yamaguchi, Masahiro Miyauchi
Department of Materials Science and Engineering

D2-4 **Relation between Iron Oxide Activities and Silicate Network Structures on the Na2O-SiO2-FeOx Slags**
Kenya Horita, Gen Watanabe, Rie Endo, Masahiro Susa, Miyuki Hayashi
Department of Materials Science and Engineering

12:00-13:00 Lunch Break

13:00-14:00 **Oral Presentation Session E1** *@Room W934*
Civil and Environmental Engineering
Presentation 11 min / Q&A 3 min for each

E1-1 **Removal of Organic Pollutants Using Magnetic Carbon Nanotubes-TiO2 Nanocomposite**
Dion Awfa, Anindityo Patmonoaji, Mohammed Ateia and Chihiro Yoshimura
Department of Civil and Environmental Engineering

E1-2 **Mechanics of Honeycomb Structure Based on Homogenization**
P. Sam and A.C. Wijeyewickrema
Department of Civil and Environmental Engineering

E1-3 **A Fare-reward Scheme to Manage Peak-hour Transit Congestion**
Tang, Yili
Department of Civil and Environmental Engineering

E1-4 **Mitigating the Earthquake Induced Damage to RC Infill Walls by using Rocking Wall Piers**
Rejina Joshi, Anil C. Wijeyewickrema
Department of Civil and Environmental Engineering

13:00-14:00 **Oral Presentation Session F1** *@Room W935*

Materials Science / Electrical and Electronic Engineering

Presentation 11 min / Q&A 3 min for each

F1-1 **The effect of H_2 gas of reduction and melting behavior of sintered ore in at blast furnace**

H. Yamaguchi, T. Watanebe and M. Hayashi

Department of Materials Science and Engineering

F1-2 **Determination of thermal diffusivity at high temperatures of FeO scale grown on iron by electrical-optical hybrid pulse-heating method**

Yuanru Yang, Hiromichi Watanabe, Mitsutoshi Ueda, Miyuki Hayashi, Masahiro Susa, Rie Endo

Department of Materials Science and Engineering

F1-3 **Study of Carrier Behavior in Organic-Inorganic Hybrid Perovskite Materials**

Lei Lei Yin Win, Takaaki Manaka

Department of Electrical and Electronic Engineering

F1-4 **Direct probing of the electric field in tin perovskite layer using electric-field-induced optical second-harmonic generation measurement**

Taishi Noma, Dai Taguchi, Takaaki Manaka, Mitsumasa Iwamoto

Department of Electrical and Electronic Engineering

14:00-14:15 Short Break

14:15-15:15 **Oral Presentation Session E2** *@Room W934*

Chemical Science and Engineering

Presentation 11 min / Q&A 3 min for each

E2-1 **Alternately coating pore walls of mesoporous silica with silica and alumina layers**

Masatoshi Miura and Masaki Okamoto

Department of Chemical Science and Engineering

E2-2 **Preparation of Iongel Catalyst for Biodiesel Production**

Tomoki Yasuda, Shinichi Ookawara, Shiro Yoshikawa

Department of Chemical Science and Engineering

E2-3 **In situ observation of the catalysts under microwave irradiation by Raman spectroscopy**

Tomoki Matsuzawa, Shuntaro Tsubaki, Eiichi Suzuki, Yuji Wada

Department of Chemical Science and Engineering

E2-4 **Volumetric Thermal Expansion Behaviors of Thermally-Crosslinkable Polyimide Films**
Mari Harada, Tomohiro Okada, Ryohei Ishige, Shinji Ando
Department of Chemical Science and Engineering

14:15-15:15 **Oral Presentation Session F2** *@Room W935*
Electrical and Electronic Engineering
Presentation 11 min / Q&A 3 min for each

F2-1 **Time-Mode Analog-to-Digital Converter (ADC) for Scaling Technologies**
Jian Sen Teh, Liter Siek, Akira Matsuzawa
Department of Electrical and Electronic Engineering

F2-2 **Sectionalizing Strategy for Power System Restoration using Heuristic Technique**
D.N. A. Talib, H. Mokhlis, M. S. A. Talip, T. Nanahara and K. Kawabe
Department of Electrical and Electronic Engineering

F2-3 **W/D-Band Frequency Doubler for High Data-rate Communication Systems**
Ibrahim Abdo, Korkut Kaan Tokgoz, Takuya Fujimura, Kenichi Okada, and Akira Matsuzawa
Department of Electrical and Electronic Engineering

F2-4 **Optimization of Arc-less Hybrid DC Switches based on the Stabilization of Electric Contact Phenomenon**
Mo Chen, Yuta Yamada, Shungo Zen, Koichi Yasuoka
Department of Electrical and Electronic Engineering

15:15-15:30 Short Break

15:30-16:30 **Oral Presentation Session E3** *@Room W934*
Chemical Science and Engineering
Presentation 11 min / Q&A 3 min for each

E3-1 **Development of Novel Structured Packed Bed Reactor for Methane Steam Reforming Application**
Anthony Basuni Hamzah, Shinochi Ookawara, Shiro Yoshikawa
Department of Chemical Science and Engineering

E3-2 **Improved reactivity of chemical reactions by microwaves**
Kousuke Furusawa, Shuntaro Tsubaki, Eiichi Suzuki, Yuji Wada
Department of Chemical Science and Engineering

E3-3 **Design of Novel Highly Fluorescent Polyimides for Polarized Fluorescence Emission**
Keita Yanase, Kazuyuki Tanaka, Kenta Kanosue, Ryohei Ishige, Shinji Ando
Department of Chemical Science and Engineering

E3-4 **Additive Manufacturing of Ultra-thin Heat Sinks and Performance Evaluation**
Ayaka Saito, Shinichi Ookawara and Shiro Yoshikawa
Department of Chemical Science and Engineering

15:30-16:30 **Oral Presentation Session F3** *@Room W935*
Information and Communications Engineering
Presentation 11 min / Q&A 3 min for each

F3-1 **Exploration of Hardware-Implementation-Aware Amoeba-SAT Solver**
Nguyen Hoang Ngoc Anh, Yuko Hara-Azumi
Department of Information and Communications Engineering

F3-2 **An Implementation of an Object Tracking System Using Multiple Drones**
Yoonpyo Koo, Daewoo Kim, Kyunghwan Son, Jihwan Bang, Hyunho Yeo, Jaehyung Ha, Kyungsoo Park, Dongsu Han, and Yung Yi
Department of Information and Communications Engineering

F3-3 **Efficient Data Clustering by Architectural Perforation**
Fransiscus Marcel Satria, Yuko Hara-Azumi
Department of Information and Communications Engineering

F3-4 **A Scalable FPGA Implementation of Amoeba-SAT Solver**
Kazuaki Hara, Yuko Hara-Azumi
Department of Information and Communications Engineering

16:30-17:00 Short Break (Move to 1st Co-op Cafeteria)

17:00-18:00 **Group Work** *@1st Co-op Cafeteria*

18:00-20:00 **Banquet and Award Ceremony** *@1st Co-op Cafeteria*