The 20th International Symposium on Advanced Technology (ISAT-20)

November 23-24, 2021
Kogakuin University of Technology and Engineering, Japan

1. Main theme of ISAT-20: Advanced Technologies for SDGs

Topics of ISAT-20 include, but not limited to:

1. Biochemistry and Food Science
2. Synthetic Chemistry and Medicinal Chemistry
3. Information and Communications Technology (ICT)
4. Energy and Transportation
5. Advanced Functional Materials
6. Architectural and Civil Engineering
7. Intelligent and Secure Systems
8. Education and Human Studies
9. Environmental Chemistry and Chemical Engineering
10. Simulation Science, Measurement Science, Computational Science
11. Electric Engineering and Electronic Engineering
12. Mechanical Engineering

The symposium program will consist of key-note lectures, oral presentations, and lightning talk sessions.

Language: English will be the official language during the conference.
Conference Venue: The conference will be held by online
Conference website: https://www.kogakuin.ac.jp/isat/

2. Presentation Guidelines

Presentation Type	Presentation Time
Keynote Sessions	35 minutes (LIVE)
Oral Sessions	15 minutes (LIVE)
Lightning Talk Sessions	5 minutes (pre-recorded)

Live Keynote and Oral Presentations Sessions:

The time allocated to each presentation will be:

Key-note: 35 minutes talk and 5 minutes for discussion
Oral Session: 15 minutes talk and 5 minutes for discussion.

Lightning Talk Sessions:

5 minutes pre-recorded presentation will be open to the conference website.
The presenters are required to communicate with attendees via online.

3. General Schedule

◆November 23rd

Japan (JST)	Taiwan, Philippines (TST) (PTS)	Vietnam (ICT)						
11:45	10:45	9:45	LOG-IN AND ROLL CALL					
12:00	11:00	10:00	OPENING CEREMONY **Prof. Shinichiro Ito** President, Kogakuin University of Technology and Engineering **Prof. Lu, Deng-Maw** President, Southern Taiwan University of Science and Technology **Prof. Doan Quang Vinh** Rector, The University of Danang - University of Science and Technology **Prof. Jose D. Camacho, Jr.** Chancellor, University of the Philippines Los Baños PHOTO SESSION					
12:30	11:30	10:30	KEYNOTE PRESENTATION 1 Why do animals have their shape? - Movement and shape - **Prof. Shinichiro Ito** Department of Mechanical Engineering, Faculty of Engineering President of Kogakuin University of Technology and Engineering, Japan					
13:15	12:15	11:15	KEYNOTE PRESENTATION 2 Case study of using artificial intelligence technology to construct a smart hospital **Prof. Chang, Wan-Jung,** Department of Electronic Engineering, Director of Medical and Intelligence Technology Research Center (MIT Center) Southern Taiwan University of Science and Technology, Taiwan					
14:00	13:00	12:00	BREAK, LOG-IN AND ROLL CALL					
			ORAL PRESENTATION, PARAREL SESSHON					
				1	**2**	**3**	**4**	**5**
14:10	13:10	12:10	**ORAL1**	BFS1	EEE1	ECC1	SSM1	ME1
14:30	13:30	12:30	**ORAL2**	BFS2	EEE2	ECC2	SSM2	ME2
14:50	13:50	12:50	**ORAL3**	BFS3	EEE3	ECC3	SSM3	ME3
15:10	14:10	13:10	**ORAL4**	SC1	EEE4	ECC4	SSM4	ME4
15:30	14:30	13:30	BREAK, LOG-IN AND ROLL CALL					
			LIGHTNING TALK SESSION, PARAREL SESSHON					
				1	**2**	**3**	**4**	**5**
15:45	14:45	13:45	**LIGHTNING1**	AFML 1-5	EEEL 1-5	ICTL 1-5	SSML 1-4	MEL 1-4
16:15	15:15	14:15	**LIGHTNING2**	AFML 6-9	EEEL 6-10	ICTL 6,8,9,11,12	SSML 5-8	MEL 5-7
16:45	15:45	14:45	BREAK					
17:00	16:00	15:00	**LIGHTNING3**	BFSL 1-4	EEEL 11-15	ICTL 7,10,13,14	EHSL 1-3	ACEL 1-6
17:30	16:30	15:30	**LIGHTNING4**	BFSL 5-8	EEEL 16-19	ICTL 15-18 ISSL 1	ETL 1-3	ECCL 1-4

◆**November 24th**

Japan (JST)	Taiwan, Philippines (TST) (PTS)	Vietnam (ICT)						
11:45	10:45	9:45	LOG-IN AND ROLL CALL					
12:00	11:00	10:00	KEYNOTE PRESENTATION 3 Development of BK-Anticovid Robot **Dr. VO Nhu Thanh and Dr. LE Hoai Nam** Mechatronic Division, Faculty of Mechanical Engineering, University of Science and Technology, The University of Da Nang, Viet Nam					
12:45	11:45	10:45	KEYNOTE PRESENTATION 4 **Honorable Danilo L. Concepcion** President, University of the Philippines					
13:30	12:30	11:30	BREAK, LOG-IN AND ROLL CALL					
			ORAL PRESENTATION, PARAREL SESSHON					
				1	**2**	**3**	**4**	**5**
13:40	12:40	11:40	**ORAL5**	AFM1	ACE1	ICT1	EHS1	ME5
14:00	13:00	12:00	**ORAL6**	AFM2	ACE2	ICT2	EHS2	ME6
14:20	13:20	12:20	**ORAL7**	AFM3	ACE3	ICT3	EHS3	ME7
14:40	13:40	12:40	**ORAL8**	AFM4	ACE4	ICT4	EHS4	ME8
15:00	14:00	13:00	BREAK					
15:20	14:20	13:20	**ORAL9**	AFM5	ACE5	ICT5	EHS5	ME9
15:40	14:40	13:40	**ORAL10**	AFM6	ACE6	ICT6	EHS6	ME10
16:00	15:00	14:00	**ORAL11**	ET1	ACE7	ICT7	EHS7	ME11
16:20	15:20	14:20	**ORAL12**			ISS1	EHS8	ME12
16:45	15:45	14:45	BREAK, LOG-IN AND ROLL CALL					
17:00	16:00	15:00	AWARDING CEREMONY					
17:30	16:30	15:30	CLOSING CEREMONY The Next Host：Prof. Doan Quang Vinh Rector of The University of Danang - University of Science and Technology					

Oral Presentation

Advanced Functional Materials

Presentation No.	Title	
AFM1.	Facile hydrothermal synthesis of interlayer-expanded MoS_2/rGO	Kien Nguyen-Ba, Huy Le-Quoc, Trang Nguyen-Thi-Thu, and Khan Dinh-Thanh
AFM2.	Fabrication of Anodic Aluminum Oxide Templates	Lance Tristan Oliver Roncal Pengson, M. Vasquez Jr
AFM3.	Carrier gas type dependence of Ga_2O_3 thin film grown by mist Chemical Vapor Deposition	Rie Yamada, S. Takahashi, A. Sekiguchi, T. Onuma, T. Honda, and T. Yamaguchi
AFM4.	A Study on Smart Fluid Technology and its Applications in Haptics	Aaron Raymond See, Kohila Chandramohan
AFM5.	Growth of GaInN multi quantum well on strain-controlled layer by RF-MBE toward realization of light emitting diodes operating in red spectral region	Masaki Matsuda, R. Yoshida, K. Tahara, T. Yamaguchi, T. Onuma, and T. Honda
AFM6.	Fluorescent immune-biosensor on the glass biochip used for albumin detection	Ying-Nien,Chou, Lien-Chiang,Hung

Architectural and Civil Engineering

Presentation No.	Title	
ACE1.	Study on Optimum Room Temperature in Offices with Thermal Controllable Chairs	Shintaro Hanazono, Tatsuo Nobe
ACE2.	Optimized artificial neural network model to classify tasks in construction and project management field	Trang Thi Phuong Pham
ACE3.	Application of Biological Process for Enhancing Carbonation of MgO Cement	Huyen Thanh Do, Tung Hoang
ACE4.	Detachment diagnosis based on frequency characteristics using a tile specimen with a pseudo-dissociation part	Tatsuya Yamada, Masaki Tamura, Nobuyuki Sanjoba
ACE5.	Pineapple Core Sugar Extract as Set Retarder in Cement Paste	Rondel Arganza Dela Cruz
ACE6.	Non-Ergodic Probabilistic Seismic Hazard Analysis using Physics-Based Ground Motion Prediction: A Case of L'Aquila, Italy	Jedidiah Joel Carlos Aguirre, Bruno Rubino, Maurizio Vasallo, Guiseppe di Guilio, Francesco Visini
ACE7.	A mathematical model of two-dimensional vertical flow based on the dual approach	The-Hung NGUYEN

Biochemistry and Food Science

Presentation No.	Title	
BFS1.	Crab-eating monkey acidic chitinase: strong chitinolytic activity under the various conditions	Maiko Uehara, E. Tabata and F. Oyama
BFS2.	Performance of Aerobic Rice Under Different Levels of N-Fertilizer Using Surface Irrigation and Drip Fertigation	Abigail R Barredo
BFS3.	The Use of Machine Vision for Postharvest Processing of Achacha Fruits	Nai-Shang Liou, Ngo Minh Tri Nguyen, Quoc Thien Pham, Hoang Huy Nguyen

Education and Human Studies

Presentation No.	Title	
EHS1.	Evaluation of internal rotation gait and normal gait based on the interarticular coordination	Natsuki Sai, Tatsuro Sato, Shinichiro Morichi, Satoru Kizawa, and Ayuko

		Saito
EHS2.	A study on coordination between a line of sight and motion of body during hitting a ball with a racket	Toshikazu Yagi, Satoru Kizawa, and Ayuko Saito
EHS3.	Study on the movement during walking beautifully and the perception of beauty	Yura Honda, Shogo Takeuchi, Jun Muramatsu, Satoru Kizawa, Masaki Tamura, and Ayuko Saito
EHS4.	Research on recognition of movement using an optical motion capture system	Shun Shiotani, Satoru Kizawa, Masaki Tamura, and Ayuko Saito
EHS5.	A New Perspective on English Education for Engineering Majors −Optimizing English Education at Kogakuin University–	Tomoko Wada
EHS6.	A Practical Report on English Education at Kogakuin University: A Lesson from Basic English I/II	Takayuki Akimoto
EHS7.	English Education in the Age of SDGs: A Survey on English Learning among Kogakuin University Students	Tomomi Yamada, Kazunori Suzuki
EHS8.	An Application of CNN in Answer Analyzing and Estimation Education Advanced Technology	Nguyen Hoang Mai

Electric Engineering and Electronic Engineering

Presentation No.	Title	
EEE1.	Examination of Improvement of Supply Stability by Introducing Wind Power Generation in Disaster-robust Zero Energy Vehicle(D-ZEV)	Bian Ning, Yasuhiro Noro
EEE2.	ElderFit: A Physical Fitness Motion Detection System for Older Adults Based on Deep Learning Technology	Wan-Jung Chang, Jian-Ping Su
EEE3.	Investigation of the Relationship between Muscle Strength and the Power of Electromyograph Signal	Chun-Ju Hou, Yen-Ting Chen, Ji-Jer Huang, and Mycel Capilayan
EEE4.	Optimization for elevation-plane beam configuration in 3D beamforming technology	Yuji Omura, Hiroyuki Otsuka

Energy and Transportation

Presentation No.	Title	
ET1.	Home Energy Management System Considering Stationary Storage and Electrical Vehicle	Jeeng-Min Ling, Firoj Ismail Mulani

Environmental Chemistry and Chemical Engineering

Presentation No.	Title	
ECC1.	Development of low-fouling microfiltration membranes with high permeability by blending PVDF with poly (2-methoxyethyl acrylate)	Seiya Ohno, Shin-ichi Nakao, Xiao-lin Wang, Kazuki Akamatsu
ECC2.	Application of wastewater treatment by microalgae cultivation technology for aquatic products processing facilities	Xuan Thanh Nguyen Thi, Nguyen Quốc Vương, Nguyen Hoang Minh
ECC3.	Investigation and optimization of harvesting microalgae using Electro-coagulation and flotation (ECF) method	Nguyen Nhat Cuong, Nguyen Thi Thanh Xuan
ECC4.	Separation mechanism of carbon dioxide through CHA membrane under high pressure	Fumiya Hirosawa, Masaya Miyagawa, and Hiromitsu Takaba

Information and Communications Technology (ICT)

Presentation No.	Title	
ICT1.	Beautification Algorithm for Handwritten Characters Based on Deep Learning	Ko-Ting Wu, Qiu Chen
ICT2.	An approach for ceramic tile defects classification based on genetic algorithm and CNN	Nhat-To Huynh
ICT3.	Creating Strong AIWolf Agents using Systematic Tactical Evaluation	Shunsuke Hatta, Keisuke Takahashi, Kazunari Furukawa, Junji Yamato
ICT4.	A Study on Optical Burst Transfer Method in Torus Type Data Center Network	Yuya Ogino, Ken-ichi Baba
ICT5.	Effect of cell range expansion of picocells with a wide bandwidth in multiband HetNets	Ayumi Yoneyama, Hiroyuki Otsuka
ICT6.	Impact of phase noise for OFDM-based 1024-QAM transmission	Daisuke Kosuge, Hiroyuki Otsuka
ICT7.	A Study of QUIC and Application Development	Jiun-Yu Tu, Pei-Ying Tsai, Ya-Ting Zhuang

Intelligent and Secure Systems

Presentation No.	Title	
ISS1.	Verification of Dentition Shape Extraction Method	Yutaro Iso, Kazuhiro Suga

Mechanical Engineering

Presentation No.	Title	
ME1.	Flow Characteristics of an Excited Jet with a Time-varying Velocity Distribution	Chisato Ichihara, K. Nishibe, and K. Sato
ME2.	Influence of secondary synthetic jet on vortex arrangement in combined jet	Yu Tamanoi, Koichi Nishibe, and Kotaro Sato
ME3.	Fundamental study on jet vectoring by circulation control wing	Shoichi Fukui, Shoichi Fukui, Qiang Zhang, Kotaro Sato
ME4.	Performance Evaluation of Soccer Balls with Different Panel Shapes	Kaito Tada, Shinichiro Ito, and Masaki Hiratsuka
ME5.	FLOW CHARACTERISTICS AROUND A DOUBLE-SLOTTED CIRCULATION CONTROL WING	Daiki Yaguchi, T. Nakayama, and K. Sato
ME6.	VORTEX ARRANGEMENT OF SYNTHETIC JETS GENERATED BY ASYMMETRIC SLOTS	Takumi Ito, Kotaro Sato
ME7.	INFLUENCE OF SECONDARY FLOW INDUCED ON COANDA SURFACE ON JET DEFLECTION CHARACTERISTICS	Minoru Nakagawa, K. Sato
ME8.	Interaction between Continuous Jet and Synthetic Jet under the Same Momentum Ratio Conditions	Masaharu Mori, J. Matsuzaki, N. Ajino, K. Nisibe, and K. Sato
ME9.	INFLUENCE OF SECONDARY SUCTION/BLOWING FLOWS ON PRIMARY JET	Akio Yamada, K. SATO and D. KANG
ME10.	Development of Self-Lubricating Slide Bearings with Sintered Porous Metals	Taiga Itoi, S. Kawajiri, Y. Sasaki, E. Takami, Y. Fujita and M. Shiomi
ME11.	Development of a finite element model for mechanical analysis on colonic stent – organs interface	Minori Kunii, Kazuhiro Suga
ME12.	Measurement and Compensation of the 3D Printing using 2.5D Characterization	Yu-Sheng Lin

Simulation Science, Measurement Science, Computational Science

Presentation No.	Title	
SSM1.	Effect of femur and tibia marker positions on measuring	Natsuki Nakamura, Satoru Kizawa,

	ankle joint angles in optical motion analysis	and Ayuko Saito
SSM2.	Effect of actuator on muscle force estimation using a musculoskeletal model	Takuto Hosoya, Tomoaki Ichikawa, Shinichiro Morichi, Yoshikazu Kobayashi, Satoru Kizawa, and Ayuko Saito
SSM3.	Study on design of a noise covariance in pose estimation using 9-axis motion sensor	Hayato Sato, Kentaro Goto, Satoru Kizawa, and Ayuko Saito
SSM4.	A study on effect of geomagnetic sensor correction for pose estimation	Kentaro Goto, Hayato Sato, Satoru Kizawa, and Ayuko Saito

Synthetic Chemistry and Medicinal Chemistry

Presentation No.	Title	
SC1.	Surface Functionalization of Chitosan Hydrogel Using Atmospheric Pressure	Kathrina Lois M Taaca, Mark Jeffry De Leon, Hideki Nakajima, Kanjana Thumanu, Eloise Prieto, and Magdaleno Vasquez Jr.

Lightning Talk Session

Advanced Functional Materials

Presentation No.	Title	
AFML1.	Effect of visible light for photocatalytic property of TiO_2/Cu_2O thin films	Katsuyuki Takeda, Ichiro Takano
AFML2.	Dependence on Ar incident angles of PTFE surface treated by plasma	Yoshitaka Nakayama, Ichiro Takano
AFML3.	Analysis of High Thermal Conductivity Mechanism of Naphthyl Benzoate-Twin Mesogenic Epoxy Polymers with Alkyl Chain Length 2 Having 2,7-Naphthyl Benzoate as the Mesogenic Skeleton	Yuu Miyama, T. Kawai, and Y. Itoh
AFML4.	Hardness of alumina film formed on aluminum by anodic oxidation with oxalic acid and alcohol	Takuma Sano, Hidetaka Asoh
AFML5.	Study on high thermal conductivity mechanism of phenyl benzoate twin-mesogen epoxy polymers by vibrational spectroscopy	Takeru Ishizawa, T. Kawai, and Y. Itoh
AFML6.	Influence of a CuO layer for conversion efficiency of CuO/TiO_2 thin films	Masaki. Yanagisawa, Ichiro. Takano
AFML7.	Theoretical calculation of infrared absorption spectra of hydrogen in various polymers under high-pressure hydrogen	Masayoshi Tsuji, T. Kawai and Y. Itoh
AFML8.	Improvement of Electrical Property of α-In_2O_3 Films Grown by Mist Chemical Vapor Deposition Using In_2O_3 Powder as Source Precursor	Akito Taguchi, T. Onuma, T. Honda, and T. Yamaguchi
AFML9.	Study on thermal conductivities of poly(methacrylic acid ester) having azobenzene as a mesogen with different spacer carbon numbers and the end group carbon numbers	Nanako Sakai, Tadatomo Kawai, and Yuzo Itoh

Architectural and Civil Engineering

Presentation No.	Title	
ACEL1.	Evaluation of Plaster Layer of Wood lath and Plaster Ceiling in Non-Destructive Testing	Sakura Yoshida, Kentaro Oka, Masaki Tamura
ACEL2.	Quantitative evaluation of the deterioration state of the modified wood shingle exposed outdoors and construction of an index to judge the deterioration	Hideto Takeuchi, Masaki Tamura
ACEL3.	Examination of resin repair method for wood damaged by termites	Yusuke Harada, Masaki Tamura
ACEL4.	Study on transportation power in DHC area for the AEM	Ryuhei Tanaka, Yusuke Nakajima
ACEL5.	History and development of wood lath and plaster techniques in Japan	Kentaro Oka, Masaki Tamura
ACEL6.	GIS-Based Assessment of Emergency Referral Systems and Ideal Locations for Ambulance Stations in the Province of Cavite, Philippines	Kathleen Ann E. Villapol, Jedidiah Joel C. Aguirre, Judie Ann A. Ramos, and Harvey S. Maunahan

Biochemistry and Food Science

Presentation No.	Title	
BFSL1.	Investigation of extraction method for antimicrobial substances accumulated in aerial microalgae	Toshihiro Sekizawa, Nobuhiro Aburai, and Katsuhiko Fujii
BFSL2.	Isolation of lichen photobionts by a density gradient centrifugation	Kotomi Hirose, Nobuhiro Aburai, and Katsuhiko Fujii
BFSL3.	Development of microflora which produces hydrogen from digested sludge	Yuhei Hayakawa, Nobuhiro Aburai, and Katsuhiko Fujii
BFSL4.	The ability of wild Bacillus sp. to produce polyglutamic acid	Suzuka Sato, Nobuhiro Aburai, and Katsuhiko Fujii

BFSL5.	Screening of carotenoid-rich aerial microalgae	Yuta Hiki, Nobuhiro Aburai, and Katsuhiko Fujii
BFSL6.	Functional Properties of Chitin Deacetylase from *Aspergillus fumigatus*	Hidetoshi Suzuki, Masashi Ohkura, Kazuaki Okawa and Fumitaka Oyama
BFSL7.	Mechanistic insights of inactivation of YKL-40, a chitinase-like protein	Keita Suzuki, Kazuaki Okawa, and Fumitaka Oyama
BFSL8.	Component imaging of spheroids by using an FIB-TOF-SIMS	Tomoki Goto, Hyogo Takeuchi, Mizuki Shu, Reiko Saito, Kazuya Matsushima, Makoto Saito, Sanshiro Hanada, Nobuhiko Kojima, Masato Morita, and Tetsuo Sakamoto

Education and Human Studies

Presentation No.	Title	
EHSL1.	Effects of Skin and Water Conditions on Water Surface Perception	Kohei Kawamata, Miyuki G.Kamachi
EHSL2.	Influence of eating Meals on facial expressions	Mao Maekawa, Miyuki G. Kamachi
EHSL3.	A study of facilitation evaluation methods in group discussions for students	Takuya Hirayanagi, Daigo Misaki

Electric Engineering and Electronic Engineering

Presentation No.	Title	
EEEL1.	UV-irradiated fabrication of SWCNT/SiO_2 Composite thin film at room temperature via Molecular Precursor Method	Naoki Ogawa, Hiroki Nagai, and Mitsunobu Sato
EEEL2.	Fabrication of visible-light responsive WO_3 Thin Film *via* Molecular Precursor Method	Taichi Murayama, H. Nagai, and M. Sato
EEEL3.	Remarkable mechanical flexibility of intentionally strain-induced amorphous B-doped In_2O_3 transparent conductive film	Shun Mori, Yukiya Ichinoseki, Kotaro Watanabe, Kaito Murano, Kaito Oe and Shinya Aikawa
EEEL4.	Understanding the switching mechanism of stacked ZrO_2-based ReRAM by insertion of SiO_x thin layer at the electrode interfaces	Keito Toyama, Ryusuke Akiyama, Kento Yuki and Shinya Aikawa
EEEL5.	Residual strain in GaN nanocolumns grown on Si(111)	Naoki Goto, Y. Hosoya, T. Onuma, T. Yamaguchi, and T. Honda
EEEL6.	Identification of Killer Defects in β-Ga_2O_3 Schottky Barrier Diodes by Raman Mapping Measurements	Masahiko Nakanishi, K. Shoji, S. Masuya, M. Kasu, T. Yamaguchi, T. Honda, K. Sasaki, A. Kuramata, and T. Onuma
EEEL7.	p-type behavior of lattice-expanded SnO_x by post-deposition N2 annealing	Kotaro Watanabe, Takuma Kawaguchi, and Shinya Aikawa
EEEL8.	Relationship between resistivity of NiO thin films and oxygen plasma condition at different deposition pressures	Mamoru Murayama, A. Ishikawa, T. Yamaguchi, T. Honda, K. Sasaki, A. Kuramata, and T. Onuma
EEEL9.	Measurement of Flexoelectric Coefficient (e_{11}-e_{33}) Using HAN Cells with Concentric-shaped Interdigitated Array Electrodes	Hiroki Shimoda, Yukihiro Kudoh, and Taiju Takahashi
EEEL10.	Well width dependence on residual strain in high In composition GaInN/GaInN MQW by RF-MBE	Kaigo Tahara, J. Yamada, T. Yamaguchi, Y. Nanishi, T. Onuma, T. Honda, and K. Kishino
EEEL11.	Micro scale analysis of LFP cathode of all solid state battery by FIB TOF SIMS	Akihiro Kawasugi, Naoki Gomyo, Linchun He, Masato Morita, and Tetsuo Sakamoto
EEEL12.	Development of resonance ionization mass spectrometry imaging method for radioactive Sr isotopes analysis	Takeru Yoshida, Takumi Umedate, Masato Morita, Tetsuo Sakamoto, Yue Zhao, Vollker Sonnenschein,

		Hideki Tomita, Toshihide Kawai, Takeo Okumura, Yukihiko Sato, Masabumi Miyabe and Ikuo Wakaida
EEEL13.	Trade-off relation of F concentration in CaF_2 co-sputtered In_2O_3-based transparent conductive film	Kaito Oe, Shun Mori, Kotaro Watanabe and Shinya Aikawa
EEEL14.	Emission Properties of Rocksalt-structured MgZnO Microcrystals for VUV Light Emitter	Wataru Kosaka, S. Hoshi, K. Kanta, K. Kaneko, T. Yamaguchi, T. Honda, S. Fujita, and T. Onuma
EEEL15.	Analysis of aerosol in urban city air using FIB-TOF-SIMS	Kentaro Sakai, Shokei Tsuchida, Noa Kato, Masato Morita, and Tetsuo Sakamoto
EEEL16.	Validation of Spray Droplets by ESD for a New Technique of Single Cell Rapid Freezing	Takayuki Umemura, Kenta Shirasu, Masato Morita, Kumiko Nagase, Wakako Hamanaka, Masatoshi Kakihana, Tatsuo Ohira, Norihiko Ikeda and Tetsuo Sakamoto
EEEL17.	Anatase Thin-Film Fabrication by Novel Precursor Solution Involving Stable Trisoxalato Complex of Ti (IV) without O_2^{2-} Coordination	Takuro Murayoshi, H. Nagai, and M. Sato
EEEL18.	Humidity dependency of the ionic conductivity of $Li_{1+x}Al_xTi_{2-x}(PO_4)_3$ transparent thin films fabricated by molecular precursor method	Kazuma Aochi, H. Nagai, and M. Sato
EEEL19.	Impact on InN Buffer Layer Inserted into GaInN/GaN Interfaces By RF-MBE	Daiki Itabashi, Ryosuke Yoshida, Tomohiro Yamaguchi, Takeyoshi Onuma, Tohru Honda

Energy and Transportation

Presentation No.	Title	
ETL1.	Optimization of Service Frequency based on Short-term Passenger Forecasting on Scheduled Bus -Case Study on the Route for Kogakuin University-	Yuya Nagai, Yoshio Miki
ETL2.	Study on Driving Skill Analysis in Curve Sections using Adaboost Algorithm with Driving Simulator	Eisho Kanno, Masakazu Mukai
ETL3.	Development of Operando Raman Analysis at the Reaction Cross-Section of All-Solid-State Batteries	Takaaki Ono, Koji Hiraoka, Hibiki Miyauchi, Takeshi Kobayashi and Shiro Seki

Environmental Chemistry and Chemical Engineering

Presentation No.	Title	
ECCL1.	Exfoliation Behavior of Graphite in Sulfuric Acid Electrolyte	Ryuichi Maekawa, Yusuke Muramatsu, Takumi Hisadome, and Hideki Hashimoto
ECCL2.	Metylation Benzene with Methane Catalyzed by Co/MFI Zeolite	Kai Tanaka, K.Okumura
ECCL3.	Preparation a Series of Polybenzimidazole Random Copolymer Membranes based on a Polyphosphoric Acid Process	Hsiao-Wu Lai, Zhi-You Lin, and Cheng-Chien Wang
ECCL4.	Application of single-particle electrochemical measurement for various positive electrode materials	Tamotsu Sawahashi, Kasane Takai, Kei Nishikawa, Takeshi Kobayashi, and Shiro Seki

Information and Communications Technology (ICT)

Presentation No.	Title	
ICTL1.	Design Thinking-based Requirements Elicitation Method using Role-Based Prototyping and its Evaluation	Senju Nakajima, Takayuki Kitagawa, Tadahisa Kondo, and Mari Inoki
ICTL2.	The bottleneck of MTD System Operation	Shintaro Kawamura, Osamu Mizuno
ICTL3.	A Study on Access Control Methods in IoT Data Distribution using Fog Computing	Masaki Yoshii, Ryohei Banno, and Osamu Mizuno
ICTL4.	Non-functional Requirements Summarization Method Using Convolutional Neural Network and Domain Ontology	Yuta Saikawa, Takeshi Nagaoka, Takayuki Kitagawa, and Mari Inoki
ICTL5.	Determination of intermittent defects by a method that focuses on the rows before and after the defective shot	Yusuke Takada, Yoshio Miki
ICTL6.	Transmission Control in DTN Considering Data Amount	Hiyu Suzuki, Osamu Mizuno
ICTL7.	Fast Adjacent Communication with RDMA and Double Buffering	Kota Yoshimoto, Akihiro Fujii, and Teruo Tanaka
ICTL8.	Preliminary Experiments for the Realization of ICN based Wireless Sensor Networks	Eishin Nagaoka, Masaki Yoshii, Ryohei Banno and Osamu Mizuno
ICTL9.	Personalization of Service Controller for Home Network Devices	Taich Kimura, Osamu Mizuno
ICTL10.	Parallelization of Automatic Tuning using Multiple Jobs for Machine Learning Programs	Sorataro Fujika, Teruo Tanaka, Akihiro Fujii, Yuka Kato, Satoshi Ohshima, andTakahiro Katagiri
ICTL11.	A Method for Detecting Anomalies in IoT Devices Using LSTM	Yutaro Nakamura, Osamu Mizuno
ICTL12.	A Study of Applying Plumtree Algorithm for Blockchain Networks	Yusuke Kitagawa, Kazuyuki Shudo, Osamu Mizuno, Ryohei Banno
ICTL13.	PAPR Reduction Effect by Applying Clipping in Spectrum Suppressed Transmission	Teppei Kanke, Takatoshi Sugiyama
ICTL14.	Performance Analyses of Efficient Belief Propagation Bit-flip Decoding Schemes for Polar Codes with Permutated Factor Graphs	Hidetoshi Saito, Naoya Takahashi
ICTL15.	Interleaving Depth Optimization for Concatenated FEC in 2.4GHz Ingenu System	Kentaro Yamamoto, Takatoshi Sugiyama
ICTL16.	Calculated Distance Error Performances by Relay Type GPS in Shinjuku Area	Kouhei Yoshida, Takatoshi Sugiyama
ICTL17.	The Child's Residual Limb Model Reconstruction by using Point Cloud Data	Ding-Horng Chen, Qiao-Ting Shen
ICTL18.	An Image Segmentation Method based on Unsupervised Learning Algorithms	Zong-Xian Yin

Intelligent and Secure Systems

Presentation No.	Title	
ISSL1.	Wired cable proposal on the feasibility of a stratospheric platform -Background and wired connections and strategies for orbital elevators-	Koichiro Murata

Mechanical Engineering

Presentation No.	Title	
MEL1.	Research on Motion Analysis of Pedestrians Using OpenPose	Genki Bamba, Kazuki Weerakoon Miyakawa,Takashi Kato, and Daigo Misaki
MEL2.	Audio glasses for confining acoustic field in near field	Shuzo Terauchi, Tsutomu Kaizuka
MEL3.	Jet formation after droplet impact into water pool	Futa Minami, K. Hasegawa

MEL4.	Visualization of vibration behavior of multiple samples levitated in an acoustic field	Manami Murata, K. Hasegawa
MEL5.	Study on the presentation method of the automated driving experience simulator by wizard of oz prototyping	Kazuki Miyakawa Weerakoon, Genki Bamba, Takashi Kato, and Daigo Misaki
MEL6.	Development of a robot to assist in optimal parts supply at cell production sites	Shutaro Ito, Daigo Misaki
MEL7.	Development of Self-Lubricating Slide Bearings with Sintered Porous Metals	Taiga Itoi, S. Kawajiri, Y. Sasaki, E. Takami, Y. Fujita, and M. Shiomi

Simulation Science, Measurement Science, Computational Science

Presentation No.	Title	
SSML1.	Theoretical study on interfacial interaction of zig-zag carbon nanotubes/epoxy resin nanocomposite	Yurika Serizawa, Tomoe Yayama, and Fumiko Akagi
SSML2.	Predicting of Pedestrian Trajectory Using Sequence to Sequence Learning with Neural Networks	Tomoya Ono, Takashi Kanamaru
SSML3.	Separation Control around NACA0015 Airfoil using Vortex Generator Type Plasma Actuator over Low Reynolds Number Conditions	Shota Mayahara, Makoto Sato
SSML4.	GPS Positioning Error Improvements by Number of Reflections and Incident Angle Estimations	Koichi Saito, Takatoshi Sugiyama
SSML5.	Extraction of useful products from specialty stores using clumpiness	Taro Numase, Yoshio Miki
SSML6.	Examination of Measures to Encourage Unplanned Purchasing Using Social Norms at Specialty Stores	Ryou Miyokawa, Yoshio Miki
SSML7.	Non-Invasive Concentration Variation Measurements of Chemical Solutions by Using a Birefringent Sensing Head in a Heterodyne Interferometer	Ruey-Ching Twu, Yi-Ren Sun
SSML8.	Computational Framework for Predicting the Surface Morphology of Laser Powder Bed Fusion Parts after Laser Polishing	Dac - Phuc Pham, Hong - Chuong Tran