

The 14th International Student Conference on Advanced Science and Technology (ICAST) 2019 Kumamoto

November 28 - 29, 2019

Graduate School of Science and Technology, Kumamoto University, Japan

Research Sessions:

1. Mathematics
2. Physics
3. Chemistry
4. Earth and Environments
5. Biological Sciences
6. Applied Chemistry
7. Materials Science and Engineering
8. Mechanical System Engineering
9. Applied Mathematics
10. Computer Science
11. Electrical Engineering
12. Civil and Environmental Engineering
13. Architecture
14. Multidisciplinary

General Sessions:

15. Energy
16. Environment
17. Other issues in society related to science and technology

Opening session, Research Poster session, Student Exchange Party, Closing Ceremony

Venue-100th Anniversary Memorial Hall

Oral sessions (Research and General)

Venue-

Room A: Room 203, 2nd floor, Mechanical System Engineering, Materials Science and Engineering
[Kurokami South C3]

Room B: Meeting Room A, 2nd floor, Faculty of Engineering Building No.1
[Kurokami South C2]

Room C: Meeting Room 204, 2nd floor, Computer Science and Electrical Engineering
[Kurokami South W2]

Room D: Lecture Room, 1st floor, Academic Commons Kurokami Bldg. 1
[Kurokami South W3]

DAY 1: November 28, 2019 (Thursday)

Opening Session -100th Anniversary Memorial Hall-

8:30 – 9:30	Registration
9:30 – 9:45	Opening Address Shinji Harada (President of Kumamoto University) Welcome Address Fusao Ichikawa (Dean of GSST, Kumamoto University)
9:45 – 10:30	Keynote Lecture Takashi Hiyama (Distinguished Professor of Priority Organization for Innovation and Excellence (POIE) and Director of International Research Organization for Advanced Science and Technology (IROAST), Kumamoto University) “Globalization of Graduate School Education and Promotion of International Research Collaboration in Science and Technology”
10:30 – 11:15	Report on International Experiences by GSST students Zeineb Belhout (Graduate School of Science and Technology, Kumamoto University in Japan) “My Study Abroad Experience at Kumamoto University” Terumasa Ryu (Graduate School of Science and Technology, Kumamoto University in Japan) “Differences in studying abroad at undergraduate and graduate schools and its features” Kazu Tanzina Rahman (Graduate School of Science and Technology, Ege University in Turkey, Kumamoto University in Japan) “Being an International Student: A Life-Changing Experience”
11:15	Photo Session

Research Session I & II, General Session I

13:00 -14:45	Room A (Kurokami South C3, 2F 203)	
	8-1-o 8-2-o 8-3-o 8-4-o 8-5-o 8-6-o 8-7-o 8-8-o	
	Room B (Kurokami South C2, 2F Meeting Room)	
	12-1-o 12-2-o 12-3-o 12-4-o 12-5-o 12-6-o 12-7-o 12-8-o	
	Room C (Kurokami South W2, 2F 204)	
	11-1-o 11-2-o 11-3-o 11-4-o 11-5-o 11-6-o 11-7-o 11-8-o	
14:45 – 15:15	Room D (Kurokami South W3, 1F Lecture Room)	
	3-1-o 3-2-o 6-1-o 6-2-o 6-3-o 6-4-o 6-5-o 6-6-o	
	Break	
	15:15 – 17:25	Room A (Kurokami South C3, 2F 203)
		8-9-o 8-10-o 8-11-o 8-12-o 8-13-o 8-14-o 4-1-o 4-2-o 4-3-o
		Room B (Kurokami South C2, 2F Meeting Room)- General Session
15-1-o 15-2-o 15-3-o 15-4-o 16-4-o 17-4-o 17-5-o		
Room C (Kurokami South W2, 2F 204)		
11-9-o 11-10-o 11-11-o 11-12-o 2-1-o 2-2-o 2-3-o 2-4-o 2-5-o		
18:00 – 20:00	Room D (Kurokami South W3, 1F Lecture Room)	
	6-7-o 6-8-o 6-9-o 6-10-o 6-11-o 5-1-o 5-2-o 5-3-o 5-4-o 5-5-o	
	Student Exchange Party (100th Anniversary Memorial Hall)	

Pre-registration required.

DAY 2: November 29, 2019 (Friday)

Research Sessions III, General Session II	
9:00 – 10:40	Room A (Kurokami South C3, 2F 203) 14-1-o 14-2-o 14-3-o 14-4-o 14-5-o 14-6-o 1-1-o 9-1-o
	Room B (Kurokami South C2, 2F Meeting Room) 13-1-o 13-2-o 13-3-o 13-4-o 13-5-o 13-6-o 13-7-o
	Room C (Kurokami South W2, 2F 204) 10-1-o 10-2-o 10-3-o 10-4-o 10-5-o 10-6-o 10-7-o
	Room D (Kurokami South W3, 1F Lecture Room)- General Session 17-6-o 17-7-o 17-8-o 17-9-o 17-10-o 17-11-o 17-12-o 17-13-o
10:40 – 10:55	Break

Poster Session I & II

Venue- 100th Anniversary Memorial Hall

10:55 – 11:55	Odd presentation number
11:55 – 12:55	Lunch Break
12:55 – 13:55	Even presentation number
13:55 – 14:10	Break

Please put up your poster in the afternoon of DAY 1.

Presenters should remove their posters by the end of DAY 2.

Research Session IV, General Session III

14:10 – 15:55	Room B (Kurokami South C2, 2F Meeting Room)- General Session 16-1-o 16-2-o 16-3-o 16-5-o 17-1-o 17-2-o 17-3-o 17-14-o
	Room C (Kurokami South W2, 2F 204) 7-1-o 7-2-o 7-3-o 7-4-o 7-5-o 7-6-o 7-7-o 7-8-o
16:20	Closing ceremony and student awards (100th Anniversary Memorial Hall)

DAY 3: November 30, 2019 (Saturday): Field Trip to Mt. Aso (pre-registration required)

List of Papers in Oral Sessions

November 28, Thursday 13:00 – 14:45

- Room A

Research Session on Mechanical System Engineering

8-1-o	Study on W/O Emulsion Fuel Stabilized by Tetraglycerin Ester <i>Takumi Iwanaga, Kumamoto University</i>
8-2-o	Effect of Diamond Particles Coating on Pool Boiling Heat Transfer <i>Yuma Nakamura, Kumamoto University</i>
8-3-o	Study on stability evaluation of nanofluid using surfactant and the heat transfer promoting mechanism of nanofluid <i>Yuki Kotooka, Kumamoto University</i>
8-4-o	Development of an Inexpensive and Easy 3D Scanning System <i>Hiroki Aoki, Kumamoto University</i>
8-5-o	Analysis and Evaluation of Standing-up Motion using Power Assistance Chair <i>Koki Aradono, Kumamoto University</i>
8-6-o	Application for Product Design of Characteristics of Carbon Fiber Reinforced Plastic <i>Hiroki Kato, Kumamoto University</i>
8-7-o	Creation of virtual spaces for VR teaching materials and settings for experience <i>Ryo Yasukawa, Kumamoto University</i>
8-8-o	Development of Multi-Purpose Electric Agricultural Machine <i>Hiroki Kaku, Kumamoto University</i>

- Room B

Research Session on Civil and Environmental Engineering

12-1-o	Effective determination and comparison of fine aggregate physical properties by methods based on electrical conductivity and ASTM <i>Rahimullah Habibzai, Kumamoto University</i>
12-2-o	Study on the Characteristics of Land Use and Landscape Pattern Change Based on RS and GIS — — A Case Study of Patheingyi City, Myanmar <i>Qiaoling Fang, Kumamoto University</i>
12-3-o	Study on Seismic Design of Steel Frame with Rectangularly linked Rotational Friction Damper <i>Masato Koga, Kumamoto University</i>
12-4-o	Acoustic Emission Analysis of Steel Fiber Reinforced Polymer Cement Mortar and Utilization merit in re-strengthening of defective concrete beams <i>Rahimullah Habibzai, Kumamoto University</i>
12-5-o	Experimental and Numerical Modelling of a Tide Embankment Section in Tacloban City Subjected to Storm Surge Waves <i>Patrick Shaun Ng Ngo, De La Salle University</i>

12-6-o	Quantifying a resilience index of water lifeline systems under seismic hazard using an optimal restoration strategy <i>Abraham Matthew Sagum Carandang, De La Salle University</i>
12-7-o	Discussion on the safety of stone dowel pin fixing system for building exterior in Taiwan <i>Huai Te Hsueh, National Kaohsiung University of Science and Technology</i>
12-8-o	The Investigation study of improving Durability Performance of Marine Infrastructure by using the Engineered Cementitious Composite <i>Indra Komara, Institut Teknologi Sepuluh Nopember</i>

● **Room C**

Research Session on **Electrical Engineering**

11-1-o	Experimental Study of Through-the-Wall Respiration Sign Detection Using Ultra-wideband Impulse Radar <i>Budiman putra asmaur Rohman, Kumamoto University</i>
11-2-o	Real-time observance of nanosecond pulsed discharge using a quadruple emICCD camera system <i>Terumasa Ryu, Kumamoto University</i>
11-3-o	Effects on shock waves generated by underwater discharge between different gaps <i>Mitsuhiko Sato, Kumamoto University</i>
11-4-o	Low-temperature Pasteurization of Liquid Food by using Intense Pulsed Electric Fields with Moderate Heat <i>Keiichiro Katano, Kumamoto University</i>
11-5-o	Shorter rise time of nanosecond pulse voltage and improvement of ozone generation using peaking gap switch <i>Hideaki Fukuoka, Kumamoto University</i>
11-6-o	Laser Thomson scattering diagnostics for streamer discharge plasma in high pressure He gas <i>Kyohei Eguchi, Kumamoto University</i>
11-7-o	Influence of inner electrode diameter in coaxial electrode on nanosecond pulsed discharge shape <i>Hitoshi Yamaguchi, Kumamoto University</i>
11-8-o	Effect of nonthermal plasma irradiation on aggregation state of nanoparticle dispersion <i>Katsushi Suenaga, Kumamoto University</i>

● **Room D**

Research Session on **Chemistry/Applied Chemistry**

3-1-o	Ions permeation thorough graphene oxide membrane <i>Takuya Mizoguchi, Kumamoto University</i>
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3-2-o	Structures and Magnetic Properties of 1-D Cobalt (II) Complexes <i>Hikaru Zenno, Kumamoto University</i>
6-1-o	Fabrication of highly luminescent CsPbX₃ quantum dot / polymer hybrid films <i>Shimpei Kawashima, Kumamoto University</i>
6-2-o	Production of Carbonaceous Material from Marine Biomass, <i>Undaria pinnatifida</i> and its Application as Solid Acid Catalyst <i>Shamala Balasubramaniam, Kumamoto University</i>
6-3-o	The Selective Conversion of Diketopiperazine to Linear Oligopeptide Using Pulsed Arc Discharge <i>Koki Nonaka, Kumamoto University</i>
6-4-o	Reversible ON/OFF Photoswitching Using Lead-Based Halide Perovskite Nanocrystals with Photochromic Diarylethene <i>Yuji Akaishi, Kumamoto University</i>
6-5-o	Development of Cerium-intercalated graphene oxide membrane attached with Au/WO₃ electrode for VOC detector <i>Aynul Sakinah Ahmad Fauzi, Kumamoto University</i>
6-6-o	Synthesis of Highly-Stable Lead-Free Perovskite Quantum Dots by a Hot-soap Method <i>Shuhei Tominaga, Kumamoto University</i>

November 28, Thursday 15:15 – 17:25

● **Room A**

Research Session on **Mechanical System Engineering/Earth and Environments**

8-9-o	Complete Structural Modeling of Violin for Resonance Evaluation <i>Yusaku Takasugi, Kumamoto University</i>
8-10-o	Investigation on the design of twin-fluid atomizer for high viscous liquid <i>Yudai Hisatsugu, Kumamoto University</i>
8-11-o	Experimental investigation on adhesion behavior of droplet between parallel plates <i>Ryosei Tanaka, Kumamoto University</i>
8-12-o	Study on the effect of surface roughness on droplets impinging on a solid substrate <i>Kazuki Shimizu, Kumamoto University</i>
8-13-o	Safety Enhancement of a Full Revolution Press <i>Zheng-cheng Lin, National Kaohsiung University of Science and Technology</i>
8-14-o	The Improvement of FMECA Model to Determine Maintenance Priority on Cooling System <i>Nurhadi Siswanto, Institut Teknologi Sepuluh Nopember</i>
4-1-o	Estimating Temporal and Seasonal Groundwater Sources Using Mass Balance Isotopic Analysis <i>Jeerapong Laonamsai, Kumamoto University</i>

4-2-o	Crystal structure and local structures of loparite (Na,REE,Ca)(Ti, Nb)O₃ by single crystal diffraction and XAFS analyses <i>Ginga Kitahara, Kumamoto University</i>
4-3-o	Boundless Space and Collective Loss: An Interpretative Phenomenological Analysis of a Flood Induced Displacement <i>Novee Mae S Pabon, University of the Philippines Diliman</i>

● **Room B**

General Session on Energy/ Environment/ Other issues in society related to science and technology

15-1-o	SEANAG PH: Increasing Product Value for Seaweed Farmers <i>Toni Dominique Balacano Madulid, University of the Philippines Diliman</i>
15-2-o	Inventing the simple Magnetic attachment <i>Soichiro Yoshida, Uto Junior and Senior High School</i>
15-3-o	Characteristic Vibration of Strings <i>Naoya Sugimoto, Uto Junior and Senior High School</i>
15-4-o	A New Method for Simple and Easy Measuring the Refractive Index of Clear Liquid and Gel <i>Eito Kubota, Uto Junior and Senior High School</i>
16-4-o	Alien Raccoon ecology survey <i>Itsuki Yasuda, Uto Junior and Senior High School</i>
17-4-o	Generation of Pluripotent Stem Cells by Ribosome <i>Ryota Odahara, Uto Junior and Senior High School</i>
17-5-o	Cell clusters formation by ribosome is reproducible with Silkworm cell line <i>Mei Miyajima, Uto Junior and Senior High School</i>

● **Room C**

Research Session on Electrical Engineering/Physics

11-9-o	Adaptive Ant Colony Optimization Neuro-Fuzzy Controller for Small UAV Altitude Control <i>Brilian Putra Amiruddin, Institut Teknologi Sepuluh Nopember</i>
11-10-o	Decomposition of carbon dioxide using nanosecond pulsed discharge <i>Tatsuya Ichiki, Kumamoto University</i>
11-11-o	Fabrication of 3D Printed Biconical-type Antenna for Sensing of Concrete <i>Dion Hayu Fandiantoro, Kumamoto University</i>
11-12-o	Fault location of HVDC transmission line based on improved genetic algorithm <i>Jianlei Zhang, Shandong university</i>
2-1-o	Constraints on a Supermassive Black Hoke Binary in M87 with Pulsar Timing Array <i>Tomonosuke Kikunaga, Kumamoto University</i>

2-2-o	Molecular-dynamics study of thermal conductivity by neural network potential constructed from first-principles <i>Shogo Fukushima, Kumamoto University</i>
2-3-o	Faraday dispersion function of disk galaxies with axisymmetric global magnetic fields <i>Yoshimitsu Miyashita, Kumamoto University</i>
2-4-o	Detectability of CMB Weak Lensing and HI Cross Correlation and constraints on cosmological parameters <i>Shoichiro Tanaka, Kumamoto University</i>
2-5-o	Terbium gallium garnet magneto-optical crystal optical waveguide fabricated by ion injection <i>Chenxi Wang, Shandong University</i>

● Room D

Research Session on Applied Chemistry/Biological Sciences

6-7-o	A green approach for selective conversion of glucose to 5-hydroxymethylfurfural utilizing CO₂-H₂O reactive separation system <i>Ryuto Inoue, Kumamoto University</i>
6-8-o	An Electronic-Structure Informatics Study on Toxicity of Alkylphenols to the Growth of <i>Tetrahymena pyriformis</i> <i>Algafari Bakti Manggara, Kumamoto University</i>
6-9-o	Hydrolysis of Rutin Using Graphene Oxide by Microwave Irradiation Method under Hydrothermal Conditions <i>Hiras Tumegas Manalu, Kumamoto University</i>
6-10-o	Kinetic Behavior of Novel "Core-Shell Type" Chelating Ion Exchange Resin for Boron and Arsenic Removal from Geothermal Water <i>Fatma Şen, Ege University</i>
6-11-o	Simultaneous Removal of Boron and Arsenic from Geothermal Water by Sequential Reverse Osmosis and Ion Exchange Processes <i>Esra Altıok, Ege University</i>
5-1-o	Analysis of intracellular localization of non-coding RNAs involved in formation of heterochromatin at the centromere in fission yeast <i>Chihaya Nagai, Kumamoto University</i>
5-2-o	Characterization of a compound that affects formation of nuage, a germline specific structure involved in piRNA biogenesis <i>Morihiro Umekita, Kumamoto University</i>
5-3-o	Phosphorylation of RNA binding protein YB-1 at serine 102 induces nuclear lobulation in HeLa cells <i>Taiki Kawabata, Kumamoto University</i>
5-4-o	Analyses of compounds that repress nuclear lobulation in Adult T-cell leukemia cells <i>Noriyuki Takamori, Kumamoto University</i>

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- 5-5-o** **Genetic variability of two domestic caviés (Cavia porcel-lus) populations in Cameroon based on microsattellites**
Youchahou Poutougnigni Matenchi, Ege University
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November 29, Friday 9:00 – 10:40

● **Room A**

Research Session on **Multidisciplinary/Mathematics/Applied Mathematics**

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- 14-1-o** **Is Zero Electricity Cost Cryptocurrency Mining Possible? Solar Power Bank on Single Board Computers**
Fajar Purnama, Kumamoto University
-
- 14-2-o** **The Study on Accessibility Analysis of Emergency Shelters In Earthquakes— — A case of Kumamoto city**
Qingxia Zhang, Kumamoto University
-
- 14-3-o** **Influence of Guarding Types of The Emergency Stop Button on Reaction Time**
Zi Xiang Liu, National Kaohsiung University of Science and Technology
-
- 14-4-o** **Implementation of Green Value Stream Mapping and Life Cycle Assessment to Evaluate and Enhance Environmental Impact of Cypermethrin-based Product**
Aufar Fikri Dimyati, Institut Teknologi Sepuluh Nopember
-
- 14-5-o** **Smart City**
Madiha Bencekri, University of Seoul
-
- 14-6-o** **Taxi Passenger’s Getting on Point Prediction Using Deep Learning**
Donggyun Ku, University of Seoul
-
- 1-1-o** **The adjacent vertex distinguishing edge choosability of planar graphs with maximum degree Δ**
Bin Wang, Shandong University
-
- 9-1-o** **On degree conditions for directed path-factors in digraphs**
Eishi Mishio, Kumamoto University
-

● **Room B**

Research Session on **Architecture**

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- 13-1-o** **The Research on Jobs-Housing Balance of Jianggan District in Hangzhou City Based on Baidu Heat Map**
Congying Fang, Kumamoto University
-
- 13-2-o** **Damages to Residential Houses Caused by Typhoon Jebi (T1821)**
Takumi Akatsuka, Kumamoto University
-
- 13-3-o** **Study on Lifting of Multi-Story Multi-Bay Steel Frame with Friction Damper at Base**
Keito Shimada, Kumamoto University
-

13-4-o	Dynamic Behavior of 3D Steel Frame with Eccentricity and Equipped with Passive Friction Dampers at Base <i>Hiroyuki Miyamoto, Kumamoto University</i>
13-5-o	Torsional Response of 3D Steel Frames with Mass-eccentricity with Friction Damper at Base Varying Number of Frame Layers <i>Masashi Takiguchi, Kumamoto University</i>
13-6-o	A New Structural Concept as Brim-slab System for Structural Design of School Gymnasium <i>Takuji Wada, Kumamoto University</i>
13-7-o	Acoustic comfort in multi-group conversation space: a field experiment in a cafe with different BGM levels <i>Naoya Maruyama, Kumamoto University</i>

- **Room C**

Research Session on Computer Science

10-1-o	Using Word and Character N-grams Combinations Features for Classifying Deceptive and Truthful Reviews in Multi-Domains <i>Al Hafiz Siagian, Kumamoto University</i>
10-2-o	E-learning readiness toward the quality of teaching and learning: A preliminary study of 6 major Afghan public universities <i>Hamidullah Sokout, Kumamoto University</i>
10-3-o	Spoken Keyword Template Matching using Hybrid DTW and LSTM Neural Network for Mini Microphone Array System <i>Muhammad Bagus Andra, Kumamoto University</i>
10-4-o	Reduction of Resource Overheads for Virtual FPGA <i>Theingi Myint, Kumamoto University</i>
10-5-o	Estimation of sound source elevation by frequency domain binaural model <i>Kento Kuribayashi, Kumamoto University</i>
10-6-o	Skill transfer between non-uniformly shaped entities <i>Mehdi Mounsif, Université Clermont Auvergne</i>
10-7-o	Algorithmic Skeletons Using Template Metaprogramming <i>Alexis Pereda, Université Clermont Auvergne</i>

- **Room D**

General Session on Other issues in society related to science and technology

17-6-o	The Development of Replacement Notification Device for Moisture Absorber <i>Rong Ying Qian, National Kaohsiung University of Science and Technology</i>
17-7-o	Safety Detection System for Solitary Elderly by Infrared Sensors <i>Yi Tong Liu, National Kaohsiung University of Science and Technology</i>
17-8-o	"Time to Eat" - Food Expiration Reminder <i>Jia-Xuan Wu, National Kaohsiung University of Science and Technology</i>

17-9-o	Automatic cooling trash bin <i>Yen Yi Lu, National Kaohsiung University of Science and Technology</i>
17-10-o	Design of a temperature alarm pot handle <i>Yu Ting Yan, National Kaohsiung University of Science and Technology</i>
17-11-o	Innovative Design of Invisible Ceiling Fan Light <i>Chi Shiang Liu, National Kaohsiung University of Science and Technology</i>
17-12-o	Ion conduction and its application of nano carbon oxide materials <i>Junya Yagyu, Kumamoto University</i>
17-13-o	Luminescence of graphene oxide and metal ion hybrids <i>Haruka Hirayama, Kumamoto University</i>

November 29, Friday 14:10 – 15:55

● Room B

General Session on Environment/Other issues in society related to science and technology

16-1-o	High Efficiency Micro-Fracture of Glass by Underwater Shock Wave <i>Kanako Hiata, Kumamoto University</i>
16-2-o	Development of a water purification agent utilizing Aso Odo, Limonite <i>Haruto Fujimoto, Takamori High School</i>
16-3-o	The Effect of Foreign Oxalis on Growth of Native Butterfly <i>Tsubasa Sakiyama, Kumamotokita high school</i>
16-5-o	The Effects of Endocrine Disruptors on Living Organisms <i>Kazi Tanzina Rahman, Ege University</i>
17-1-o	High-Performance Product Design using Carbon Fiber Reinforced Plastics <i>Naoya Sanuki, Kumamoto University</i>
17-2-o	Structural Reproduction of Japanese Folding Fan using CAE <i>Shoji Watasaki, Kumamoto University</i>
17-3-o	Revealing the sea level change in the Ariake Sea by analyzing diatoms and pollens ~ To Protect the Future of the World ~ <i>Anmi Wakata, Amakusa High School</i>
17-14-o	Synthesis of building block for 2D materials <i>Akira Sugimoto, Kumamoto University</i>

● Room C

Research Session on Materials Science and Engineering

7-1-o	The study on constitutive equation and temperature dependence for extension of hard rubber NBR <i>Ryoma Nagata, Kumamoto University</i>
7-2-o	Changes in local mechanical properties near grain boundary in deformed aluminum bicrystal <i>Koichiro Kino, Kumamoto University</i>

7-3-o	Study of material properties and constitutive equation of hard rubber NBR <i>Tomoya Tasaki, Kumamoto University</i>
7-4-o	Numerical Study on Molten Zone of Laser-Heated Pedestal Growth with Various Powers Based on Semi-Gaussian-Annular Laser Input <i>Yuqing Yin, Shandong University</i>
7-5-o	Effect of process parameters on the functional properties of NiTi shape memory alloys fabricated by selective laser melting <i>Jingya Yu, Shandong University</i>
7-6-o	Microstructure characterization of the homogeneous weld of T24 steel in the state after welding + annealing at 480° C for 48 hours <i>Daniel Bartonek, VSB - Technical University of Ostrava</i>
7-7-o	Surface Modification and Dyeability Enhancement of Jute Fibers by Ambient Air Plasma Treatment <i>Giancarlo Dominador Sanglay, University of the Philippines Diliman</i>
7-8-o	Proton conduction of TiO₂ nanosheet <i>Hiroki Yasutake, Kumamoto University</i>

List of Papers in Poster Session

November 29, Friday

100th Anniversary Memorial Hall (10:55-11:55: Odd No., 12:55-13:55: Even No.)

Odd and even numbers mean sequential numbers in each field.

ex.) 2-1-p → Odd No., 2-2-p → Even No., . . .

PHYSICS	
2-1-p	Empirical Determination of the Thermal Expansion Coefficient of Glassy Materials <i>Taro Yukitake, Kumamoto University</i>
2-2-p	Breakdown of the Stokes-Einstein Law in AgI-AgPO ₃ <i>Kotaro Noguchi, Kumamoto University</i>
2-3-p	Particle Size Dependence of the Grüneisen Parameter <i>Kazuho Murata, Kumamoto University</i>
2-4-p	Correlation between the Dielectric Constant and other Physical Parameters in Binary Compounds <i>Hiroyuki Noda, Kumamoto University</i>
2-5-p	AFM investigation of a water layer at the interface between a titanium oxide nanosheet and a graphene <i>Seita Uechi, Kumamoto University</i>
2-6-p	FET characteristics of a graphene on a titania nanosheet <i>Inoue Daiki, Kumamoto University</i>
CHEMISTRY	
3-1-p	Synthesis and three-way catalysis of multi-component spinel oxides <i>Taiki Hirakawa, Kumamoto University</i>
3-2-p	Study on the Mn(III)-Based Oxidative Cyclization of Curcumine Derivatives <i>Yuma Yasutake, Kumamoto University</i>
3-3-p	Synthesis of Dioxo[4.4.3]propellanes Using Mn(III)-Based Oxidative Cyclization <i>Keisuke Shibuya, Kumamoto University</i>
3-4-p	Reaction of 3-(2,2-Diarylvinyl)pentane-2,4-diones and the Analogs with Mn(OAc) ₃ . Synthesis of 4,5-Dihydrofurans and 1,2-Dioxin-3-ols <i>Sosuke Oka, Kumamoto University</i>
3-5-p	Mn(III)-Based Oxidative Radical Cyclization of 2,2'-Methylenebis(3-hydroxycyclopent-2-en-1-one)s <i>Junpei Takayanagi, Kumamoto University</i>
3-6-p	Synthesis of Spirolactams and Spirodiimines by Mn(III)-Based Oxidative Cyclization <i>Yuuki Nakano, Kumamoto University</i>

BIOLOGICAL SCIENCES	
5-1-p	Effects of sucralose on dopaminergic neurons during early development of zebrafish <i>Afm Arifur Rahman, Kumamoto University</i>
APPLIED CHEMISTRY	
6-1-p	Reversible luminescence photoswitching of Diarylethene-Perovskite Quantum Dot hybrids <i>Ashkan Mokhtar, Kumamoto University</i>
6-2-p	Near-infrared fluorescence photoswitching based on photochromic diarylethene nanoparticles <i>Shinya Yamasaki, Kumamoto University</i>
6-3-p	Synthesis of Multi-Component Materials for Alternative Three-way Catalyst <i>Yushi Shimokawa, Kumamoto University</i>
6-4-p	Thermal Stabilisation Effects of Zr Buffer Layer on Nanometric Rh Overlayer Catalyst Formed on Metal Foil Substrate <i>Yusuke Kuzuhara, Kumamoto University</i>
6-5-p	Comprehensive search for the G-quadruplex structure in RNA using a RGB-1 <i>Maimi Inoue, Kumamoto University</i>
6-6-p	Fabrication of anti-EpCAM aptamer-modified gold substrate for capturing cancer cells <i>Ayase Tashima, Kumamoto University</i>
6-7-p	Development of a novel technology for suppression of gene expression based on specific secondary structure induction in RNA by staple oligomer <i>Takuto Kamura, Kumamoto University</i>
MATERIALS SCIENCE AND ENGINEERING	
7-1-p	Real time analysis of mechanical response associated with interaction between dislocation and grain boundary in magnesium bicrystal via in-situ TEM deformation <i>Junpei Yamaguchi, Kumamoto University</i>
7-2-p	Epitaxial growth of non-polar ZnO films on ZnO buffer layers on sapphire substrates by mist chemical vapor deposition <i>Yuki Nagao, Kumamoto University</i>
7-3-p	Structural properties of SnO₂ thin films on m-plane sapphire formed by mist chemical vapor deposition <i>Takumi Furukawa, Kumamoto University</i>
7-4-p	Formation of amorphous Al₂O₃ thin films by mist chemical vapor deposition <i>Kazuki Nishimura, Kumamoto University</i>
MECHANICAL SYSTEM ENGINEERING	
8-1-p	Evaluation of Cellular Responses towards Polymethyl Methacrylate Micro Particles for Development of Cancer Treatment Methods <i>Maisarah Binti Mat Rajab, Kumamoto University</i>
8-2-p	Experimental study on mechanical interaction between cancer cells and extracellular matrix <i>Mandkhai Ganbold, Kumamoto University</i>

COMPUTER SCIENCE	
10-1-p	Fast head-related transfer functions measurement via M-related classes <i>Kousuke Matsuoka, Kumamoto University</i>
ELECTRICAL ENGINEERING	
11-1-p	Extraction of yeast ingredient using pulsed electric fields <i>Taichi Kamezaki, Kumamoto University</i>
11-2-p	Consideration of electromagnetic analysis on pulse waveform for electroporation <i>Shunya Kazue, Kumamoto University</i>
CIVIL AND ENVIRONMENTAL ENGINEERING	
12-1-p	Factor Decomposition of Differences in Households with Every Member Out-Of-Home in Japanese cities <i>Tatsuya Fukahori, Kumamoto University</i>
12-2-p	Inferring Attribute Information in Smartphone-Based Travel-Survey Using Extended Topic Models <i>Rintaro Kizaki, Kumamoto University</i>
12-3-p	Analysis of the Impact of the Spread of Autonomous Sharing Car on Movement and Parking Demand <i>Ryoma Yae, Kumamoto University</i>
12-4-p	Arsenic Pollution of River by Volcanic Eruption of Mt. Io <i>Chika Komura, Kumamoto University</i>
12-5-p	The Relationship Between the Current Residential Locations and Future Residential Location Preferences of The Victims in Mashiki Following The 2016 Kumamoto Earthquake <i>Anna Nagasako, Kumamoto University</i>
12-6-p	Time series analysis of traffic accident increase after the 2016 Kumamoto earthquake <i>Kazutake Taguchi, Kumamoto University</i>
12-7-p	Investigating Day-To-Day Link-Flow Variation using Traffic Counter Data in Kumamoto, Japan <i>Katsuya Kumagae, Kumamoto University</i>
12-8-p	Exploring Weather Impact and Temporal Variation of Link Flow Using Traffic Counter Data in Kumamoto, Japan <i>Jun Murakami, Kumamoto University</i>
12-9-p	A flexible MDCEV Approach to Describe Visiting and Staying Behavior in Downtown Kumamoto <i>Shunta Yoshikawa, Kumamoto University</i>
12-10-p	Duration Analysis of Households with Every Member Out-of-Home (HEMO) <i>Kenta Kikuchi, Kumamoto University</i>
12-11-p	Environmental Optimization of Multiple Pathways for Rice Straw Utilization in the Philippines <i>Iliana Benice Toralba Tan, De La Salle University</i>