

J-K TFEC11 Technical Session

DAY 1: Wednesday, October 22, 2025

Time / Session	Room A1	Room A2	Room B1	Room B2
Session Chair:	T09 - Thermal Management 1 Tomoyuki Hatakeyama (Toyama Prefectural University)	F03 - Complex Fluids 1 Yutaka Kaneko (Tohoku University)	F05 - Fluid Machinery and Renewable Energy 1 Lee Chien-Shing (National Changhua University of Education)	F04 - Computational Fluid Dynamics 1 Yoshiaki Abe (Tohoku University)
11:00-11:15	JK-TFEC11-1253 Numerical study of the effects of geometric and operational parameters on transpiration cooling Jisu Park (Jeonbuk National University), Jeong-Yeol Kim (Korea Institute of Industrial Technology), Changwoo Kang (Jeonbuk National University)	JK-TFEC11-1391 Investigation of the influence of solution conductivity on PFAS decomposition combining bubbles and gas-liquid interface plasma Airi Kato, Shanshan Qing, (Institute of Science Tokyo), Douyan Wang, Takao Namihira (Kumamoto University), Nozomi Takeuchi (Institute of Science Tokyo)	JK-TFEC11-1126 Investigation of Loss Increase due to Stall in Vaneless Diffuser of Centrifugal Blower using Wall-resolved LES Kazuhiro Tsukamoto (Hitachi, Ltd.), Chisachi Kato (Nihon University)	JK-TFEC11-1176 Three-dimensional numerical study on the liquid carryover phenomena inside a shell-tube type evaporator for a turbo-chiller application with various flow guides and arrangements Kwang Il Seo (Pusan National University), Heung Ju Lee, Cheol Min Kim (LG Electronics), Man Yeong Ha, June Kee Min (Pusan National University)
11:15-11:30	JK-TFEC11-1212 Investigation of liquid film thickness distribution and fluctuation in a shear- driven liquid film flow Yosuke Ikemoto, Tomoki Hirokawa, Osamu Kawanami (University of Hyogo)	JK-TFEC11-1489 Numerical study on influence of magneto-hydrodynamic flow control on radiative heat transfer from wake in Martian Entry Kai Shimizu, Kotaro Tabuchi, Takayasu Fujino (University of Tsukuba)	JK-TFEC11-1162 Numerical investigation of the effects of design parameters for heat pump fan blades on fan performance Chihiro Iki, Yasumasa Suzuki, Yuya Miki, Hirotaka Ohashi, Chisachi Kato (Nihon University), Naoki Shikazono (The University of Tokyo)	JK-TFEC11-1218 Multiscale simulation of heat recirculation in urban cooling towers for realizing low-carbon cities Keigo Hirasawa, Ryo Onishi, Shoki Honda (Institute of Science Tokyo), Yoshihiro Goto, Katsuhiko Uchida, Mitsuki Akisawa (Minato Mirai 21 District Heating and Cooling Co., Ltd.)
11:30-11:45	JK-TFEC11-1530 Relationships between time-averaged Reynolds number and heat transfer performance around square heating element monted in recutangular duct in the case of forced convection boiling by pulsating flow Kota Fujisawa, Takashi Fukue, Jumpei Hatakeyama (Kanazawa Institute of Technology), Hidemi Shirakawa (National Institute of Technology, Toyama College)	JK-TFEC11-1233 Numerical study of wavy vortex flow in a rotating co-axial cylindrical channel with mhd interaction K. Namba, T. Hasebe T. Fujino (University of Tsukuba), H. Takana (Tohoku University), H. Kobayashi (Keio University)	JK-TFEC11-1192 Study on performance and flow fields of semi-opened axial fan placed in narrow space Norimasa Shiomi, Yoichi Kinoue (Saga University), Pin Liu (NIT Matsue College,)	JK-TFEC11-1227 Development of particle-based-simulation heat transfer coefficient model for thermal-fluid simulation of oil-cooled motor coil ends Jun'ichi Sato (MEIDENSHA CORPORATION), Koji Fukudome (Kanazawa Institute of Technology), Soichiro Fujimura, Makoto Yamamoto (Tokyo University of Science)
11:45-12:00	JK-TFEC11-1442 Influence of fin depth and thermal conductivity of T-shaped fin on immersion quenching in liquid nitrogen Fumiaki Matsuo, Kohei Yuki (Sanyo-Onoda City University)	JK-TFEC11-1337 Numerical simulation of fluid flow in an Ion-drag EHD micropump Yutaka Matsukawa (Nagasaki Institute of Applied Science)	JK-TFEC11-1388 Numerical analysis of unsteady flow related to aerodynamic noise in a turbofan using Lattice Boltzmann method Kazutoki Suzuki (Iwate University), Kazutoyo Yamada (Fukuoka University), Seiji Sato, Shinji Goto (Samsung R&D Institute Japan Co. LTD)	JK-TFEC11-1245 Flow field analysis of vertical cvd reactor with showerhead and baffle through flow visualization and numerical method Min Sang Yoo, Dong Kee Sohn, Han Seo Ko (Sungkyunkwan University)
12:00-12:15	JK-TFEC11-1274 A study on heat transfer enhancement in battery immersion cooling using nonconductive fluids Doan Quang Bao Phuc, Duong Van Hau, Nguyen Thanh Phuong, Nguyen Thi Nhan, Le Van Cong, Song Yoon-ha, Seo Seok-Min, Park Chan Woo (Jeonbuk National University)	JK-TFEC11-1330 Scale effects on EHD conduction pump performance related with heterocharge layers Riku Kisanuki (Toyohashi University of Technology), Masahito Nishikawara (Nagoya University), Takashi Kuraishi, Hiroshi Yokoyama (Toyohashi University of Technology)	JK-TFEC11-1315 Influence of rotor blade geometry on operating mode of an axial compressor at windmilling conditions Yamato Momose, Wakana Kobayashi, Nobumichi Fujisawa, Yutaka Ohta (Waseda University)	JK-TFEC11-1377 Numerical analysis of thermal-fluidic characteristics in industrial reheating furnace Junyeop Kim, Son Gihun (Sogang university)
12:15-12:30	JK-TFEC11-1239 A study on the heat transfer performance of a novel single-phase dielectric fluid for immersion cooling Yun Ha Song, Thi Nhan Nguyen, Le Van Cong, Yong Geun Kim, Seok Min Seo, Tae Hyun Park, Chan Woo Park (Jeonbuk National University)	JK-TFEC11-1314 Electrohydrodynamic drop on demand: AI-powered optimal experimental conditions prediction Mikolaj Mrozek, Donghoon Lee, Jinkee Lee, (Sungkyunkwan University)	JK-TFEC11-1435 Loss structure and unsteady flow in a stator passage of an axial compressor at windmilling conditions Wakana Kobayashi, Shunsuke Kawajiri, Hiromi Uruma, Nobumichi Fujisawa, Yutaka Ohta (Waseda University)	JK-TFEC11-1396 Numerical analysis of a novel d wavy fin for enhanced heat transfer in fin-and-tube heat exchangers Yujin Ra, Sujin Lee, Jeongwoo Roh, Jinyoung Kim, Yongchan Kim (Korea University)

J-K TFEC11 Technical Session

DAY 1: Wednesday, October 22, 2025

Time / Session Session Chair:	Room B3	Room B4	Room B5	Room B6
		J01 - Measurement Technique 1 Hiroshige Kikura (Institute of Science Tokyo)		T03 - Energy Conversion 1 Hiroshi Iwai (Kyoto University)
11:00-11:15		JK-TFEC11-1112 Effect of background type on the selection of analysis parameters for optical flow in the background oriented schlieren method Sakuma, S. (TMCIT), Ogasawara, Y. (Tohoku University), Takahashi, R., Iwata, G. (TMCIT), Yamagishi, M. (Salesian Polytechnic), Hirose, Y. (Shonan Institute of Technology), Inage, T. (The National Institute of Advanced Industrial Science and Technology), Ota, M., Udagawa, S. (Chiba University)		JK-TFEC11-1188 Electrochemical compression of R1234yf: experimental verification selection result Hyunmin Yang, Donik Ku, Kijeong Seo, Hyunkyu Noh, Yeontae Jeong, Jongjin An, Minsung Kim (Chung-Ang University)
11:15-11:30		JK-TFEC11-1135 Experimental study of complex particle motion and diffusion in the wall-vicinity region based on high-resolution particle-tracking with evanescent light field Kosuke, Morita, Ryusei Yajima, Masahiro Yajima, Katsuaki Shirai (Shibaura Institute of Technology)		JK-TFEC11-1427 Investigation of water transport and performance of a catalyst-coated membrane for polymer electrolyte fuel cells under controlled gas pressure using a microfluidic electrochemical device Wataru Ota, Takahiro Suzuki, Shohji Tsushima (The University of Osaka)
11:30-11:45		JK-TFEC11-1199 Drone-assisted vision system for large-scale 3d particle tracking Jungyeon Kim, Plus Soh, Jin-Tae Kim (POSTECH)		JK-TFEC11-1429 Reaction and transport analysis in the porous catalyst layer of polymer electrolyte fuel cell by Lattice Boltzmann method and pore network modeling H. Tagami, T. Suzuki, S. Tsushima (The University of Osaka)
11:45-12:00		JK-TFEC11-1329 Comparative study of optical properties evaluation using machine learning: verification by numerical calculation and experimental data Hiromichi Nozaki, Hiroyuki Fujii, Kazumichi Kobayashi, Masao Watanabe (Hokkaido University)		JK-TFEC11-1534 X-ray visualization of water distribution accumulated in a GDL of PEFC and evaluation of oxygen transport resistance Ziyu Peng, Yusuke Aoyama, Suguru Uemura, Yutaka Tabe (Hokkaido University)
12:00-12:15		JK-TFEC11-1347 Interference effects of multiple scattered fields in dense colloidal suspensions using light scattering measurements Sou Sasaki, Hiroyuki Fujii, Kazumichi Kobayashi, Masao Watanabe (Hokkaido University)		JK-TFEC11-1473 Effect of catalyst ink drying temperature on PEFC electrode performance Takashi Sasabe, Takeharu Ueno (Institute of Science Tokyo), Toshihiko Ogura (AIST), Katsuyuki Kawamura, Katsunori Sakai, Shuichi Hirai (Institute of Science Tokyo)
12:15-12:30		JK-TFEC11-1393 Experimental and numerical elucidation of transient CO₂ absorption into ionic liquid Soichiro Gunji, Yuki Kanda, Atsuki Komiya (Tohoku University)		

J-K TFEC11 Technical Session

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Session Chair:	T09 -Thermal Management 2 Kazuhisa Yuki (Sanyo-Onoda City University)	F03 - Complex Fluids 2 Kentaro Doi (Toyohashi University of Technology)	F05 - Fluid Machinery and Renewable Energy 2 Cho Jongjae (Korea Institute of Energy Research)	F04 - Computational Fluid Dynamics 2 June Kee Min (Pusan National University)
14:00-14:15	JK-TFEC11-1116 Development of design support tools for plate-fin and tube heat exchangers using optimization methods Keisuke Terada, Yoshiyuki Iwata, Taihei Koyama(Toshiba Corporation Corporate Laboratory), Takashi Hashizume, Yoshitake Kamijo (Toshiba Corporation Railway Systems Division)	JK-TFEC11-1104 Effect of sheath flow on alignment of cellulose nanofibrils in electric field assisted flow-focusing channel Yutaka Kaneko, Satoru Fukumori, Hidemasa Takana (Tohoku University)	JK-TFEC11-1303 Optimization of blade outlet angle for enhanced biradial turbine performance in OWC wave energy systems Seong Jong Bae, B.H.B.P.D. Baddegamage, Seung Hyun Jang, Min Yoon (Korea Maritime and Ocean University)	JK-TFEC11-1119 Wetness loss prediction of steam flows through a turbine cascade using eulerian-eulerian method Kazushi Morikita, Takashi Furusawa, Hironori Miyazawa, Satoru Yamamoto (Tohoku University), Yasuhiro Sasao, Satoshi Miyake, Soichiro Tabata (Mitsubishi Heavy Industries Ltd.)
14:15-14:30	JK-TFEC11-1230 Laboratory experiments of a multi-evaporator loop heat pipe for solar heat utilization Ren Hamada (Toyohashi University of Technology), Masahito Nishikawara (Nagoya University), Takashi Kuraishi, Hiroshi Yokoyama (Toyohashi University of Technology)	JK-TFEC11-1508 Influence of AC magnetic field frequency and nano-rod orientation on magnetization properties of magnetic nano-rod dispersion Masahiro Miyamoto, Masaaki Motozawa, Satoshi Ota, Mitsuhiro Fukuta (Shizuoka University)	JK-TFEC11-1297 Simulation of crossflow air turbine dynamics under irregular wave conditions B.H.B.P.D. Baddegamage, Seong Jong Bae, Seung Hyun Jang, Min Yoon (Korea Maritime and Ocean University)	JK-TFEC11-1149 Numerical simulation of transonic buffet in moist-air flows Tomoya Takuma, Yasuharu Hagita,Hironori Miyazawa, Takashi Furusawa, Satoru Yamamoto (Tohoku University)
14:30-14:45	JK-TFEC11-1279 Thermal performance evaluation of a wrap-around loop heat pipe with various working fluids Jung Chan Moc, Sukkyung Kang, Jungho Lee (Ajou University)	JK-TFEC11-1118 Inverse magnetostriction induced by particle dynamics in permanent magnet foamed urethane elastomers Yuto Hiraiwa, Gakuho Oe, Yuhiro Iwamoto, Yasushi Ido (Nagoya Institute of Technology), Hisashi Tsuruta (INOAC Corporation), Nobuyuki Makihara (BASF INOAC POLYURETHANES Ltd.)	JK-TFEC11-1148 Effect of design tip speed ratio and tip speed ratio on performance of contra-rotating propeller wind turbine Naoki Tsuji, Naoki Ota, Takuji Hosotani, Toru Shigemitsu (Tokushima University)	JK-TFEC11-1215 Aeroacoustic analysis of the centrifugal fan using splitters and unevenly-spaced blades Jeong Tae Kim, Seongho Park, June Kee Min (Pusan National University)
14:45-15:00	JK-TFEC11-1434 Flow visualization in the evaporator section of two-phase closed thermosyphon with varying widths of hydrophilic/phobic stripe patterns Gyuchang Kim, Jaeseon Lee (Ulsan National Institute of Science and Technology)	JK-TFEC11-1293 String vibration response and energy harvesting of permanent magnet elastomers Y. Yoshida, W. Kumagai, Y. Iwamoto, Y. Ido (Nagoya Institute of Technology), M. Kaneeda, N. Tamura, S. Komiya (Resonac Corporation)	JK-TFEC11-1428 Prediction of flow field and rotor performance of three-rotor parallel layout of experimental miniature vertical axis wind turbines by a fast computation method Moral MD Shameem, Inai Hiroto, Hara Yutaka (Tottori University), Jodai Yoshifumi (NIT, Kagawa College), Zhu Hongzhong (Kyushu University)	JK-TFEC11-1327 Efficient film cooling design for gas turbine endwalls using a genetic algorithm Jiyong Choi, Jungwoo Kim, Jeongwon Lee (Yonsei University), Ju-Hyun Im (Agency for Defense Development), Hyung Hee Cho, Jung-Il Choi (Yonsei University)
15:00-15:15	JK-TFEC11-1430 Experimental evaluation of gyroid two-fluid heat exchanger Weichen Wang, Di Chen, Yosuke Hasegawa (The University of Tokyo)	JK-TFEC11-1365 Temperature-sensitive magnetic fluid utilizing volume change of thermoresponsive gel Takumu Kayahashi, Junpei Sakurai, Seiichi Hata, Chiemi Oka (Nagoya University)	JK-TFEC11-1438 Investigation of wake deflection of offshore wind turbines Shoki Ohgi, Yuki Fukatani (Toshiba Energy Systems and Solutions), Koichiro Shibuya, Keisuke Umazume, Masaki Inui (Kanadevia Corporation), Yoshihiro Taniyama (Toshiba Energy Systems and Solutions), Takanori Uchida (Kyushu University)	JK-TFEC11-1364 High-fidelity simulation of turbulent wet steam flows in a steam turbine cascade Yasuharu Hagita, Hironori Miyazawa, Takashi Furusawa, Satoru Yamamoto (Tohoku University)
15:15-15:30	JK-TFEC11-1447 Refrigerant charge design and circulation amount optimization in heat pump for thermal management of EVs Donik Ku, Yeontae Jeong, Minsung Kim (Chung-Ang University)	JK-TFEC11-1175 Effect of morphology of gold/iron-oxide nanocomposites on radiosensitization and their magnetic heating Kuma Hashimoto, Junpei Sakurai, Seiichi Hata Katsunori Yogo, Chiemi Oka (Nagoya University)	JK-TFEC11-1326 Evaluation of secondary-flow structures in rotating flow within corotating disks using reconstruction of three-dimensional velocity fields Ren Nakamoto, Tomohiro Ueno, Stefan Thomas Bockamp (Shibaura Institute of Technology), Muhammad Aiman bin Mohd Nor (Keio University), Ibrahim Abubakar, Masud, Katsuki Shirai (Shibaura Institute of Technology)	

J-K TFEC11 Technical Session

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		J01 - Measurement Technique 2 Hideo Mori (Kyushu University)	T01 - Biothermal Engineering 1 Takahiro Okabe (Hiroshima University)	T03 - Energy Conversion 2 Yutaka Tabe (Hokkaido University)
14:00-14:15		JK-TFEC11-1114 Measurement of temperature distribution around bubbles during flow boiling in a narrow channel using temperature-sensitive paint Ryota Asami, Tetsuya Fukunaga (Waseda University), Yusaku Abe (Tokyo University of A&T), Yasuhiro Egami (Aichi Institute of Technology), Osamu Kawanami (University of Hyogo), Yu Matsuda (Waseda University)	JK-TFEC11-1129 An experimental study using the polarized light schlieren method to investigate the pain-relief mechanism of HIFU in knee osteoarthritis Shinnosuke Asaki, Yuya Iseki (NIT, Hachinohe College)	JK-TFEC11-1204 Thermodynamic comparison of fuel cells and combustion engines Hiroyuki Kaguchi, Kohei Ito, Hironori Nakajima (Kyushu University)
14:15-14:30		JK-TFEC11-1180 Temperature measurement using thermo-chromic liquid crystals with scattered light intensity measurements and machine learning Takashi Yamamura (Institute of Science Tokyo), Kyoshiro Kanamori, Tetsu Nagata (Manufacturing Engineering Development Center), Tadashi Hongou (Institute of Science Tokyo), Akira Sumitani (Manufacturing Engineering Development Center,), Takushi Saito (Institute of Science Tokyo)	JK-TFEC11-1346 Quantitative evaluation of thermal damage regions using GAN based non-invasive temperature estimation from ultrasound imaging Seiya Yamada, Yuya Iseki (NIT, Hachinohe College)	JK-TFEC11-1532 Estimation of triple-phase boundary density in porous SOC electrodes using topological structural information Naruhito Sato, Sojiro Yamatoko, Masashi Kishimoto, Yuting Guo, Hiroshi Iwai (Kyoto University)
14:30-14:45		JK-TFEC11-1237 Development and validation of flow estimation methods based on wall thermal measurements Hiroki Nakajima, Kazuhito Dejima, Kiyoshi Kawasaki (The University of Shiga Prefecture)	JK-TFEC11-1157 Optimization of freeze-thaw protocol for cryopreservation of scaffold-free bone spheroids Jeonghyun Kim, Kanoko Ohama, Kosei Kawai, Kosaku Kurata (Kyushu University)	JK-TFEC11-1286 Active and stable atomic-layer-deposited CeO₂@LSCF oxygen electrode for reversible solid oxide cell Sung Eun Cho, Kyoungjae Ju, Hyunmin Kim (Pohang University of Science and Technology), Jeffrey W. Elam (Argonne National Laboratory), Jihwan An (Pohang University of Science and Technology)
14:45-15:00		JK-TFEC11-1407 Evaluation and validation of TEG heat sink performance using thermographic MyeongJin Seo (Chung-Ang University), Seongmin Kang (Gachon University), Hideo Mori (Kyushu University), Jae-Ho Jeong (Chung-Ang University)	JK-TFEC11-1546 Numerical estimation of cyclic heating in biological tissue during ablation therapy Tomoki Tani, Yuki Kanda, Atsuki Komiya (Tohoku University)	JK-TFEC11-1415 Surrogate-assisted optimization of catalyst distribution for temperature uniformity in a direct internal reforming solid oxide fuel cell Kosuke Kanzaki, Daichi Iwane, Masashi Kishimoto, Guo Yuting, Hiroshi Iwai (Kyoto University)
15:00-15:15		JK-TFEC11-1541 Temperature sensitive particles excitable by blue and green lasers Satoshi Someya, Nanaha Higuchi, Fengjie Zhuang, Manato Kakuyama, Toshie Koyama (Tokyo Denki University)		JK-TFEC11-1209 Development of a battery prediction model using thermal-electrical characteristics of lithium-ion batteries Yongjoo Jun, Hoseong Lee (Korea University)
15:15-15:30		JK-TFEC11-1501 Development of object shape measurement method using laser light and ultrasonic waves S. Kozaka (Institute of Science Tokyo), N. Shoji (Muran Institute of Technology), S. Oshima, W. Zhang (Institute of Science Tokyo), H. Kawai (Muran Institute of Technology), H. Takahashi, H. Kikura (Institute of Science Tokyo), N. Tsuzuki (Institute of Applied Energy)		JK-TFEC11-1395 An investigation into the cooling efficiency of thermoelectric modules utilizing block extenders Kosuke Yamada, Koya Sato, Chungpyo Hong, Eiji Kinoshita (Kagoshima University), Yutaka Asako (University Technology Malaysia), Mohammad Faghri (The University of Rhode Island)

J-K TFEC11 Technical Session

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16:00-16:15	JK-TFEC11-1211 Design optimization of EV air-cooled heat exchanger using the multi-objective genetic algorithm Seongmin Han (Korea University), Junsuk Youn, Minsu Jeong (HYUNDAI-WIA Corporation), Hoseong Lee (Korea University)	JK-TFEC11-1226 Numerical simulation on ion transport in carbon nanotube composite paper for water energy harvesting Ryo Igari, Hidemasa Takana (Tohoku University)	JK-TFEC11-1485 CFD analysis of oil injected screw compressor Priyanshu Aryan, Byungjin An, Motohiko Nohmi (Ebara Corporation)	JK-TFEC11-1224 Efficient and scalable quantum library solving two-dimensional poisson equations with mixed boundary conditions Dongyun Chung, Jiyong Choi, Jung-Il Choi (Yonsei University)
16:15-16:30	JK-TFEC11-1241 Study on heat transfer improvement of heat exchanger by fan turbulence using large-scale LES Ryosuke Inoue, Masaharu Sakai, Hideaki Sato (Denso Corporation), Kinya Saito (Numerical Flow Designer Inc.), Ryoichi Kurose (Kyoto University)	JK-TFEC11-1263 Nanochannel pH sensor using ionic current rectification Tatsunori Kishimoto, Hiroo Nakamura, Kei Nakamura, Kentaro Doi (ToyoHashi University of Technology)	JK-TFEC11-1488 Development of a turbo-expander for natural refrigerant-based ultra-low temperature chillers in semiconductor processes Jongjae Cho, Hyungki Shin, Beomjoon Lee, Sang-Hyun Che, Eun-Seok Wang, Junhyun Cho, Bongsu Choi, Bong Seong Oh, Sun Ik Na, Youngbok Lee, Eun-chul Kang, Ho-Sang Ra, Gil-bong Lee (Korea Institute of Energy Research)	JK-TFEC11-1251 An efficient multigrid solver for anisotropic poisson problems using plane relaxation Young-Jin Yoon, Haecheon Choi (Seoul National University)
16:30-16:45	JK-TFEC11-1223 Hybrid battery thermal management system using a novel heat spreader Se Won Kim, Dong Rip Kim (Hanyang University)	JK-TFEC11-1107 Separation and analysis of nanoparticle transport using 10-parallel nanochannels Itsuki Saito, Tatsunori Kishimoto, Kentaro Doi (ToyoHashi University of Technology)	JK-TFEC11-1533 A novel integrated film-transpiration cooling design for enhancing film-cooling performance Chien-Shing Lee (National Changhua University of Education)	JK-TFEC11-1258 Low-dissipation boundary variation diminishing scheme using neural-network model for two-phase gas-liquid compressible flows with phase change Hiro Wakimura (Institute of Science Tokyo), Minsheng Huang (Shanghai Jiao Tong University), Takuya Kuwabara (Institute of Science Tokyo), Lidong Cheng (Shanghai Jiao Tong University), Satoshi Ii, Feng Xiao (Institute of Science Tokyo)
16:45-17:00	JK-TFEC11-1256 Improved cooling performance of a U-type air-cooled lithium-ion battery pack through inclined manifolds Jeonghun Ko, Changwoo Kang (Jeonbuk National University)	JK-TFEC11-1143 Single particle sensing tuned by pressure-driven flow in nanochannels Sojiro Ochi, Tatsunori Kishimoto, Kentaro Doi (ToyoHashi University of Technology)	JK-TFEC11-1373 Fundamental study on the thermophysical properties of absorbents for flue gas waste heat recovery absorption systems Se Hyeon Noh, Chan Woo Park (Jeonbuk National University)	JK-TFEC11-1280 Improvement of computational accuracy of two-dimensional flow between thin membranes using extended finite element method Takumi Shimabuku, Suguru Miyauchi (University of Miyazaki)
17:00-17:15	JK-TFEC11-1255 Thermal analysis of 18650 lithium iron phosphate batteries Ina Jeong, Subin Kim, Changwoo Kang (Jeonbuk National University)	JK-TFEC11-1132 Doublet crater formed by the fall of two objects of different masses Haruto Kitagawa, Ririha Obara, Yu Matsuda (Waseda University)	JK-TFEC11-1421 Development and performance evaluation of a reverse brayton cycle air refrigeration system for ultra-low temperature applications Beomjoon Lee, Jongjae Cho, Hyungki Shin, Gilbong Lee, Junhyun Cho, Eunseok Wang, Hosang Ra, EunChul Kang, Bongsoo Choi, Bongseong Oh, Sun Ik Na, Sanghyun Che, Young-Jin Baik (Korea Institute of Energy Research)	JK-TFEC11-1319 Local refinement technique for simulating cellular-scale mass transferphenomena in brain tissue using mesh-constrained discrete point method Tomoharu Tsuzuki, Takeharu Matsuda, Hiro Wakimura, Satoshi Ii (Institute of Science Tokyo)
17:15-17:30	JK-TFEC11-1355 Integrated CO₂ sorption and thermal management in LED heatsinks using functionalized MWCNT-PEI coatings Bo Ra Kim, Bong Kyu Shin, Jae Won Lee (Korea Maritime & Ocean University)	JK-TFEC11-1385 Gasdynamic analogy of soap film flows Ildoo Kim (Konkuk University)	JK-TFEC11-1353 Inkjet-printed patterned proton ceramic electrolysis cells for enhanced hydrogen production Sung Min Kang, Kyeong Chan Min, Kyung Ho Oh, Kitae Han, Joon Hyung Shim (Korea University)	JK-TFEC11-1424 Elucidation of heat transfer mechanism through LES analysis of fin-induced vortex structure in stagnation flow Je-Hyeong Park, Jun-beom Park, Jae-Ho Jeong (Chung-ang University)

J-K TFEC11 Technical Session

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Session Chair:		J01 - Measurement Technique 3 Satoshi Someya (Tokyo Denki University)	T01 - Biothermal Engineering 2 Woosung Park (Hanyang University)	T03 - Energy Conversion 3 Jihwan An (Pohang University of Science and Technology)
16:00-16:15		JK-TFEC11-1225 Prediction of liquid film surface wave shapes using spot measurement and validation through ray-tracing simulation Shinsuke Watanabe, Toshiyuki Sanada (Shizuoka University)	JK-TFEC11-1206 Wearable thermal MEMS sensor for sweat-rate monitoring during exercise Hidefumi Yoshizawa, Honoka Yasuda, Yoshiyasu Ichikawa, Takahiro Mukaimoto, Shinya Yanagita, Tatsunori Suzuki, Isao Shitanda, Masahiro Motosuke (Tokyo University of Science)	JK-TFEC11-1463 Charge-discharge behavior and overpotential characteristics of the anode in a lithium-based hydrogen supply system R. Kobayashi, S. Uemura, Y. Aoyama, Y. Tabe (Hokkaido University)
16:15-16:30		JK-TFEC11-1336 Experimental validation of fiber-optic concurrent measurement of bubble size and film thickness for the foam flow Ryota Tanioka (Shizuoka University), Shimpei Saito (AIST), Yuki Mizushima (Shizuoka University)	JK-TFEC11-1325 Characterization of a blood perfusion phantom for evaluation and calibration of hyperthermia treatment devices Aoi Hayano, Yuya Iseki (NIT, Hachinohe College)	JK-TFEC11-1121 Operating characteristics of sorption thermal battery with heat pump for thermochemical heat storage Ja Ryong Koo, Hyung Won Choi, Yong Tae Kang (Korea University)
16:30-16:45		JK-TFEC11-1248 Highly sensitive detection of single nanoparticle using optical interferometry with nanochannel Yuri Yoshida, Takahiro Suzuki, Yoshiyasu Ichikawa, Masahiro Motosuke (Tokyo University of Science)	JK-TFEC11-1158 Measurement of water activity distribution in medaka fish eggs using shortwave infrared micro spectroscopy Kosei Kawai (Kyushu University), Ryo Shirakashi (The University of Tokyo)	JK-TFEC11-1172 A study on the separation of water from a nitrogen-steam mixture by homogeneous non-equilibrium condensation in a supersonic impactor Ali Sadeghi, Byoung Jae Kim (Chungnam National University)
16:45-17:00		JK-TFEC11-1265 A flexible multi-directional flow sensor Tianxia Yu, Genta Miyake, Yoshiyasu Ichikawa, Masahiro Motosuke (Tokyo University of Science)	JK-TFEC11-1382 Development of thin thermal sensor with a microfluidic channel for monitoring biotransport properties Ryota Takahama (Hirosaki University), Yuto Hiyama (SEMITEC Corporation), Takahiro Okabe (Hirosaki University)	JK-TFEC11-1408 Experimental study on an open-cycle refrigeration system using R718 and a vacuum compressor Jongjin An, Donik Ku, Jr., Kijeong Seo, Hyunkyu Noh, Hyunmin Yang, Yeontae Jeong, Minsung Kim (Chung-Ang University)
17:00-17:15		JK-TFEC11-1268 Development of a water level measurement method applicable during severe accidents and verification of bubble interference Takahiro Ito, Weichen Zhang, Hiroshige Kikura (Institute of Science Tokyo), Daisuke Sasa, Takeshi Suzuki (Tokyo Electric Power Company Holdings, Inc.)		JK-TFEC11-1411 Numerical study of curved supersonic nozzle using heterogeneous condensation Sungjin Kim, Ali Sadeghi, Byoungjae Kim (Cungnam National University)
17:15-17:30		JK-TFEC11-1544 Development of fluorescent gel-based temperature sensor with extended depth of focus using multi-focal lens array Shogo Ito (Kyoto University), Anthony Beaucamp (Keio University), Reiko Kuriyama (Kyoto University), Kazuya Tatsumi (Kyoto Institute of Technology)		JK-TFEC11-1522 Dissimilar heat transfer enhancement by travelling wave-like flow disturbances induced in a triangular duct with porous walls Ichiro Miyoshi (Mitsubishi Heavy Industries Aero Engines), Yosuke Hasegawa (The university of Tokyo)

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time / Session	Room A1	Room A2	Room B1	Room B2
Session Chair:	T09 -Thermal Management 4 Ai Ueno (Nagoya University)	F03 - Complex Fluids 4 Masakazu Muto (Naogya Institute of Technology)	F05 - Fluid Machinery and Renewable Energy 4 Yuka Iga (Tohoku University)	F04 - Computational Fluid Dynamics 4 Haechon Choi (Seoul National University)
10:30-10:45	JK-TFEC11-1333 Heat transfer path representation of an electric motor and semiconductors utilizing thermal impedance distribution Koji Nishi (Ashikaga University)	JK-TFEC11-1516 Rheometries based on flow information suited for different situations Yuji Tasaka (Hokkaido University), Kohei Ohie (Nagoya University), Daigo Nishizuka, Wenqing Zheng (Hokkaido University), Taiki Yoshida (National Institute of Advanced Industrial Science and Technology)	JK-TFEC11-1123 Performance and cavitation flow of small side thruster for ship at low cavitation numbers Taiyo Nishio, Toru Shigemitsu (Tokushima University), Tsutomu Soda (Takazawa Manufacturing Co., Ltd.)	JK-TFEC11-1200 Drag reduction effect in a turbulent channel flow using streamwise traveling wave-like wall deformation with spanwise phase shift Kyohei Oishi, Senri Miura (Keio University), Yusuke Nabae (Tokyo University of Science), Koji Fukagata (Keio University)
10:45-11:00	JK-TFEC11-1545 Thermal network analysis for evaluating heat dissipation performance of thermal vias and inner copper layer in PCB Tomoyuki Hatakeyama, Masaru Ishizuka (Toyama Prefectural University)	JK-TFEC11-1163 Taylor-Couette flow of shear-thinning fluids with a ribbed inner cylinder Hayato Nakagawa, Hayato Masuda, Hiroyuki Iyota (Osaka Metropolitan University)	JK-TFEC11-1213 The influence of different blade geometries of fan-type inducers on cavitation instability phenomena Shimpei Narimatsu, Hajime Nukatsuka (Osaka Institute of Technology), Yusuke Noguchi, Shinichiro Ejiri (Nikkiso Co., Ltd.), Masahiro Miyabe (Osaka Institute of Technology)	JK-TFEC11-1272 Effects of feedback force points on data assimilation accuracy in measurement-integrated simulation of two-dimensional flow around a circular cylinder Kota Hirose, Suguru Miyauchi (The University of Miyazaki)
11:00-11:15	JK-TFEC11-1512 Development of thermal model of electrical components with high heat generation mounted in high-density packaging electronic equipment Masahito Fujiwara (Kanazawa Institute of Technology), Keiichiro Taka, Koki Nagai, Takeshi Takano, Yuhei Sugimori (COSEL CO., LTD.), Takashi Fukue (Kanazawa Institute of Technology)	JK-TFEC11-1497 Reversal of hydrodynamic forces in shear-thinning flow between eccentric rotating cylinders Masafumi Hayashi, K. Sugiyama (The University of Osaka)	JK-TFEC11-1412 Numerical analysis of cavitation suppression a baffle plate equipped downstream of a fan-type inducer in a centrifugal pump Hajime Nukatsuka, Shimpei Narimatsu (Osaka Institute of Technology), Yusuke Noguchi, Takayuki Hiraishi, Yasushi Fujishima, Shinichiro Ejiri (Nikkiso Co., Ltd.), Masahiro Miyabe (Osaka Institute of Technology)	JK-TFEC11-1375 Data assimilation-based resolvent analysis of supersonic jets under experimental conditions using PIV data and RANS simulations Renwei Wang (Nagoya University), Yuta Ozawa (JAXA), Takayuki Nagata, Taku Nonomura (Nagoya University)
11:15-11:30	JK-TFEC11-1259 Evaluation of cabin thermal performance for flexible interior layouts in future mobility Byeonghyeon Kang, Dongchan Lee (University of Seoul)	JK-TFEC11-1232 Flow prediction of complex fluids using velocity-profiling -assisted rheomerty Kohei Ohie (Nagoya University), Yuji Tasaka (Hokkaido University), Ruri Hidema (Nagoya University), Yuichi Murai (Hokkaido University)	JK-TFEC11-1217 An experimental study about how to evaluate the thermodynamic effects in cryogenic pumps Hiroki Hirano (Tohoku University), Michiya Kaku (National Institute of Technology, Kumamoto College), Shuichi Moriya (Tohoku University), Teiichi Tanaka (National Institute of Technology, Kumamoto College), Yuka Iga (Tohoku University)	JK-TFEC11-1400 Effect of numbers of modes and sensors for the extended DEIM methods Aran Kobayachi, Yasuo Sasaki, Taku Nonomura (Nagoya University)
11:30-11:45	JK-TFEC11-1235 Basic study on heat transfer enhancement around a straight fin array with pulsating flow Tomoya Kazumi (Nissan Motor Co. Ltd, and Kanazawa Institute of Technology), Kota Fujisawa, Ryosei Nishino (Kanazawa Institute of Technology), Kenta Emori (Nissan Motor Co. Ltd), Takashi Fukue (Kanazawa Institute of Technology)	JK-TFEC11-1155 An experimental study of the characteristic motion of single large bubbles rising in hydrophobically modified alkali-soluble associative polymer solutions Ryusei Hatake, Mituhiro Ohta (Tokushima University), Shuichi Iwata (Nagoya Institute of Technology)	JK-TFEC11-1459 Experimental study of unsteady behavior of cavitation during instabilities in a centrifugal pump Jia Liu (Tohoku University), N. Yang, M. Nohmi (EBARA Corporation), Y. Iga (Tohoku University)	JK-TFEC11-1452 Fundamental study on effects of feedback force points in measurement-integrated simulation for three-dimensional flow around a circular cylinder Leon Atake, Suguru Miyauchi (The University of Miyazaki)
11:45-12:00	JK-TFEC11-1474 Analysis of relationship between flow characteristics and cooling performance of heating elements in flow separation regions by pulsating flow using model-based design approach Daiki Kobayashi, Takashi Fukue (Kanazawa Institute of Technology), Shin Wakitani (Hiroshima University)	JK-TFEC11-1154 Numerical simulations of shear-induced drop deformation and breakup in shear-thinning fluids Asumi Kato, Mitsuhiro Ohta (Tokushima University), Edwin Jimenez (Spectral Numerical LLC), Mark Sussman (Florida State University)	JK-TFEC11-1509 Experimental analysis of paint detachment progression due to cavitation impact on material surface using paint method Kazuto Okuma, T. Takamine, S. Tsuda, S. Watanabe (Kyushu University)	JK-TFEC11-1456 Fluid-structure interaction analysis using control theory Chungil Lee, Tomoki Yamazaki (Tohoku University), Yu Kawano (Hiroshima University), Yoshiaki Abe (Tohoku University)

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time / Session Chair:	Room B3	Room B4	Room B5	Room B6	Room B7
		T04 - Micro/Nano Heat and Mass Transfer 1 Jungwan Cho (Sungkyunkwan University)	J02 - AI and Machine Learning 1 Kazuya Tatsumi (Kyoto Institute of Technology)	T02 - Combustion 1 Jun Hayashi (Kyoto University)	T12 - Advanced thermal technologies for CN 1 Honghyun Cho (Chosun University)
10:30-10:45		JK-TFEC11-1526 Design of near-field thermoradiative systems with radiative cooling Chanyeong Hwang, Namwoo Kim, Gye Heo (Kyung Hee University), Mikyung Lim (Korea Institute of Machinery and Materials), Jaeman Song (Kyung Hee University)	JK-TFEC11-1146 3D flow field reconstruction around a cylinder in a duct based on 2D PIV measurement data Ryo Nishikawa, Ryo Araki, Takahiro Tsukahara (Tokyo University of Science), Takayuki Osawa, Yousuke Hasegawa (The University of Tokyo)	JK-TFEC11-1117 Numerical investigation of liquid ammonia spray flame characteristics using a single hole nozzle in a swirling burner under various thermal wall conditions K.D. Kunkuma A. Somarathne, Hirofumi Yamashita, Yi R. Chen, Reibel Gauthoer, Hisayoshi Ito, Taku Kudo, Akihiro Hayakawa, Hideaki Kobayashi (Tohoku University)	JK-TFEC11-1477 Thermal conductivity measurement of various liquids using bi-directional steady-state thermoreflectance technique Ho-Sung Kim, Dong-Wook Oh (Chosun University)
10:45-11:00		JK-TFEC11-1120 Thermal conductivity of silicon crystals with amorphous nanoinclusion Yuki Mori (Tokyo University of A&T), T. Shiga (Toyota Technological Institute), T. Hori (Tokyo University of A&T)	JK-TFEC11-1151 Influence of training data on the accuracy of flow field predicted by a supervised neural network model Ren Saito, Koji Shimoyama (Kyushu University)	JK-TFEC11-1439 Stability of liquid ammonia spray flames in oxygen-enriched co-flow burner using orifice nozzle Yi-Rong Chen, Sophie Colson, Jua Liang, Ke Ji, Akihiro Hayakawa, Hideaki Kobayashi (Tohoku University)	JK-TFEC11-1160 Empirical modeling of thermal properties in nanoparticle-enhanced LiBr/H₂O solutions for single-stage absorption refrigeration applications Tsogtbilegt Boldoo, Lee Jin Gwon, Honghyun Cho (Chosun University)
11:00-11:15		JK-TFEC11-1166 Effect of nanoscale voids on phonon mean free path in nanostructured materials Shunsuke Nampo, S. Kidooka, T. Hori (Tokyo University of A&T)	JK-TFEC11-1270 Super-resolution of 4D flow MRI via physics-informed normalized Gaussian splatter Seungmin Kang, Sun Jo, Je Hyeong Hong (Hanyang University), Seok Young Hong (Nanyang Technological University), Simon Song (Hanyang University)	JK-TFEC11-1368 Combustion analysis and in-cylinder pressure prediction of ammonia-gasoline and ammonia-ethanol mixtures in a SACI engine using deep neural networks Takanobu Okada, Ferdinand R. Tjotjono, Eric L. R. Ngwompe Souop, Emir Yilmaz, Mitsuhisa Ichianagi, Takashi Suzuki (Sophia University)	JK-TFEC11-1311 Comparative study on Janus nanoparticle based working fluids for solar energy harvesting Hyemin Kim, Veerakumar Chinnasamy, Honghyun Cho (Chosun University)
11:15-11:30		JK-TFEC11-1196 Molecular dynamics study of thermal transport property at the interface between two-dimensional layered materials hBN and water Kota Takahashi (Tohoku University), Meng An., Junichiro Shiomi (The University of Tokyo), Gota Kikugawa (Tohoku University)	JK-TFEC11-1419 Time-series prediction of flow fields based on temporal evolution models estimated from PIV data Misato Kurosawa, Tsuneto Narita, Ryuji Kokubo (Waseda University), Masaki Okawa, Tubasa Ikami (Tohoku University), Yasuhiro Egami, Hiroki Nagai (Aichi Institute of Technology), Yu Matsuda (Waseda University)	JK-TFEC11-1357 Large eddy simulation of turbulent combustion for small-size hydrogen gasturbine Nobuyuki Oshima (Hokkaido University), Takayuki Nishiie (Flow Designing Co. Ltd), Takahiro Minami (Toyota motor Corporation)	JK-TFEC11-1243 Numerical approach on multi-staging ammonia-air injection strategies for NO_x reduction under ammonia fueled swirl burner at atmospheric condition Minhyeok Kim, Jungsoo Park (Chosun University)
11:30-11:45		JK-TFEC11-1416 Arrhenius-based model for liquid molecule transport characteristics in the vicinity of the solid-liquid interface Naohiro Dezawa, Donatus Surblys (Tohoku University), Takeo Nakano (Tokyo Electron Technology Solutions Ltd.), Taku Ohara (Tohoku University)	JK-TFEC11-1480 Improving the accuracy of flow field prediction by a physics-informed neural network with space-adaptive sampling and epoch-adaptive weighting Shunya Yoshida, Koji Shimoyama (Kyushu University)	JK-TFEC11-1506 Fundamental combustion characteristics of hydrogen-mixed fuel emitted in steel production Won Seok Jang, Seo Ra Lee, Gwan Woo Lee, Yuseon Jeon, Hyeon Taek Nam, Seungro Lee (Jeonbuk National University)	JK-TFEC11-1269 Measurement of low-concentration helium in air by using a suspended microheater Chang-Ui Jeon, Dong-Wook Oh (Chosun University)
11:45-12:00		JK-TFEC11-1441 Enhanced hot electron cooling in gold thin films via a polar dielectric interlayer Byunggi Kim (Institute of Science Tokyo), Laurent Jalabert, Jose Ordenez-Miranda (The University of Tokyo), Daiki Higuma, Kazuyoshi Fushinobu (Institute of Science Tokyo), Sebastian Volz, Masahiro Nomura (The University of Tokyo)			JK-TFEC11-1302 Numerical analysis of a thermal energy storage system integrated with renewable energy source Nayoung You, Seongmin Choi, Honghyun Cho (Chosun University)

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time / Session Chair:	Room A1	Room A2	Room B1	Room B2
	T09 -Thermal Management 5 Takashi Fukue (Kanazawa Institute of Technology)	F03 - Complex Fluids 5 Kohei Ohie (Nagoya University)	F05 - Fluid Machinery and Renewable Energy 5 Shouchiro Iio (Shinshu University)	F04 - Computational Fluid Dynamics 5 Takashi Furusawa (Tohoku University)
13:30-13:45	JK-TFEC11-1145 Flow-driven directional freeze-casting of graphene aerogels on tubular components for enhanced thermal energy management Subhani Shaik, Jiho Kang, Vandana Kumari Jha, Ganghyeon Bae, Duckjong Kim (Gyeongsang National University)	JK-TFEC11-1515 Effects of molecular weight distribution and solvent viscosity on the extensional rheology of polyethylene oxide solutions Ruri Hidema (Nagoya University), Ryotaro Sago (Kobe University), Kohei Ohie (Nagoya University), Hiroshi Suzuki (Kobe University)	JK-TFEC11-1214 Wake of spherical Savonius turbines in a turbulent pipe flow Genki Yamagishi, H. J. Park, Y. Tasaka, Y. Murai (Hokkaido University)	JK-TFEC11-1479 Free interaction of shock wave and boundary layer in external flows John Chemmanoor Joseph (Gyeongkuk National University), Vincent Lijo (Government Engineering College), Heuy Dong Kim (Gyeongkuk National University)
13:45-14:00	JK-TFEC11-1177 A study on factory-EMS-based heat pump application strategies for improving the thermal efficiency of medium- and low-pressure steam drying processes Kijeong Seo, Donik Ku, Hyunkyu Roh, Hyunmin Yang, Yeontae Jeong, Jongjin An, Minsung Kim (Chung-Ang University)	JK-TFEC11-1519 Sparse helical turbulent structures in annular pipe flow transition of viscoelastic fluid Yoshin Mori, Shumpei Hara (Doshisha University)	JK-TFEC11-1466 Simulation of threshold-driven efficiency loss and probabilistic fracture in ceramic francis turbines using DPM Haram Oh, Dong-Hyun Kim, Younjea Kim (Sungkyunkwan University)	JK-TFEC11-1122 Large eddy simulation of transcritical dodecane flows in a heated rectangular channel Shunsuke Kondo, Takashi Furusawa, Hironori Miyazawa, Satoru Yamamoto (Tohoku University)
14:00-14:15	JK-TFEC11-1181 Effect of microporous coating on thermal performance enhancement in the evaporator of a two-phase closed thermosyphon Sukkyun Kang, Chanhun Jeong, Jungho Lee (Ajou University)	JK-TFEC11-1137 Flow properties of rod-like micellar solutions passing through small orifices Akiomi Ushida (Niigata University), Taisuke Sato (Photonic Lattice Inc.)	JK-TFEC11-1487 Experimental study on Darrieus-type hydroturbines installed in two parallel rectangular open channels Yudai Yoshimitsu, Shodai Yamamoto, Taiki Takamine, Satoshi Watanabe (Kyushu University), Akira Kawata, Koichi Yamaoka, Mitsuyoshi Matsuhisa, Kohei Omori (Kansai Electric Power Co. Inc.)	JK-TFEC11-1184 Hemodynamic impact of geometric symmetry and stenosis location in tandem coronary artery stenosis models Yujin Jeon, Minseo Jeon, Yujin Kim, Labin Kim, Kyung Eun Lee (Inha University)
14:15-14:30	JK-TFEC11-1219 Experimental study on the heat transfer performance of various enhanced tubes for falling film evaporation applied with R1233zd(E) Jeong Bo Shim, Jae Hong Min., Jae Hyun Shin, Yong Tae Kang (Korea University)	JK-TFEC11-1356 Aspect ratio effects of a finite surface-mounted square cylinder on turbulence structures in polymer-injected turbulent boundary layer Ayato Yokoi, M. Muto, S. Shinji (Nagoya Institute of Technology)	JK-TFEC11-1141 Effect of guide vane geometry on the performance of a counter-rotating impulse turbine for wave energy conversion Karu Inoue, Manabu Takao, Shinya Okuhara (National Institute of Technology, Matsue College), Miah Md Ashrafal Alam (Osaka Sangyo University), Yoichi Kinoue (Saga University)	JK-TFEC11-1450 Design of experimental equipment and validation of high-resolution computational methodologies for thermoelectric generator systems Junbeom Park (Chung-Ang University), JongKeun Yu (Samsung Heavy Industries), Jae-Ho Jeong (Chung-Ang University)
14:30-14:45	JK-TFEC11-1292 A study on heat pump-based heating for the transport of liquefied CO2 Bong Kyu Shin, Bo Ra Kim, Jae Won Lee (Korea Maritime & Ocean University)	JK-TFEC11-1210 Analysis of turbulence statistics based on DNS in wake of wall-mounted finite-length square cylinder in viscoelastic turbulent boundary layer Ryuga Sumi, K. Maekawa, M. Muto, S. Tamano (Nagoya Institute of Technology)	JK-TFEC11-1168 Numerical investigation on bidirectional duct and turbine system for tidal energy conversion Miu Yamashita, Yoichi Kinoue, Wakana Tsuru, Tengen Murakami, Norimasa Shiomi (Saga University), Manabu Takao (National Institute of Technology, Matsue College)	JK-TFEC11-1486 Study on entry impulse wave generated at the entrance of a high-speed railway tunnel Taeho Kim (Andong National University), Dong Hyeon Kim (Korea Railroad Research Institute), Heuy Dong Kim (Andong National University)
14:45-15:00	JK-TFEC11-1536 Experimental study on heat transfer enhancement in impingement/effusion cooling system with pin fins: Influence of geometrical parameters Sang-Woo Lee, Chang-Su Park, Won-Woo Choi, Sung-Min Kim (Sungkyunkwan University)		JK-TFEC11-1242 Effect of length on flow behaviour in an induction type microplastics recovery device Tengen Murakami, W. Tsuru, Y. Kinoue (Saga University)	

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time / Session Chair:	Room B3	Room B4	Room B5	Room B6	Room B7
Session	F02 - Biofluids and Biomimetics 1	T04 - Micro/Nano Heat and Mass Transfer 2	J02 - AI and Machine Learning 2	T02 - Combustion 2	T12 - Advanced thermal technologies for CN 2
Session Chair:	Satoshi Ii (Institute of Science Tokyo)	Yoichi Murakami (Institute of Science Tokyo)	Koji Shimoyama (Kyushu University)	Seong Kyun Im (Korea University)	Seulhyun Park (Chosun University)
13:30-13:45	JK-TFEC11-1128 Inertial focusing of red blood cells in square capillary channel flows Masako Sugihara-Seki(Kansai University)	JK-TFEC11-1140 Evaporation dynamics and uniform deposition of graphene-loaded ternary mixture droplets on PDMS surfaces B.A.H.M. Bamunuarachchi (Chung-Ang University), Hyung Ju Lee (Gangneung-Wonju National University), Seok-min Kim, Seong Hyuk Lee (Chung-Ang University)	JK-TFEC11-1103 Machine learning-based surrogate model for predicting performance of Francis turbine runner Takahiro Nakashima, Takanori Nakamura, Yasuhiro Kanishima and Naoki Shibukawa (Toshiba Energy Systems & Solutions Corporation)	JK-TFEC11-1167 Effect of micro structures on wall heat transfer during a head-on quenching of a laminar premixed flame Kazuhiro Dejima, Yuki Okamoto, Tomoki Yokoyama, Kiyoshi Kawasaki (The University of Shiga Prefecture)	JK-TFEC11-1455 Prediction of Minimum Ignition energy of Hydrogen–Air mixtures using theoretical models and CFD simulation Dong-Ju, Kim, Myung-kyu, Lee (Chosun University), Seul-Hyun, Park (Chosun University.).
13:45-14:00	JK-TFEC11-1254 Blood flow simulation including RBC dynamics and mass transport with transport dissipative particle dynamics Shun Tomizawa(University of Tokyo), Hiroyuki Nakajima(National cardiovascular Research Center), Zhen Li(Clemson University), Yosuke Hasegawa(University of Tokyo)	JK-TFEC11-1125 Penetration dynamics of pigmented ternary droplets into nanoporous polymer substrates for inkjet printing Achmad Rofi Irsyad, Koichi Kato, Kazuyoshi Fushinobu, Masami Kadonaga (Institute of Science Tokyo)	JK-TFEC11-1174 Time estimation of scalar diffusion in homogenous isotropic turbulence using deep learning Harumichi Mochizuki, Ryo Araki(Tokyo University of Science), Tomohiro Nimura (Nagoya Institute of Technology), Takahiro Tsukahara (Tokyo University of Science)	JK-TFEC11-1287 Modeling the effect of flame-wall interaction on the wall heat flux via a neural network Y. Noguchi, Y. Wang, M. Tanahashi (Institute of Science Tokyo)	JK-TFEC11-1281 Energy efficiency analysis according to the geometrical variables and flow conditions of the sensible heat storage tank Seongmin Choi, Nayoung You, Honghyun Cho (Chosun University)
14:00-14:15	JK-TFEC11-1402 Stress measurement in simulated blood and simulated blood vessel under steady and pulsatile flows using High-Speed polarization imaging toward experimental hemodynamics Akihito Sawai, Masakazu Muto, Ryo Umezawa (Nagoya Institute of Technology), Kazuya Kobayashi (Nippon Institute of Technology), Shinji Tamano(Nagoya Institute of Technology)	JK-TFEC11-1189 Role of pacemaker droplets in controlling evaporation flux and their influence on particle deposition patterns Jinghao Jin (Chung-Ang University), Hyung Ju Lee (Gangneung-Wonju National University), Chang Kyoung Choi(Michigan Technological University), Seong Hyuk Lee (Chung-Ang University)	JK-TFEC11-1310 Temperature field prediction of a Li-ion battery using deep operator network under various operating conditions Jihoon Kim, Bumsoo Park, Jaeyung Park (KAIST), Miran Ryu (Samsung SDI), Seungchul Lee and Bong Jae Lee (KAIST)	JK-TFEC11-1462 Effect of ambient pressure, oxygen content and temperature conditions on the diffusion flame characteristics of fuel films. Keiki Kubo, Fujio Akagi(Fukuoka University), Chen Chaoxi, Yannis Hardalupas, Alex M.K.P Taylor (Imperial College London)	JK-TFEC11-1282 Performance evaluation of a Small Dish-Type solar collector using ATO Nanofluid Jeongho Park, Hyemin Kim, Honghyun Cho (Chosun University)
14:15-14:30	JK-TFEC11-1500 Experimental and numerical studies on red blood cell lingering in bifurcating microfluidic channels Sota Yoneoka, Keisuke Kitano, Toru Hyakutake(Yokohama National University)	JK-TFEC11-1205 Probing growth precursor diffusion lengths by inter-surface diffusion Stoffel D. Janssens(Mechanics and Material Unit), Francisco S. Forte Neto (OIST), David Vázquez-Cortés(Mechanics and Material Unit),Fernando P. Duda (OIST), Elliot Fried (Mechanics and Material Unit)	JK-TFEC11-1351 Self-Organizing map for detecting surge and rotating stall in axial compressor based on pressure measurements Yoshihiro Kitamura, Hironori Miyazawa, Takashi Furusawa, Satoru Yamamoto (Tohoku University), Kentaro Nakayama, Naoyuki Niwa, Naoki Kanazawa (Kawasaki Heavy Industries)	JK-TFEC11-1499 Numerical analysis of the temperature rise process in a metal disk heated by an impinging partially-premixed jet flame Tsukasa Hori(University of Osaka), Kaname Kodama, Tadashi Ohnishi, Masanobu Kawazoe, Hiroichi Hase, Hiroyuki Kamura(Daikin Industries Ltd), Kaito Tsurusaki, Shinya Sawada, Fumiteru Akamatsu(University of Osaka)	JK-TFEC11-1277 Numerical investigation of SNCR reaction induced by secondary injection in the combustion zone of an ammonia-fueled co-axial swirl burner Jonghyun Kim, Jungsoo Park (Chosun University)
14:30-14:45	JK-TFEC11-1361 Investigation of asymmetric-shaped micro-posts in cell trapping channels Atsushi Kase, Mami Iwasaki, Seichiro Izawa(University Toyama), Takashi Ohanaga(University of Occupational and Environmental Health)	JK-TFEC11-1285 Investigation of liquid diffusion phenomena near the surface of 2D materials R. Yamaji, S. Uchida, K. Fujiwara, M. Shibahara (The University of Osaka)		JK-TFEC11-1514 DNS for Non-premixed Hydrogen-oxygen Jet Impingement Flame at direct heating boiler condition Yudai Miyazaki, Shan Jiang, Ye Wang, Sayaka Suzuki, Mamoru Tanahashi (Institute of Science Tokyo)	JK-TFEC11-1267 Investigation of M-shaped fiber alignment profile by an orifice-embedded nozzle during fused filament fabrication Quoc-Viet Le, Dong-Wook Oh (Chosun University)
14:45-15:00	JK-TFEC11-1502 In vitro experiments on collective swimming of sperm in shear thinning fluid Junpei Endo, Toru Hyakutake (Yokohama National University)	JK-TFEC11-1370 Performance of a hydrophobic mix-matrix membrane for dehumidification under various conditions Hyunkyu Roh, Donik Ku, Kijeong Seo, Hyunmin Yang, Yeontae Jeong, Jongjin An, Minsung Kim (Chung-Ang University)			JK-TFEC11-1478 An experimental investigation of flame spread in reduced gravity produced by free fall from a drone Jun-Hyeon Kim, Seul-Hyun Park (Chosun University)
15:00-15:15					JK-TFEC11-1276 Numerical analysis of Carbon-Neutral energy systems through Ammonia-Based thermodynamic cycles Yerin An, Jungsoo Park (Chosun University)

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time /	Room A1	Room A2	Room B1	Room B2
Session	T09 -Thermal Management 6	TED Panel Session	F05 - Fluid Machinery and Renewable Energy 6	F08 - Micro/Nano Fluids 1
Session Chair:	Koji Nishi (Ashikaga University)		Norimasa Shiomi (Saga University)	Ikuya Kinefuchi (The University of Tokyo)
15:30-15:45	JK-TFEC11-1191		JK-TFEC11-1171	JK-TFEC11-1381
	Optimization of flow channel width in solid oxide fuel cells Eunseop Yeom (Pusan National University)		Fundamental research on magnetically suspended low specific speed centrifugal pump Shinnosuke Oku, Kouki Ikawa, Toru Shigemitsu (Tokushima University)	Development of separation device for bionanoparticles using membrane filter Eriko Kumakura, Yoshiyasu Ichikawa, Masakazu Umezawa, Masahiro Motosuke (Tokyo University of Science)
15:45-16:00	JK-TFEC11-1309		JK-TFEC11-1257	JK-TFEC11-1420
	Parametric study on thermal shielding of a compander using a lumped parameter thermal network model Gyeong Jin Jeong, Kuk Hyun Yun (KAIST), Jongjae Cho, Beomjoon Lee, Hyunki Shin (Korea Institute of Energy Research), and Bong Jae Lee (KAIST)		Estimation of internal flow field in a centrifugal impeller using Data-Driven sparse sensing Izuru Kambayashi (Ebara Corporation), Donghyuk Kang (Saitama University)	Rapid Antimicrobial Susceptibility Testing in Droplet Acoustofluidics Woohyuk Kim and Jinsoo Park (Chonnam National University)
16:00-16:15	JK-TFEC11-1491		JK-TFEC11-1298	JK-TFEC11-1380
	Basic study on development of prediction method of power generation by waste heat recovery systems with thermoelectric module based on combined network analysis of thermal and electrical circuits Kotaro Nagai, Takashi Fukue, Kentaro Uchida (Kanazawa Institute of Technology)		Effect of Endwall Groove on the Three-Dimensional separation around a NACA65 blade in a decelerating flow Kento Nakata, Yoichi Kinoue, Kaito Kuwahara, Norimasa Shiomi (Saga University)	Impact of Oxygen Concentration on the Growth of Silicon Nanocrystals in Silicon Oxide Film G. Tamura (Tohoku University), K. Gotoh (Niigata University), N. Usami (Nagoya University), T. Tokumasu (Tohoku University)
16:15-16:30	JK-TFEC11-1284		JK-TFEC11-1493	JK-TFEC11-1222
	Thermal characterization of heat exchangers using artificial intelligence algorithm Hyeonho Lee, Gunwoo Kim, Dong Rip Kim (Hanyang University)		Numerical analysis of the effects of positive IGV rotation on losses in an Axial-Flow Pump under Part-Load conditions J. Kim, J. Lim, T. Joo, S. Song (Seoul National University)	Mean-field kinetic theory analysis of the water hammer pressure generated by two liquid film impact Jotaro Akazawa, Kazumichi Kobayashi, Kotaro Ohashi, Hiroyuki Fujii, Masao Watanabe (Hokkaido University)
16:30-16:45	JK-TFEC11-1403		JK-TFEC11-1161	JK-TFEC11-1250
	Evaluation of thermal resistance based on materials and joining methods of capillary Tube-Suction line heat exchangers Junhyeok Park, Ji Hwan Jeong (Pusan National University)		Enhancement of Flow-Induced vibration in a piezoelectric film for energy harvesting under low wind speed Naoto Kato, Kazuya Kondo, Hiroaki Hasegawa (Utsunomiya University), Hiroki Nagai (Tohoku University)	Evaluation of the work of adhesion applicable to complex surfaces using the thermodynamic integration via molecular dynamic Takumi Tanaka, Donatas Surblys, Taku Ohara (Tohoku University)
16:45-17:00	JK-TFEC11-1458			JK-TFEC11-1414
	Experimental investigation of Voltage-Tunable Graphene-Based Solid-State thermal switch Gunwoo Baik, Wonjun Ko, Saeyoun Kim (Kyung Hee University), Mikyung Lim (Korea Institute of Machinery and Materials), Jaeman Song (Kyung Hee University)			Light-driven Knudsen pump using mixed cellulose ester membrane Hiroki Yamaguchi, Masanobu Inoue (Nagoya University)

J-K TFEC11 Technical Session

DAY 2: Thursday, October 23, 2025

Time / Session Chair:	Room B3	Room B4	Room B5	Room B6	Room B7
	F02 - Biofluids and Biomimetics 2	T04 - Micro/Nano Heat and Mass Transfer 3		T02 - Combustion 3	T12 - Advanced thermal technologies for CN 3
	Atsushi Kase (University of Toyama)	Koji Miyazaki (Kyushu University)		Akihiro Hayakawa (Tohoku University)	Dongwook Oh (Chosun University)
15:30-15:45	JK-TFEC11-1295	JK-TFEC11-1216		JK-TFEC11-1345	JK-TFEC11-1266
	Estimation of the pressure drop in coronary arteries: FFR revisited Hyunsoo Na, Changbeom Kim, Haecheon Choi (Seoul National University), Jihoon Kweon, Dong Hyun Yang, Young-Hak Kim (University of Ulsan)	Pool boiling heat transfer performance of dual-layer copper microporous structures Su-Yoon Doh, Jungho Lee (Ajou University)		Highly responsive gas detection method for fuel loading using variation in sound velocity Ayuka Hirayama, Katsuyoshi Fukiba, Tomoki Matsumura (Shizuoka University), Shinichi Maeda (Saitama University), Akira Kawasaki (Shizuoka University), Hiroaki Kobayashi (Institute of Space and Astronautical Science)	Numerical analysis of hydrogen mitigation inside a passive autocatalytic recombiner Dae-Hyun Kim (Chosun University), Youngsu Na (Korea Atomic Energy Research Institute), Dong-Wook Oh (Chosun University)
15:45-16:00	JK-TFEC11-1271	JK-TFEC11-1300		JK-TFEC11-1371	JK-TFEC11-1278
	Hemodynamics effects of intimal tear configuration on the progression of descending aortic dissection Labin Kim, Kyung Eun Lee (Inha university)	Molecular dynamics study on local physical quantities in the vicinity of heat transfer surface before bubble nucleation K. Takenami, K. Fujiwara, M. Shibahara (The University of Osaka)		Development of pre-detonator for detonation wave propagation into a large-diameter pulse detonation engine Tomoki Matsumura, Katsuyoshi Fukiba, Ayuka Hirayama, Akira Kawasaki (Shizuoka University), Shinichi Maeda (Saitama University), Hiroaki Kobayashi (JAXA)	Numerical study on overcoming the flame retardancy of ammonia fuel using passive turbulent jet ignition system in a small engine Kangmin Ju, Jungsoo Park (Chosun University)
16:00-16:15	JK-TFEC11-1320	JK-TFEC11-1383		JK-TFEC11-1507	JK-TFEC11-1291
	Hemodynamic simulations of flows in a patient-specific aortic dissection by using various outlet boundary conditions Minseo Jeon, Labin Kim, Yujin Kim, Yujin Jeon, Kyung Eun Lee (Inha University)	Molecular-level insights into energy transport in water using ab initio molecular dynamics simulations Kanna Yamaji, Kunio Fujiwara, Masahiko Shibahara (The university of Osaka)		Effects of swirl parameters on combustion characteristics of hydrogen-methane inverse diffusion flame Ri So, Yuseon Jeon (Jeonbuk National University), Sung-Min Kum(Halla University), Seungro Lee (Jeonbuk National University)	Enhancing ice maker efficiency through direct-contact cooling: influence of distinct cooling characteristics Seongsoo Heo, Yongseok Jeon (Ajou University)
16:15-16:30	JK-TFEC11-1360	JK-TFEC11-1405		JK-TFEC11-1202	JK-TFEC11-1436
	Development of a vascular structure generation algorithm reflecting the physiological mechanisms of sprouting angiogenesis in cancer Yujin Kim, Yujin Jeon, Minseo Jeon, Labin Kim, Kyung Eun Lee (Inha University)	Numerical analysis of vacuum pressure variation considering water droplet evaporation in household refrigerators Youngjoon Kim, Ji Hwan Jeong (Pusan National university)		Flame spread behavior of wood/plastic mixture with alternating layers Takuya Yamazaki, Hiroyuki Torikai (Hirosaki University)	Prediction and analysis of the impact of expanding domestic adoption of residential heat pump water heaters in Korea Yeontae Jeong, Minsung Kim (Chung-Ang University)
16:30-16:45	JK-TFEC11-1423	JK-TFEC11-1467		JK-TFEC11-1332	JK-TFEC11-1289
	Validation of one-dimensional blood flow simulation using live imaging of zebrafish brain vasculature Yang Qiao, Hiroyuki Nakajima, Yosuke Hasegawa (The University of Tokyo)	Study of particle tracking inside porous materials by fluorescence imaging Taiki Okamura, Naoki Tomioka (Waseda University), Yusaku Abe (Tokyo University of Agriculture and Technology), Yu Matsuda (Waseda University)		Magnified high-speed imaging of laminar flame propagation in a stratified mixture Tomoya Fukuchi, Yifan Shi, Takuya Tomidokoro (Kyoto University), Yoshitane Takashima (Osaka Gas Co., Ltd.), Jun Hayashi, Hiroshi Kawanabe (Kyoto University)	Optimizing ice maker performance and climate impact through hybrid cooling with R-454C drop-in test for replacing R-404A Juneseok Oh, Yongseok Jeon (Ajou University)
16:45-17:00					JK-TFEC11-1358
					A numerical study on the LP-EGR of a small hydrogen PFI engine Hyunung Kang, Jungsoo Park (Chosun University)
17:00-17:15					JK-TFEC11-1482
					An investigation on the cooling performance of Thermal Electric Module(TEM) implementing heat pipes Seung-Jun Oh, Seul-Hyun Park (Chosun University)

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session Chair:	Room A1	Room A2	Room B1	Room B2
Session	F07 - Multiphase/Multicomponent Flows 1	F06 - Fundamental Flows and Flow Controls 1	T05 - Multiphase Heat and Mass Transfer 1	F08 - Micro/Nano Fluids 2
Session Chair:	Jinkee Lee (Sungkyunkwan University)	Hitoshi Ishikawa (Tokyo University of Science)	Shoji Mori (Kyushu university)	Kazumichi Kobayashi (Hokkaido University)
10:30-10:45	JK-TFEC11-1334 Accuracy Verification of Moving Particle Simulation Method Using the Oil Film Method for a Washing Machine Detergent Case Sori Sasaki, Takeshi Honda, Kazuhiro Tsukamoto (Hitachi, Ltd Research & Development Group)	JK-TFEC11-1527 Optimized Hydrogen Pipeline Elbow Design by Applying Biomimetic Technology HoJin Choi, Cheol-Jung Kang, Kyoung-Hoon Chu, Younjea Kim (Sungkyunkwan University)	JK-TFEC11-1139 Modeling of the evaporation rate for paired droplets considering vapor shielding and natural convection effects WonYeong Hwang (Chung-Ang university), Hyung Ju Lee (Gangneung-Wonju National University), Chang Kyoung Choi (Michigan Technological University), Seong Hyuk Lee (School of Mechanical Engineering)	JK-TFEC11-1521 Molecular Dynamics Study of Poiseuille Flow of a Dense Gas: Effects of Finite Molecular Size Ryo Kiyose, Satoshi Taguchi , Tetsuro Tsuji (Kyoto University)
10:45-11:00	JK-TFEC11-1379 Experimental Study on the Stratified Borated Water Mixing under Low Flow Conditions in BWR Geometry Tsugumasa Iiyama, Takahiro Arai, Masahiro Furuya, Riichiro Okawa, Atsushi Ui (Central Research Institute of Electric Power Industry)	JK-TFEC11-1496 Reinforcement Learning Model for Generation of Pulsating Waveform for Reducing Drag in Turbulent Pipe flow Gakuto Kanomata, Akira Murata, Kaoru Iwamoto (Tokyo University of A&T)	JK-TFEC11-1246 Coalescence dynamics and mixing characteristics of colliding Leidenfrost drops Koki Takahashi, Hayato Masuda,Hiroyuki Iyota (Osaka Metropolitan University)	JK-TFEC11-1294 Surface modification of 3D printed droplet generators by photochemical grafting Guohao Yang, Seonghun Shin, Seongsu Cho, Jinkee Lee (Sungkyunkwan University)
11:00-11:15	JK-TFEC11-1389 Theoretical analysis of the velocity of a spherical particle in an inclined water-free screw conveyor Haruto Nakaso , Hideaki Saito, Yoshihiko Oishi, Telaumbanua Iman Kasih, Hideki Kawai (Muroran Institute of Technology), Tatsuya Orimo, Takashi Murakami (R&E Corporation)	JK-TFEC11-1111 Drag reduction capability of streamwise traveling wave created by wall-surface heating and cooling in turbulent channel flow Yusuke Nabae (Tokyo University of Science), Hiroya Mamori (The University of Electro-Communications), Koji Fukagata (Keio University)	JK-TFEC11-1323 Thermal Spraying for boiling heat transfer enhancement in Liquid Nitrogen Kotaro Tanabe, Katsuyoshi Fukiba (Shizuoka University), Hiroaki Kobayashi (JAXA)	JK-TFEC11-1476 Ice droplet generation and melting during thin film flows on tilted surfaces G. Jung, T. Park, S. Kim (Pusan National University)
11:15-11:30	JK-TFEC11-1273 Effect of Liquid Viscosity on Liquid Transport in Upward Vertical Annular Flow Bunta Inagaki (Shizuoka University), Yusuke Sato (DENSO CORPORATION), Mitsuhiro Fukuta , Toshiyuki Sanada (Shizuoka University)	JK-TFEC11-1331 Reynolds number effects on the dissimilarity between turbulent momentum and heat transfer in wall turbulence with a streamwise traveling wave of wall blowing and suction Tingting Fang, Fijihro Hamba, Yosuke Hasegawa (The University of Tokyo)	JK-TFEC11-1352 Thermally processed aluminum surfaces with enhanced water spreading properties Jae Woo Sim, Dong Rip Kim, Ji Yong Hyun (Hanyang university)	JK-TFEC11-1481 Visualization and Analysis of Evaporation-Induced Flow in Sessile Multicomponent Droplets Using U-Net Assisted Micro-PIV Hao Cong , Kazuyoshi Fushinobu, Tatsuya Kawaguchi (Institute of Science Tokyo)
11:30-11:45	JK-TFEC11-1195 Numerical Simulation of Pollen Like Particles Flow Injected from a Rotary-wing UAV R. Watanabe, S. Furukawa (Tokyo City University)	JK-TFEC11-1124 Direct numerical simulation of swirling pipe flow with heat transfer at low Reynolds number Aoi Wakiyasu, Hiroya Mamori, Menglei Wang, Takeshi Miyazaki (The University of Electro-Communications), Hajime Nakamura (National Defense Academy), Takahiro Tsukahara (Tokyo University of Science), Koji Fukudome (Kanazawa Institute of Technology)	JK-TFEC11-1425 Thermal and hydraulic analysis of pool boiling phenomena on micro and nano structured porous surfaces Dong Ju Lee (Chung-Ang University), Moo Hwan Kim (POSTECH), Hyungmo Kim (Gyeongsang National University), Kim Dong Eok (Chung-Ang University)	JK-TFEC11-1376 Molecular Beam Experiment on Enhanced Evaporation under Visible Light Irradiation Kohei Sato, Atuski Fujita, Ikuya Kinefuchi (The University of Tokyo)
11:45-12:00	JK-TFEC11-1105 Microstructural Visualization of Multiphase LiCoO₂-CB Cathode Slurry via Electrical Impedance Tomography Songshi Li, Taichi Kanamoto, Daisuke Kawashima, Masahiro Takei (Chiba University)	JK-TFEC11-1197 PIV Measurement of Vibrating Pipe Flow with Amplified Piezoelectric Actuators for Heat Transfer Enhancement Takero Shimizu, Akira Murata, Kaoru Iwamoto (Tokyo University of A&T)	JK-TFEC11-1440 Effects of Droplet Temperature on the Splashing Behavior of Liquid Droplets on a Solid Surface Shih Peng Chang (Kyushu University), Hui Han Yang, Prashant Valluri (The University of Edinburgh),Yasuyuki Takata (Kyushu University), Khellil Sefiane (The University of Edinburgh), Masamichi Kohno (Kyushu University)	JK-TFEC11-1301 The Effects of Nanoscale Surface Geometry and Liquid Film on Contact Line Motion Hideaki Teshima , Yuta Heima , Takanobu Fukunaga , Qin-Yi Li, Koji Takahashi (Kyushu University)
12:00-12:15	JK-TFEC11-1165 Numerical study of contact angle treatment effects on liquid film spreading over a rotating wafer using OpenFOAM Y. Kawaguchi (Nagoya Institute of Technology), A. Ishimaru, S. Aihara (SCREEN HD), N. Matsui (SCREEN HD), T. Matsuda(Nagoya Institute of Technology), M. Muto, S. Tamano (Nagoya Institute of Technology)	JK-TFEC11-1445 Jet-induced resonance in vertical natural convection under isothermal heating Takuma Koizumi (Tohoku University), Takuma Kogawa (Shibaura Institute of Technology), Steven Armfield (The University of Sydney), Juan F. Torres (The Australian National University), Atsuki Komiya (Tohoku University)	JK-TFEC11-1443 Effect of vertically aligned carbon nanotube coating on pool boiling performance of multistage cross-flow JinHwi Kim, Jung-Ho Ahn, Ju-Won Jeon, Jae-Hyun Kim, Seung-Hyun Baik, Sung-Min Kim (Sungkyunkwan University)	

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session	Room B3	Room B4	Room B5	Room B6
Session Chair:	F02 - Biofluids and Biomimetics 3 Yoshihiro Kubota (Toyo University)	F10 - General Session 1 Shin-ichi Tsuda (Kyushu University)	T11 - General Session 1 Chungpyo Hong (Kagoshima University)	F09 - Turbulence 1 Takahiro Tsukahara (Tokyo University of Science)
10:30-10:45	JK-TFEC11-1173 Evaluation of the robustness of bio-inspired scalar source localization algorithms using movable sensors Haruya Nakane, Takahiro Tsukahara, Ryo Araki (Tokyo University of Science), Takayuki Osawa, Yosuke Hasegawa (The University of Tokyo)	JK-TFEC11-1470 Shock-induced molecular dynamics in gas, liquid, and solid media Alex Joseph Paulson Puthoo, Jayabal Rajasekar (Gyeongkuk National University), Vincent Lijo (Government Engineering College), Ghi Ryang Shin, Heuy Dong Kim (Gyeongkuk National University)	JK-TFEC11-1542 Effect of Three-Dimensional Geometry on the Thermo-Hydraulic Performance of a Pump-Driven Phase Change Heat Transport Device Hajime Onishi (Komatsu University)	JK-TFEC11-1142 Measurement of wall-shear-stress fluctuations in turbulent channel flows using local deformations of a silicone Daehwan Kim, Yoshihiko Oishi (Muran Institute of Technology), Hyun Jin Park, Yuji Tasaka, Yuichi Murai (Hokkaido University)
10:45-11:00	JK-TFEC11-1238 Design and Implementation of a Mock Circulatory Loop for Physiological Replication and Cardiovascular Flow Analysis HyunSoo Kim, Unseong Baik, Janghoon Go, Taeji Lee, Jin-Tae Kim (Pohang University of Science and Technology)	JK-TFEC11-1316 Intake performance improvement using deflective plates installed on intake cowls Taisei Kishimoto, Katsuyoshi Fukiba (Shizuoka University), Yusuke Maru, Hiroaki Kobayashi (JAXA)	JK-TFEC11-1392 Heat Transfer Characteristics of Gas Flow in a Circular Tube Under Constant Wall Heat Flux Hiroto Takenaka, Chungpyo Hong, Hiroshi Katanoda (Kagoshima University), Yutaka Asako (University Technology Malaysia), Faghri Mohammad (University of Rhode Island)	JK-TFEC11-1169 Turbulent Structure Over Rough Surfaces and Spanwise Two-Point Measurements in Channel Flow Soya Kurashige, Shoma Yamaguchi, Masahito Nishikawara, Yoshiyuki Tsuji (Nagoya University),
11:00-11:15	JK-TFEC11-1504 Predicting viral kinetics in the human respiratory tissue through numerical models and CFD Alicia Murga (Kobe University), Rahul Bale (RIKEN), Kazuhide Ito (Kyushu University), Makoto Tsubokura (RIKEN)	JK-TFEC11-1520 Loss prediction of narrow clearance in subsonic flow considering compressibility of air Yusuke Katayama, Li Peize, Masatsugu Umeta (Waseda University), Akihide Nagao (Kyushu University), Kunio Hirata, Kazuyoshi Miyagawa (Waseda University)	JK-TFEC11-1449 Prediction of the onset of density wave oscillation in single-heated systems using the MARS-KS code Seung Hyup Ji, Nam Kyu Ryu, Byoung Jae Kim, (Chungnam National University), Sung Jae Yi, Ju Hyung Lee, Hyun Sik Park (Korea Atomic Energy Research Institute)	JK-TFEC11-1182 Evaluation of Skin-Friction Drag Reduction over a Rough-Wall Turbulent Boundary Layer Using Momentum Teruya Miyashita, Shoma Yamaguchi, Masahito Nishikawara, Yoshiyuki Tsuji (Nagoya University)
11:15-11:30	JK-TFEC11-1115 Large eddy simulation of aqueous-glycerin-solution flow in a venous air trap chamber for different inflow conditions Toru Yamada, China Kato (Nagoya Institute of Technology), Kota Shimizu (Fujita Health University Hospital), Yohei Morinishi (Nagoya Institute of Technology)	JK-TFEC11-1324 Effective return flight of reusable rockets using a deployable deceleration device with static stability Yuta Narahara, Katsuyoshi Hukiba, Yusuke Maru (Shizuoka University)	JK-TFEC11-1203 Active Regulation of hindered Diffusion through Membrane Using SAW-Driven Flow Ruiyao Zhu (Tohoku University), Valéry Botton, Sophie Miralles (INSA Lyon), Atsuki Komiya (Tohoku University)	JK-TFEC11-1193 Active Control of Pressure Fluctuations in an Incompressible Cavity Flow using Multiple Slot Jets Seungho Yoo, Jae Hwa Lee (Ulsan National Institute of Science and Technology)
11:30-11:45	JK-TFEC11-1444 How does vein network structures influence blood flow on fly's wings? Kazuki Sugiyama, Yoshihiro Kubota, Osamu Mochizuki (Toyo University)	JK-TFEC11-1183 Study on electrical breakdown characteristics in air, water, and silicone oil (Preliminary research for plasma discharge in cryogenic fluids) SHUXUAN XING, Shinichiro Waki, Masahito Nishikawara, Yoshiyuki Tsuji (Nagoya University)	JK-TFEC11-1231 A Study on Improvement of Performance of Rotor Blade in Low Reynolds Number Region Haruto Kusama, Takahiro Yasuda, Hisato Minagawa (The University of Shiga Prefecture)	JK-TFEC11-1296 Large-scale heat transport with thermal streaks in high-Reynolds-number turbulent thermal boundary layers Sayoko Mayama, Mayu Kamada, Shu Sato (Doshisha University), Makoto Iwasaki (JR RTRI), Kentaro Kato (Shinshu University), Yoshitsugu Naka (Meiji University), Ayumu Inasawa (Tokyo Metropolitan University), Masaharu Matsubara (Shinshu University), Shumpei Hara (Doshisha University)
11:45-12:00			JK-TFEC11-1307 Tuning substrate permittivity for enhanced plasmon thermal conductivity Jeongmin Nam, Dong-min Kim, Dong Jun Kim, Taek-Soo Kim, Bong Jae Lee (KAIST)	

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session Chair:	Room A1	Room A2	Room B1	Room B2
	F07 - Multiphase/Multicomponent Flows 2 Toshiyuki Ogasawara (Osaka Metropolitan University)	F06 - Fundamental Flows and Flow Controls 2 Yusuke Nabae (Tokyo University of Science)	T05 - Multiphase Heat and Mass Transfer 2 Masamichi Kohno (Kyushu University)	F08 - Micro/Nano Fluids 3 Hideaki Teshima (Kyushu University)
13:30-13:45	JK-TFEC11-1322 LOCAL CHARACTERISTICS OF BUBBLY FLOW IN A 4x4 ROD BUNDLE UNDER OSCILLATING CONDITIONS Hung Tan Hoang (Chungnam National University), Myung Ho Kim (TBM Technology Team), Byoung Jea Kim (Chungnam National University)	JK-TFEC11-1208 Effect of momentum assition by wavy plasma actuator on flow separation I. Takemoto, T. Uchida (Tokyo University of science), Y. Nishio (Seikei University), H. Ishikawa (Tokyo University of Science)	JK-TFEC11-1179 Experimental study of the Effect of Interfacial Shear Stress on Jet Naoto Masaki, Akiko Kaneko (University of Tsukuba), Naoki Horiguchi, Hiroyuki Yoshida (Japan Atomic Energy Agency)	JK-TFEC11-1131 Effect of surfactants on volume fraction changes in colloidal suspensions during one directional drying process Shiro Wakaki (Sanjo City University), Koki Tanaka, Yasunori Sato, Tsutomu Takahashi (Nagaoka University of Technology)
13:45-14:00	JK-TFEC11-1517 Numerical study on artificial void wave for drag reduction in turbulent channel flow Sangwon Kim (RIKEN), Teruaki Abe, Hyun Jin Park (Hokkaido University), Makoto Tsubokura (RIKEN)	JK-TFEC11-1469 Verification of total drag reduction effect by oblique blowing control in a flat turbulent boundary layer Hana Otomo, Akira Murata, Kaoru Iwamoto (Tokyo University of Agriculture and Technology)	JK-TFEC11-1342 A study on heat and wastewater recovery performance of membrane heat exchanger using fabricated Van Cong Le, Thi Nhan Nguyen, Chan Woo Park (Jeonbuk National University,)	JK-TFEC11-1261 ICEJET – An integrated controlled environment jetting platform for precision cryo-EM sample preparation Zahra, Seongsu Cho (Sungkyunkwan University), Kuldeep Baghel (Anyang University), Jinkee Lee (Sungkyunkwan University)
14:00-14:15	JK-TFEC11-1249 Generation frequency effects on the dispersion of a clean spherical bubble chain at intermediate Reynolds Satoi Suzuki, Toshiyuki Sanada (Shizuoka University)	JK-TFEC11-1102 Experimental investigation of combined blowing-suction control on a Clark-Y airfoil Senri Miura, Koji Fukagata (Keio University)	JK-TFEC11-1384 Filling ratio of pulsating heat pipe influence on internal flow Kanji Suzuki, Keiko Ishii (Chuo University)	JK-TFEC11-1349 Effect of oxygen transport properties in the ionomer thin film on cell performance of Polymer Electrolyte Fuel Cells Kengo Hikida, Hiroto Suzuki (Tohoku University), Gen Inoue (Kyushu University), Takashi Tokumasu (Tohoku University)
14:15-14:30	JK-TFEC11-1378 Experimental study of current-density-dependent hydrogen bubble dynamics in alkaline water electrolysis Sung Jae Bae, Gihun Son (Sogang University)	JK-TFEC11-1194 Lift enhancement at low Reynolds numbers using bio-inspired dual-side flap Gun Wook Kim (UNIST), Young Dal Jeong (Chosun University), Jae Hwa Lee (UNIST)	JK-TFEC11-1547 Thermal management of lithium-ion batteries with shape-stabilized phase change materials Su Woong Hyun, Dong Ho Shin (Dongguk University)	JK-TFEC11-1362 Photo-excited micro-droplet robotics Jintaro Shiina, Masayuki Naya, Shinya Hakuta (Keio University)
14:30-14:45	JK-TFEC11-1535 Tracking the bubble transport from the electrode surface of a water electrolysis cell using machine learning Keita Hirayama, Ryo Kanemoto, Chisato Kamikawa, Takuto Araki (Yokohama National University)	JK-TFEC11-1305 The diffusion characteristics of coaxial swirling jet Sota Yamashita, Toma Watanabe, Fujio Akagi (Fukuoka University)	JK-TFEC11-1540 Evaporative heat transfer in the contact line region observed by fluorescence thermal microscopy Kenta Hatanaka, Muku Fukamachi (Kyushu Institute of Technology), Yohei Sato (Paul Scherrer Institute), Tomohide Yabuki (Kyushu Institute of Technology)	JK-TFEC11-1397 Development of a ReaxFF reactive force field for CO₂ separation in PVAm/PVA composite membranes : Molecular-level insights into aqueous transport mechanisms Yuiko Tomita, Kohei Sato, Ikuya Kinefuchi (The University of Tokyo)
14:45-15:00	JK-TFEC11-1170 On the microbubbles trajectories and their velocity distribution near the wall in turbulent pipe flow Yasuhisa Hamana, Xianfeng Wu, Masahito Nishikawara, Yoshiyuki Tsuji (Nagoya University)	JK-TFEC11-1472 Flow characteristics of multiple jets and their flow in a chamber Asuka Kondo, Masaki Fuchiwaki (Kyushu Institute of Technology)	JK-TFEC11-1543 Rapid generation of superheated steam from porous media: Effects of micro-gap and fluid properties Shoji Mori, WANG BICHENG, YUTARO UMEHARA, Atsuro Eto (Kyushu University)	JK-TFEC11-1451 Influence of internuclear distance of diatomic fluid on static and dynamic structure of density fluctuation around the critical point Seiryu Shigemura, Shin-ichi Tsuda, Satoshi Watanabe (Kyushu University)
15:00-15:15	JK-TFEC11-1348 Effect of electrolytes in water and an approach velocity on the drainage process and the rupture of the liquid Hiroaki Matsura, Toshiyuki Ogasawara, Hiroyuki Takahira (Osaka Metropolitan University)		JK-TFEC11-1406 Concentration measurement of propane and refrigeration oil mixture in transient dissolution process by refractive index technique Pansang Thepsongsang, Mitsuhiro Fukuta, Masaaki Motozawa, Wannarat Rakpakdee (Shizuoka University), Seheon Choi (LG Electronics)	

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session	Room B3	Room B4	Room B5	Room B6
Session Chair:	F02 - Biofluids and Biomimetics 4 Alicia Murga (Kobe University)	F10 - General Session 2 Yusuke Katayama (Waseda University)	T11 - General Session 2 Hajime Onishi (Komatsu University)	F09 - Turbulence 2 Jae Hwa Lee (Ulsan National Institute of Science and Technology)
13:30-13:45	JK-TFEC11-1387 Analysis of pressure loss in vein networks of succulent leaves Chihana Fukagawa, Kazuki Sugiyama, Yoshihiro Kubota (Toyo University)	JK-TFEC11-1401 Flow simulation and analysis around a baseball using computational fluid dynamics M.Tanaka, K.Ishii (Chuo University), K.Yokota (Aoyama Gakuin University)	JK-TFEC11-1306 Enhancement of near-field thermophotovoltaic energy conversion with multilayer emitter for high-temperature slag Xin Wang, Minwoo Choi (KAIST), Minsung Kim (Chung-Ang University), Bong Jae Lee (KAIST)	JK-TFEC11-1153 Response and its probability of localized turbulence pattern formation to decreasing Reynolds number in channel flow Ryoko Ono, Yuki Matsukawa, Takahiro Tsukahara (Tokyo University of Science)
13:45-14:00	JK-TFEC11-1228 Three-dimensional wake structure produced by gaps of dandelion pappus Yusei Wano, Hiroaki Hasegawa (Utsunomiya University)	JK-TFEC11-1431 Characteristics of air exchange in passive ventilation of rectangular room with single opening in uniform flow Seiya Kimura, Yoshihide Suwa, Takemi Kabumoto, Shota Yamamoto (Shibaura Institute of Technology), Muhammad Aiman bin Mohd Nor (Keio University), Katsuaki Shirai (Shibaura Institute of Technology)	JK-TFEC11-1366 Experimental and 1-D simulation study of CO2 heat pump system for electric vehicles Seongyong Eom, Jeonghyun Song (Pusan National University), Jaeseung Lee, Youngshin Chu, Dongmin Yu, Seohyun Choi (R&D Division, KORENS), Gyungmin Choi (Pusan National University)	JK-TFEC11-1275 Dissimilar heat transfer enhancement in low-re channel flow subjected to a traveling wave - like blowing and suction with turbulent transition Hiroki Saito (Tokyo University of Science), Tingting Fang (The University of Tokyo), Ryo Araki, Takahiro Tsukahara (Tokyo University of Science), Yosuke Hasegawa (The University of Tokyo)
14:00-14:15	JK-TFEC11-1524 Large-eddy simulation of vegetation movement and vortex structures in agricultural fields Kentaro Hisamochi, Shin-ichi Satake (Tokyo University of Science)	JK-TFEC11-1518 Dynamic pressure drop analysis in dryer filters based on lint accumulation Seongjin Park, Ji Hwan Jeong (Pusan National University)	JK-TFEC11-1147 On the transition from laminar flow to turbulent flow of thermal convection for $Ra=2.00 \times 10^5 - 1.00 \times 10^6$ Naoya Kawada, Ryusei Kinugawa, Masato Kodama (Doshisha University), Hirochika Tanigawa (NIT Maizuru College), Katsuya Hirata (Doshisha University)	JK-TFEC11-1343 Drag reduction by plastron in featureless turbulent Taylor-Couette flow Woobin Song, Haeyeon Lee (Hanyang University), Garam Ku, Minjae Kim (Agency for Defense Development), Dong Rip Kim, Simon Song (Hanyang University)
14:15-14:30	JK-TFEC11-1144 Riblet-based aerodynamic improvements of a flat-plate test model emulating low-pressure turbine airfoil for aircraft engine Shota Miyamoto, Satoshi Takeda, Takanori Sibata (Iwate University), Ken-ichi Funazaki (Hachinohe Institute of Technology)		JK-TFEC11-1354 Energy conversion materials for self-powered thermal tactile sensing Yoobin Choi, Hang Gyeom Kim, Hoe Joon Kim (DGIST)	JK-TFEC11-1505 Development of turbulent fluxes in laminar-turbulent boundary layer transition under free-stream turbulence Ryotaro Kosugi, Shumpei Hara (Doshisha University)
14:30-14:45	JK-TFEC11-1159 Effects on mosquito thrust generation of air flow directions Hidekazu Shiraiishi, Kazuki Sugiyama (Toyo University), Kuniaki Higashi, Daiki Miki (Earth Corporation), Yoshihiro Kubota (Toyo University)		JK-TFEC11-1318 Impact of HVAC load and driving conditions on hydrogen fuel cell bus efficiency under seasonal temperatures Seongyong Eom, Omarova Zarina, Gyungmin Choi (Pusan National University)	
14:45-15:00			JK-TFEC11-1150 Alternative cooling system using elastocaloric effect and evaluation of heat transfer performance Atsuki Komiya, Shun Ishii (Tohoku University), Gael Sebald, Gllidas Coativy (INSA Lyon)	

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session	Room A1	Room A2	Room B1	Room B2
Session Chair:	F07 - Multiphase/Multicomponent Flows 3 Tetsuya Kanagawa□ (University of Tsukuba)□	F06 - Fundamental Flows and Flow Controls 3 Masaki Fuchiwaki (Kyushu Institute of Technology)	T05 - Multiphase Heat and Mass Transfer 3 Sung-Min Kim (Sungkyunkwan University)	F08 - Micro/Nano Fluids 4 Hiroki Yamaguchi (Nagoya University)
15:30-15:45	JK-TFEC11-1359 A remark on the remedy of numerical oscillations in the 6-equation two-phase flow model for the backscattering of pressure waves from gas-liquid interfaces Rei Kondo, Hiroyuki Takahira, Toshiyuki Ogasawara (Osaka Metropolitan University)	JK-TFEC11-1350 Evaluation of cycle variation in pulsating turbulent pipe flow for drag reduction using PIV measurements A.Katakai, A. Murata, K. Iwamoto (Tokyo University of A&T)	JK-TFEC11-1460 Modeling and analysis of heat transfer coefficient of ternary R455A through mass transfer coefficient analysis Hoang Ngoc Hieu, Jong-Taek Oh, Jong Kim Kyu (Chonnam National University)	JK-TFEC11-1525 Molecular simulation of nitrogen gas molecule scattering on platinum surfaces K. Takemura, H. Takeuchi (National Institute of Technology)
15:45-16:00	JK-TFEC11-1363 Surface instability during the growth and collapse of a laser-induced bubble in agarose gels R. Ohshima, H. Takahira, T. Ogasawara (Osaka Metropolitan University)	JK-TFEC11-1498 Suppression of secondary flows and pressure loss in curved hydrogen pipelines via airfoil vane optimization Chang Ho Son, Hwan Gyo Kim, HyunSu Jeong, YounJea Kim (Sungkyunkwan University)	JK-TFEC11-1461 Heat transfer coefficient measurement of ternary R455A inside mini-channel Hoang Ngoc Hieu, Jong-Taek Oh, Jong Kim Kyu (Chonnam National University)	JK-TFEC11-1453 Numerical study of light scattering in a hollow sphere using Mie theory Ryuga Sawada, Hiroyuki Fujii, Masao Watanabe, Kazumiti Kobayasi (Hokkaido University)
16:00-16:15	JK-TFEC11-1464 Bubble dynamics analysis of thermodynamic effects for a cavitation bubble in thermo-sensitive conditions I. Takezaki, S.Tsuda, S.Watanabe, T.Takamine (Kyushu University)	JK-TFEC11-1247 Wind-tunnel experiment of flow control around a circular cylinder by blowing near the separation points Takuma Hirota, Senri Miura, Koji Fukagata (Keio University)	JK-TFEC11-1198 Pool boiling based cold plate with tapered gap for high power chip cooling Junyoung Choi, Seokchan Hwang, Jungho Lee (Ajou University)	JK-TFEC11-1471 Rapid antigen-antibody binding via surface acoustic wave-induced acoustic streaming flow Beomseok Cha, Jinsoo Park (Chonnam National University)
16:15-16:30	JK-TFEC11-1513 Seismic wave propagation in multiphase volcanic magma : modeling rheological effects of bubbles and crystals Daichi Kurata, Takahiro Ayukai, Tetsuya Kanagawa (University of Tsukuba)	JK-TFEC11-1264 Quantitative analysis of wake flow modulation by surface displacement of a cylinder using wind tunnel PIV Pius Soh, Jin-Tae kim (Pohang University of Science and Technology)	JK-TFEC11-1321 CFD simulation of natural circulation loop based on wall boiling and wall condensation models Quoc-Tuan Le, Byoung Jae Kim (Chungnam National University)	JK-TFEC11-1409 Heat flow around a circular disk placed in a uniform flow of a rarefied gas Takuma Tomita, Satoshi Taguchi, Tetsuro Tsuji (Kyoto University)
16:30-16:45	JK-TFEC11-1221 Interfacial stability of levitated bubble in acoustic field Kazuki Onishi, Koji Hasegawa (Kogakuin University)	JK-TFEC11-1136 Direct numerical simulation of turbulent Taylor-Couette flow with opposition control with nonlinear forecasting T.Noguchi, H. Mamori, T. Miyazaki, M. Wang (The University of Electro-Communications)	JK-TFEC11-1410 Observation of solid-liquid contact in microbubble emission boiling Toshihara Chono, Tomohide Yabuki (Kyushu Institute of Technology)	
16:45-17:00	JK-TFEC11-1244 A study on heat transfer enhancement of PCM-based thermal management system through bubble-driven flow and aspect ration effect Min Hyeok Kim, Dong Kee Sohn, Han Seo Ko (Sungkyunkwan University)	JK-TFEC11-1207 Vortex structure in the wake behind axisymmetric body influenced by free-stream turbulence K. Inoue, S. Hashimoto (Tokyo University of Science), Y. Nishio (Seikei University), H. Ishikawa (Tokyo University of Science)	JK-TFEC11-1539 Numerical investigation of convective heat transfer mechanisms in pool boiling Tomohide Yabuki, Ryuki Shono, Kenta Hatanaka (Kyushu Institute of Technology), Yohei Sato (Paul Scherrer Institute)	

J-K TFEC11 Technical Session

DAY 3: Friday, October 24, 2025

Time / Session	Room B3	Room B4	Room B5	Room B6
Session Chair:	T10 - Thermophysical Properties Naoya Sakoda (Fukushima Institute for Research, Education and Innovation)	F10 - General Session 3 Satoshi Watanabe (Kyushu University)	T06 - Radiation Makoto Shimizu (Tohoku University)	
15:30-15:45	JK-TFEC11-1454 Surface tension behavior of molten iron-nickel and iron-charomiumalloys under various temperatures and oxygen partial pressures Shumpei Ozawa, Gouki Horiuchi, Kaito Asami, Misaki Nishimura, Ryusei Okada, Yusaku Seimiya (Chiba Institute of Technology)	JK-TFEC11-1178 Effect of thermophysical properties of fluids on flow dynamics and heat transfer characteristics of conical Taylor–Couette flow Kohei Momotori, Hayato Masuda, Hiroyuki Iyota (Osaka Metropolitan University)	JK-TFEC11-1341 Design and fabrication of transparent conductive film-based thermal radiation metamaterials Kosuke Kikuchi, Taiyo Hokari, Atsushi Sakurai (Niigata University)	
15:45-16:00	JK-TFEC11-1457 Surface tension of molten iron-copper alloys measured by electromagnetic levitation Shuya Kurosawa, Yusaku Seimiya, Riku Sugahara, Kazuki Tono-oka (Chiba Institute of Technology), Hidekazu Kobatake (Doshisha University), Suguru Shiratori (Tokyo City University), Ken-ichi Sugioka (Toyama Prefectural University), Takehiko Ishikawa (Japan Aerospace Exploration Agency), Shumpei Ozawa (Chiba Institute of Technology)	JK-TFEC11-1317 Shoe wetting mechanism by droplet formation with gait Hayato Hasegawa, Kazuki Sugiyama, Yoshihiro Kubota (Toyo University)	JK-TFEC11-1308 Enhanced plasmon thermal conductivity in multilayer graphene Kuk Hyun Yun and Bong Jae Lee (KAIST)	
16:00-16:15	JK-TFEC11-1338 Measurement of interfacial tension of hexane/water system pressurized with methane Taiga Sasaki, Taiki Yamashita, Ryo Ohmura (Keio University)	JK-TFEC11-1106 Effect of mixed ultra-fine bubble liquids on the removal rate of the soils on a glass surface by free-flow washing Torakage Kawasaki, Akiomi Ushida (Niigata University)	JK-TFEC11-1510 Directivity control of thermal radiation using polymer thin-film waveguide combined with surface structures Shunsuke Tokanai, Keiya Otomo, Hiro Yugami, Makoto Shimizu (Tohoku University)	
16:15-16:30	JK-TFEC11-1185 Difference in phase equilibrium conditions between H2O and D2O in the HFC-32 and HFC-134a clathrate hydrate system Leo Kamiya, Ryonosuke Kasai, Haruki Ito, Hitoshi Kiyokawa, Ryo Ohmura (Keio University)	JK-TFEC11-1503 Numerical analysis of unsteady losses in axial pump caused by variable IGV under off-design condition Hyunji Chang, Junyoung Lim, Seung Jin Song (Seoul National University)	JK-TFEC11-1339 A proposal for background noise correction in room-temperature micro-FTIR thermal emission spectroscopy Takeshi Kishi, Kazuya Hasegawa, Hiroki Tanaka, Atsushi Sakurai (Niigata University)	
16:30-16:45	JK-TFEC11-1164 The gaseous speed of sound and density measurements for binary refrigerant blends of HFO-1123 and HFO-1234yf Yuya Kano, Kanako Nishihashi, Yohei Kayukawa, Naoki Kuramoto (National Institute of Advanced Industrial Science and Technology)		JK-TFEC11-1335 Enhancement of methane dry reforming using micro-structured resonant emitters Takato Komatsu, Hiroki Sato, Takumi Kojima, Jiaming Cao, Reo Nakamura, Hiroo Yugami, Makoto Shimizu (Tohoku University)	
16:45-17:00	JK-TFEC11-1133 Thermophysical properties of pure HFO-1132A and HFO-1132A & HFC-134A binary blends' refrigerants from 240 K to 300 K using MD simulation Sanzida Akter (Jagannath University), Rifat Ara Rouf (Independent University), Md. Rakibul Hasan (Dhaka University of Engineering & Technology), Md. Sarwar Alam (Jagannath University)			

J-K TFEC11 Technical Session

DAY 4: Saturday, October 25, 2025

Time /	Room A1	Room A2	Room B1	Room B2
Session	F07 - Multiphase/Multicomponent Flows 4		T05 - Multiphase Heat and Mass Transfer 4	F01 - Aeroacoustics/Flow-induced vibration 1
Session Chair:	Toshiyuki Sanada (Shizuoka University)		Junnosuke Okajima (Tohoku University)	Hiroshi Yokoyama (Toyohashi University of Technology)
10:30-10:45	JK-TFEC11-1220		JK-TFEC11-1240	JK-TFEC11-1437
	Numerical investigation on splashing characteristics of single droplet impingement on inclined wet surface using moving particle method Koji Fukudome, Joe Matsutani (Kanazawa Institute of Technology), Shunpei Nanmo (Institute of Science Tokyo), Yuki Abe (Tokyo University of Science), Ryo Tsuboi (Daido University), Masaya Suzuki, Takuya Mizuno (JAXA), Makoto Yamamoto (Tokyo University of Science)		Experimental investigation and analysis of flow instability characteristics in large-area mini-channel heat sink Jae-Yoon Park, Jin-Young Kim, Myung-Bae Cha, Seong-Jin Oh, Hee-Jae Jeon, Jin-Hwi Kim, Sung-Min Kim (Sungkyunkwan University)	Numerical investigation of airfoil tip vortex using the lattice Boltzmann method Yuya Miki, Yasumasa Suzuki, Chisachi Kato (Nihon University)
10:45-11:00	JK-TFEC11-1494		JK-TFEC11-1252	JK-TFEC11-1130
	Numerical simulation of drop deformation and breakup in shear flow between counter-rotating cylinders Hayato Masuda, Hiroyuki Iyota (Osaka Metropolitan University), Mitsuhiro Ohta (Tokushima University), Muhammad Hassan Asghar, Jun Liu, Tomislav Marić, Dieter Bothe (Technische Universität Darmstadt)		Experimental study of pressure drop and pressure fluctuation characteristics in a mini-channel heat sink Jae-Hyun Kim, Hee-Jae Jeon, Seung-Joon Lee, Sung-Min Kim (Sungkyunkwan University)	High-fidelity simulation of trailing edge noise with an unstructured-grid CFD solver I. Miyamoto, K. Ogura, M. Kameda (Tokyo University of Agriculture and Technology), Y. Kojima (JAXA)
11:00-11:15	JK-TFEC11-1156		JK-TFEC11-1386	JK-TFEC11-1299
	A computational study of drop breakup in strong linear shear flows induced between a moving wall and a stationary wall Fan Yuhang, Mitsuhiro Ohta (Tokushima University), Edwin Jimenez (Spectral Numerical LLC), Mark Sussman (Florida State University)		Experimental investigation of OSV occurrence conditions in subcooled flow boiling with swirl flow Yudai Tsutsui, Wang Yue, Tomio Okawa (The University of Electro-Communication)	Effect of trailing edge shape of propeller fan on aerodynamic performance and generated aerodynamic noise Shunya Uda, Yasumasa Suzuki, Yuya Miki, Chisachi Kato (Nihon University), Naoki Shikazono (The University of Tokyo)
11:15-11:30	JK-TFEC11-1283		JK-TFEC11-1538	JK-TFEC11-1101
	Evaporation dynamics of liquid marble in acoustic levitation Keigo Noro, Koji Hasegawa (Kogakuin University)		Predicting critical heat flux of flow boiling across short to long micro and mini-channels: A theoretical model Zain Ul Abideen, Jae-Hyun Kim, Jae-Yoon Park, Sung-Min Kim (Sungkyunkwan University)	Compressible flow analysis of wake-blade interaction for a counter-rotating fan Takashi Kuraishi, Hiroshi Yokoyama (Toyohashi University of Technology)
11:30-11:45	JK-TFEC11-1190		JK-TFEC11-1417	JK-TFEC11-1426
	Steady and pulsating flow in a droplet induced by solutal Marangoni effect Kosei Kohika, Akihiko Horibe, Kazuma Isobe, Yutaka Yamada (Okayama University)		Evaporation-induced phase separation dynamics in multicomponent droplets in acoustic levitation Hiroki Kasahara, Mitsuki Mitsuno, Masaki Hiratsuka, Koji Hasegawa (Kogakuin University)	Prediction of trailing edge noise generated from a low-pressure axial fan based on machine learning Takeru Hosoi and Soichi Sasaki (Nagasaki University)
11:45-12:00	JK-TFEC11-1475			JK-TFEC11-1432
	High-speed nanodroplets driving innovation in water use Takehiko Sato (Tohoku University), Shigeru Fujimura (Tohoku Medical and Pharmaceutical University), Seiji Kanazawa, Kosuke Tachibana (Oita University), Siwei Liu, Tomoki Nakajima (Tohoku University), Yunchen Xiao (Tohoku University)			Evaluation of feature values of interference noise generated by an axial fan Kohta Okumura, Takeru Hosoi, Soichi Sasaki (Nagasaki University)

J-K TFEC11 Technical Session

DAY 4: Saturday, October 25, 2025

Time / Session	Room B3	Room B4	Room B5	Room B6
Session Chair:	T07 - Solidification and Melting 1 Tatsunori Asaoka (Shinshu University)	T08 - Sustainable Energy Noboru Yamada (Nagaoka University of Technology)		
10:30-10:45	JK-TFEC11-1433 Effect of adding surfactants and polyvinyl alcohol to sugar alcohol slurries Kota Serizawa, Haruka Sato (Nagaoka University of Technology), Shunsuke Abe, Tatsunori Asaoka (Shinshu University), Masatoshi Takeda, Masaaki Baba (Nagaoka University of Technology)	JK-TFEC11-1398 Plant system and receiver for solar indirect heating thermochemical CO₂ splitting Y. Koyama, T. Matsushima, M. Suzuki, M. Nakakura, K. Matsubara (Niigata University)		
10:45-11:00	JK-TFEC11-1328 Crystallization characteristics of sugar alcohol crystals from supersaturated aqueous solutions Yuki Matsumoto, Ayumu Nagahori, Takashi Morimoto, Hiroyuki Kumano (Aoyama Gakuin University)	JK-TFEC11-1234 Numerical model analysis for optimization of liquid hydrogen fueling processes during operation Hyunseo Lee, Dongchan Lee (University of Seoul)		
11:00-11:15	JK-TFEC11-1260 Evaluation of agglomeration force of ice particles in ice slurry Hiroto Watanabe, Mahiro Akimoto, Takashi Morimoto, Hiroyuki Kumano (Aoyama Gakuin University), Toshie Koyama (Tokyo Denki University), Masayuki Tanino (Takasago Thermal Engineering Co., Ltd.)	JK-TFEC11-1448 Optimization of VO₂ based smart window with anti-reflection coating Kosei Yagi, Itsuki Shinohara, Kanata Tsukano, Nguyen Huy Hiep (Nagaoka University of Technology), Shogo Hatayama, Noriyuki Uchida (AIST), Yuta Saito (Tohoku University), Masatoshi Takeda, Masaaki Baba (Nagaoka University of Technology)		
11:15-11:30	JK-TFEC11-1390 Laser-induced reductive sintering of various metal oxide nanoinks Phuoc Loc Truong, Daeho Lee (Gachon University)	JK-TFEC11-1344 Numerical calculation on reducing the overall length of resonance tubes in a thermoacoustic engine using a resonator with spring and mass Mariko Senga, Shinya Hasegawa (Tokai University)		
11:30-11:45		JK-TFEC11-1262 Model analysis of steam heat pump in the industrial complex Beom Goo Han, Junwoo Park, Dong Rip Kim (Hanyang University)		
11:45-12:00				

J-K TFEC11 Technical Session

DAY 4: Saturday, October 25, 2025

Time /	Room A1	Room A2	Room B1	Room B2
Session	F07 - Multiphase/Multicomponent Flows 5		T05 - Multiphase Heat and Mass Transfer 5	F01 - Aeroacoustics/Flow-induced vibration 2
Session Chair:	Mitsuhiro Ohta (Tokushima University)		Tomohide Yabuki (Kyushu Institute of Technology)	Jin-Tae Kim (Pohang University of Science and Technology)
13:30-13:45	JK-TFEC11-1134 Stability analysis of inclined falling liquid films: effects of meniscus formation based on numerical simulations and experiments Shogo Matsui (Yokohama National University), Georg F. Dietze (Université Paris-Saclay), Koichi Nishino, Misa Ishimura (Yokohama National University)		JK-TFEC11-1108 Numerical investigation of liquid film flow and heat transfer on a heated rotating disk Kojiro Kurosawa (Tohoku University), Mitsuru Shimagaki (JAXA), Junnosuke Okajima (Tohoku University)	JK-TFEC11-1399 A study on prediction of power output characteristics and broadband noise of a stall control wind turbine Soichi Sasaki, Kotaro Sakamoto (Nagasaki University)
13:45-14:00	JK-TFEC11-1404 Marangoni de-wetting of an oil layer above water pool Donghoon Lee (Sungkyunkwan University), Ildoo Kim (Konkuk University), Jinkee Lee (Sungkyunkwan University)		JK-TFEC11-1490 Thermal analysis of flow boiling heat transfer on a microstructure using optical fiber based temperature measurement Seong Yeop Kim, Hyeon Taek Nam (Jeonbuk National University), Jong Hyun Kim (Korea Lift of College), Seungro Lee, Donghwi Lee (Jeonbuk National University)	JK-TFEC11-1201 Microfilers inspired by wind-dispersed seeds Jin-Tae Kim (POSTECH)
14:00-14:15	JK-TFEC11-1313 Convection cells in a partially filled horizontal rotating cylinder Daiki Watanabe and Susumu Goto (The University of Osaka)		JK-TFEC11-1138 Experimental study on surrounding liquid motion induced by high-frequency vapor-bubble oscillation in microbubble emission boiling Chikaze Yasuda, Hirotochi Machigaki, Akira Otake, Ichiro Ueno (Tokyo University of Science)	JK-TFEC11-1127 Experimental study on fluid force acting on a cylinder oscillating in viscous fluid Yuzuki Watanabe, Shota Anayama (Doshisha University), Halvard Forsland (Norwegian University of Science and Technology), Katsuya Hirata (Doshisha University)
14:15-14:30	JK-TFEC11-1394 Experimental demonstration of enhanced displacement by phase separation in a two-dimensional micromodel in viscously unstable fluid displacement with a partially miscible system Shunta Kiuchi, Yuichiro Nagatsu (Tokyo University of A&T), Takahiko Ban (The University of Osaka), Manoranjan Mishra (Indian Institute of Technology Ropar), Ryuta X. Suzuki (PRESTO, Japan Science and Technology Agency)		JK-TFEC11-1109 Numerical simulation of subcooled pool nucleate boiling considering microlayer formation Ryo Miura, Junnosuke Okajima (Tohoku University)	JK-TFEC11-1229 Performance of flow-induced vibrational power generator by a cantilevered rectangular prism with the angle of attack S. Ikeda, T. Kiwata, M. Heragy, H. Mitani, T. Ueno (Kanazawa University)
14:30-14:45	JK-TFEC11-1372 Bistable states of turbulent wake behind a plate under a free surface Yutaro Motoori, Ayuri Fujishima, Shunsuke Goda, Takaya Masuda, Susumu Goto (The University of Osaka)		JK-TFEC11-1465 Numerical study on two-phase heat transfer phenomena during CO₂ liquefaction process in a PCHE of LNG carrier Won Suk Ryoo, Jae-Ho Jeong, Mugabi Jophous (Chung-ang University), Jong Keun Yu (Samsung Heavy Industries)	JK-TFEC11-1312 Numerical simulation of a flow-induced vibration of a circular cylinder in extreme conditions of mars Mohamed Heragy, Shota Kita, Takahiro Kiwata (Kanazawa University)
14:45-15:00				

J-K TFEC11 Technical Session

DAY 4: Saturday, October 25, 2025

Time / Session	Room B3	Room B4	Room B5	Room B6
Session Chair:	T07 - Solidification and Melting 2 Daeho Lee (Gachon University)			
13:30-13:45	JK-TFEC11-1236 Behavior of ice particles in ice slurry jet flow Jin. Uraki, Haruki. Sato, Mizuki. Igarashi, Shunsuke. Abe, Tatsunori. Asaoka (Shinshu University)			
13:45-14:00	JK-TFEC11-1304 Solvent selection and thermal energy storage density evaluation of sugar alcohol slurries for heat storage applications Akane Nakashima, Shunsuke Abe, Tatsunori Asaoka (Shinshu University)			
14:00-14:15	JK-TFEC11-1483 Visualization of density variation near CO₂ hydrate formation surface in saline water Yuki Kanda (Tohoku University), Hiroyuki Komatsu (Niigata University)			
14:15-14:30	JK-TFEC11-1537 Neutron imaging for meltwater behavior during defrosting R. Matsumoto, N. Fujikawa, Q. Chu, K. Munekiyo, Y. Oda (Kansai University), Y. Matsumoto (Comprehensive Research Organization for Science and Society), T. Shinohara (J-PARC Center)			