Program at a glance 1/3

Day 1	HST(UTC-10) Oct.13, 14:00-19:48 GMT(UTC+0) Oct.14, 00:00-05:48 JST(UTC+9) Oct.14, 09:00-14:48				
	Room A	Room B	Room C	Room D	Lounge
HST(UTC-10) 14:00-14:10 GMT(UTC+0) 00:00-00:10 JST(UTC+9) 09:00-09:10	**Opening** Welcome Address: *Yasuyuki Yokono* , ISTP31 chair Welcome Address: *Masaru Ishizuka* , PCTFE president Announcement: *Yoshio Utaka* , ISTP32 chair Group photo				
HST(UTC-10) 14:10-14:50 GMT(UTC+0) 00:10-00:50 JST(UTC+9) 09:10-09:50	**Plenary Lecture 1** OPTICAL MEASUREMENTS IN MULTIPHASE FLOWS: POINT · PLANE · SPATIO-TEMPORAL AND FURTHERMORE *Koichi HISHIDA* Sessin Chair: *Kzuyoshi Fushinobu*				
Break					
HST(UTC-10) 15:10-16:40 GMT(UTC+0) 01:10-02:40 JST(UTC+9) 10:10-11:40	**Technical Session A1** Experimental / Computational Fluid Mechanics 1 Sessin Chair: *Atsuki Komiya*	**Technical Session B1** Heat and Mass Transfer 1 Sessin Chair: *Tomoyuki Hatakeyama*	**Technical Session C1** Boiling / Multiphase 1 Sessin Chair: *Kazuhisa Yuki*	**Technical Session D1** Nanoscale Transport / Materials Processing 1 Sessin Chair: *Naoki Ono*	open talk space
	16 EXPERIMENTAL INVESTIGATION OF THE INFLUENCE OF THE CLEARANCE RATIO ON THE FLOW DRIVEN BY COROTATING DISKS MOUNTED IN A NON-AXISYMMETRIC ENCLOSURE *Beomzu Kim, Katsuaki Shirai and Takanori Shimizu*	63 SIMULTANEOUS MEASUREMENT OF NON-AXISYMMETRIC TEMPERATURE AND FLOW FIELDS FORMED BY NATURAL CONVECTION AROUND A SMALL HEATING SPHERE IN WATER *The Anh Nguyen, Zhenlei Wang, Van Cuong Han, Katsuya Kondo and Naoto Kakuta*	65 STUDY OF BREAKUP ON WATER FILM SHEARED BY STEADY AND PULSATILE AIR FLOW IN A HORIZONTAL RECTANGULAR DUCT *Shotaro Nakada, Yoichi Ogata, Keiya Nishida, Hideaki Yokohata, Ryo Yamamoto, Akira Nakashima, Nakamura, Marui, Nishimura, Ma and Kyosuke Akiyama*	20 NUMERICAL SIMULATION ON PROMOTION AND CONTROL OF CONCENTRATION DIFFUSION BY A MOVING OBJECT □ASSUMING APPLICATION FOR MOLECULAR COMMUNICATION *Kohei Ueda, Masashi Yamakawa and Shinichi Asao*	
	19 EXPERIMENTAL STUDY ON TURBULENCE STATISTICS IN TAYLOR-COUETTE FLOW WITH IRREGULARLY ROUGH SURFACES *Yukihiro Ihara, Yasufumi Horimoto and Yasuo Kawaguchi*	104 MEASUREMENT OF THERMAL DIFFUSIVITY AND EVALUATION OF FIBER CONDITION OF DISCONTINUOUS FIBER CFRP *Kohei Miyachi, Yasuyuki Muranaka, Shinichi Nonaka and Hosei Nagano*	69 BUBBLE–BUBBLE INTERACTION AND TRANSLATIONAL MOTION *Kotaro Ono, Tetsuro Yamashita, Kotaro Sato, Donghyuk Kang and Yukio Tomita*	55 INFLUENCE OF TORSIONAL DEFORMATION ON THERMAL CONDUCTIVITY OF SINGLE-WALLED CARBON NANOTUBE BUNDLES *Hayato Nagaya, Junhee Cho and Takuma Hori*	
	37 EXPERIMENTAL INVESTIGATION OF COLLOIDAL PARTICLE VELOCITIES IN THE REGION CLOSE TO SOLID WALL USING EVANESCENT LIGHT FIELD *Katsuaki Shirai, Takeru Hatanaka, Yuto Tateishi and Issei Takeuchi*	143 VISUALIZATION AND MEASUREMENT OF BUBBLES TRANSPORTED BY MIXED WETTABILITY SURFACES IN A HORIZONTAL CHANNEL *Taishi Satoda and Atsuhide Kitagawa*	116 HEAT REMOVAL CHARACTERISTICS OF A WATER FILM FALLING ON A VERTICAL WALL UNDER RADIANT HEATING *Yichao Bo, Manabu Tange, Aoshi Kono and Yoshifumi Ohmiya*	77 AN INVESTIGATION INTO THE ROLE OF HYDROXYL GROUPS ON THE THERMAL CONDUCTIVITY OF SMALL ALCOHOLS USING MOLECULAR SIMULATION WITH ATOMIC-LEVEL GREEN-KUBO ANALYSIS *Manjunatha Likhith, Hiroshi Takamatsu and James Cannon*	
	79 FLOW INSTABILITIES IN INWARD SWIRLING FLOW GENERATED BY INLET GUIDE VANES *Masanori Kudo, Shoji Kita, Koichi Nishibe, Hiroshi Ohue and Kotaro Sato*	147 VELOCITY AND TEMPERATURE MEASUREMENTS IN NATURAL CONVECTION BUBBLY FLOW BETWEEN VERTICAL PARALLEL PLATES *Atsuhide Kitagawa and Reona Kobayashi*	112 RESTORING VITALITY ENHANCEMENT BY MICROBUBBLE BATHING WITH HIGH ζ - POTENTIAL *Hiroto Narita, Hiroaki Hasegawa and Yutaka Masuda*	78 QUANTITATIVE ANALYSIS OF REACTION RATE DISTRIBUTIONS FOR ACID-BASE NEUTRALIZATION IN A MICROFLUIDIC CHANNEL USING NEAR-INFRARED IMAGING TECHNIQUE *Naoto Kakuta, Yutaka Washizuka, Ryo Nakanishi and Takato Uema*	
	155 EFFECTS OF SPIN ON FLOW STRUCTURE IN THE WAKE OF A BADMINTON SHUTTLECOCK *Kenichi Nakagawa and Hiroaki Hasegawa*	148 FLOW AND HEAT TRANSFER CHARACTERISTICS OF NATURAL CONVECTION BUBBLY FLOW ALONG A VERTICAL HEATED PLATE WITH MIXED WETTABILITY SURFACES *Atsuhide Kitagawa, Reona Kobayashi and Yasuharu Munezane*	135 EFFECT OF MICROBUBBLES ON FLOW FIELDS IN THE WAKE OF A BLUNT BODY *Naoto Kato, Hayato Matsugane and Hiroaki Hasegawa*	82 MOLECULAR DYNAMIS STUDY ON PARTICLE PUSHING AND ENGULFMENT BY A SOLIDIFICATION FRONT *Kunio Fujiwara, Tomoya Miyamoto, Shota Uchida and Masahiko Shibahara*	
Break					
HST(UTC-10) 18:00-19:48 GMT(UTC+0) 04:00-05:48 JST(UTC+9) 13:00-14:48	**Technical Session A2** Experimental / Computational Fluid Mechanics 2 Sessin Chair: *Katsuhiro Koizumi*	**Technical Session B2** Heat and Mass Transfer 2 Sessin Chair: *Takuma Hori*	**Technical Session C2** Boiling / Multiphase 2 Sessin Chair: *Manabu Tange*	**Technical Session D2** Nanoscale Transport / Materials Processing 2 Sessin Chair: *James Cannon*	open talk space
	13 INSTABILITY OF THE FLUID-FLUID INTERFACE IN THE HELE-SHAW CELL UNDER INITIAL ARBITRARY PERTRUBATION AMPLITUDES *Roman Bando, Eugenia Chervontseva and Leonid Martyushev*	30 THE EFFECTS OF WATER LEVEL ON FORCED CONVECTION HEAT TRANSFER FROM A HEATED CYLINDER BURIED IN A SATURATED POROUS MEDIUM *Tsubasa Oi, Shigeo Kimura, Nobuyoshi Komatsu, Takahiro Kiwata and Takaaki Kono*	15 INVESTIGATION OF CONVECTIVE BOILING PHENOMENA IN LAYERED-PARALLEL MICROCHANNELS *Yusuke Nishimura, Yuki Kanda, Junnosuke Okajima and Atsuki Komiya*	101 FLOW ANALYSIS FOR THE OPTIMIZATION OF MASS SUSPENSION CULTURE OF IPS CELLS USING ORBITALLY SHAKEN BIOREACTORS *Ryosuke Isobe, Atsushi Sekimoto, Yasunori Okano, Masahiro Kino-Oka, Tomohiro Tokura and Hiroyuki Matsuda*	
	51 INFLUENCE OF STROKE ON JET STRUCTURE OF WALL-SYNTHETIC JET FLOWING OVER CIRCULAR CYLINDER *Tenho Sakakura, Kihachi Yamaguchi, Koichi Nishibe, Hiroshi Ohue and Kotaro Sato*	62 EFFECT OF SWIRL FLOW ON HEAT TRANSFER COEFFICIENT DISTRIBUTION OF SQUARE TUBE FLOW *Ryo Morozumi, Kenichiro Takeishi, Tomoko Tsuru, Naoya Kawakita and Yoshiki Niizeki*	83 GROWTH OF ISOLATED NUCLEATE BOILING BUBBLE UNDER CONTROLLED CONDITIONS OF SUPERHEATED LIQUID LAYER *Takahiro Nakamura and Manabu Tange*	144 MEASUREMENT OF PARTICLE TRAPPING PROBABILITY IN MICROCHANNELS WITH DIFFERENT FILTER STRUCTURE *Tomoki Kumano, Atsuhide Kitagawa, Mirano Ota and Taishi Tonooka*	
	52 STUDY ON JET STURUCTURE OF SYNTHETIC JET IN AN ASYMMETRIC FLOW FIELD *Seiya Kawada, Kihachi Yamaguchi, Koichi Nishibe, Hiroshi Ohue and Kotaro Sato*	76 NUMERICAL AND EXPERIMENTAL STUDIES OF HEAT TRANSFER FOR STRAIGHT AND 90 DEGREE CURVED SQUARE DUCT *Guanming Guo, Mesaya Kamigaki, Yuuya Inoue, Keiya Nishida, Hitoshi Hongou, Masanobu Koutoku, Ryo Yamamoto, Hieaki Yokohata and Yoichi Ogata*	99 EFFECT OF DISSOLVED GAS ON BOILING HEAT TRANSFER AND BUBBLE BEHAVIOR IN FORCED FLOW BOILING *Hiroaki Narazaki, Satoshi Matsumoto, Akiko Kaneko and Yutaka Abe*	146 EFFECT OF PILLAR SHAPE ON PARTICLE TRAPPING IN MICROCHANNELS *Atsuhide Kitagawa, Mirano Ota, Tomoki Kumano, Tomoaki Watamura and Taishi Tonooka*	
	59 JET STRUCTURE OF PLANE AND CURVED WALL-SYNTHETIC JET *Kihachi Yamaguchi, Tenho Sakakura, Koichi Nishibe, Hiroshi Ohue and Kotaro Sato*	97 EXPERIMENTAL STUDY ON RELATIONSHIP BETWEEN HEAT TRANSFER ENHANCEMENT AROUND CYLINDRICAL OBSTRUCTION AND WAVE PATTERN OF PULSATING WATER FLOW *Keiichi Hamatani, Takashi Fukue, Hidemi Shirakawa and Yasuhiro Sugimoto*	105 LES OF POOL BOILING PHENOMENA CONSIDERING CHT AND NUCLEATION SITE *Hiroaki Yamshita, Koichi Tsujimoto, Toshihiko Shakouchi, Toshitake Ando and Mamoru Takahashi*	156 PRESSURE-DRIVEN SUSPENSION FLOW SIMULATION TO ASSESS THE TEMPORAL CHANGES IN ITS MICROSTRUCTURE *Tomohiro Fukui, Misa Kawaguchi and Koji Morinishi*	
	72 INFLUENCE OF STEPPED SLOT GEOMETRY ON THE DEFLECTION OF SYNTHETIC JETS *Ryota Kawahara, Ryota Kobayashi, Kotaro Sato, Koichi Nishibe and Kazuhiko Yokota*	125 TEMPORAL EVOLUTION OF TURBULENCE COHERENCE STRUCTURE IN AND ABOVE URBAN CANOPY WITH HETEROGENEOUS HEATING AT BUILDING SURFACE *Yasuo Hattori, Shuji Ishihara, Hitoshi Suto, Keisuke Nakao, Yuma Hasebe and Hiromaru Hirakuchi*	111 EXPERIMENTAL STUDY OF HEAT TRANSFER ENHANCEMENT ON SUBCOOLED FLOW BOILING UNDER PRESSURIZED CONDITIONS *Rikiya Shiono and Ichiro Kano*	161 PERFORMANCE IMPROVEMENT OF MICROSTRUCTURED FLUID SEPARATOR UTILIZING THE SORET EFFECT *Takumi Saiki, Shinya Watanabe, Souhei Matsumoto and Naoki Ono*	
	95 INTERACTION BETWEEN A CONTINUOUS JET AND SYNTHETIC JET *Yodai Suzuki, Ryota Kobayashi, Kotaro Sato, Koichi Nishibe and Kazuhiko Yokota*	137 HEAT TRANSFER OF MAGNETIC FLUID FLOW THROUGH CERAMIC FOAM POROUS MEDIA UNDER MAGNETIC FIELD *Wannarat Rakpakdee, Masaaki Motozawa, Mitsuhiro Fukuta and Weerachai Chaiworapuek*			

Program at a glance 2/3

Day 2	HST(UTC-10) Oct.14, 14:10-19:48 GMT(UTC+0) Oct.15, 00:10-05:48 JST(UTC+9) Oct.15, 09:10-14:48				
	Room A	Room B	Room C	Room D	Lounge
HST(UTC-10) 14:10-14:50 GMT(UTC+0) 00:10-00:50 JST(UTC+9) 09:10-09:50	**Plenary Lecture 2** PRACTICE YOUR SCALES! NANOMATERIALS FOR FAST ENERGY PROCESSES *Timothy S. Fisher* Sessin Chair: *Kazuaki Yazawa*				
	Break				
HST(UTC-10) 15:10-16:40 GMT(UTC+0) 01:10-02:40 JST(UTC+9) 10:10-11:40	**Technical Session A3** Experimental / Computational Fluid Mechanics 3 Sessin Chair: *Masashi Yamakawa*	**Technical Session B3** Thermal-Fluids Machinery Sessin Chair: *Hironori Saito*	**Technical Session C3** Boiling / Multiphase 3 Sessin Chair: *Atsuhide Kitagawa*	**Technical Session D3** Electronic Packaging 1 Sessin Chair: *Toshio Tomimura*	open talk space
	17 COMPUTATION ON A COMPRESSIBLE VISCOUS FLOW AROUND A BIKE USING MULTI AXES SLIDING MESH APPROACH *Masashi Yamakawa, Satoshi Chikaguchi, Shinichi Asao and Shotaro Hamato*	60 EXPERIMENTAL RESEARCH ON AERODYNAMIC NOISE RADIATED FROM DELTA WING *Harutaka Honda, Shigeru Ogawa and Kohei Suzuki*	56 FROST GROWTH CHARACTERISTICS ON AN AMBIENT AIR VAPORIZER OF LIQUIFIED NATURAL GAS *Sewon Lee, Junho Kwon, Sungho Yun and Yongchan Kim*	26 CFD-BASED INVESTIGATION ON FLOW PATTERN AND HEAT TRANSFER OF PULSATING FLOW AROUND A RIB MOUNTED IN RECTANGULAR CHANNEL (RELATIONSHIP BETWEEN FLOW PATTERN AND RIB HEIGHT) *Shintaro Hayakawa, Takashi Fukue, Hidemi Shirakawa and Yasuhiro Sugimoto*	
	38 DNS ANALYSIS OF MULTIPLE IMPINGING JETS UNDER OSCILLATION CONTROL *Haruka Taniguchi, Koichi Tsujimoto, Toshihiko Shakouchi, Toshitake Ando and Mamoru Takahashi*	61 STUDY ON RELATIONSHIP BETWEEN AERODYNAMIC SOUND SOURCES BY LONGITUDINAL VORTEX SYSTEM AND FLOW FIELD *Kohei Suzuki, Shigeru Ogawa and Harutaka Honda*	68 INVESTIGATION ON COHESIVE FORCE OF ICE PARTICLES IN HIGH IPF ICE SLURRY *Kentaro Tsukagoshi, Hiroki Abe, Yuta Kuroiwa, Daiki Takeuchi and Koji Matsumoto*	35 EFFECTS OF RESTRICTED INLET FLOW ON P-Q CHARACTERISTICS OF SMALL AXIAL FANS IN THIN ENCLOSURE *Yukio Masuda, Takashi Fukue, Tomoyuki Hatakeyama, Masaru Ishizuka and Katsuhiro Koizumi*	
	48 CONSTRUCTION OF GENERATION TECHNOLOGY OF FLUID-ENGINEERING VACCINE USING AI *Kiyota Ogura, Masashi Yamakawa and Shinichi Asao*	85 ENHANCEMENT OF THERMAL-HYDRAULIC PERFORMANCE OF ARTIFICIALLY ROUGHENED SOLAR AIR HEATER DUCT WITH V-UP CONTINUOUS RIBS *Indri Yaningsih, Dominicus Danardono Dwi Prija Tjahjana, Takahiko Miyazaki and Koji Enoki*	113 INVESTIGATION ON INFLUENCE OF DROPPING IONIC SURFACTANT MIXTURE TO NONIONIC SURFACTANT ONE ON SUPERCOOLING DEGREE OF MIXED MIXTURE UNDER APPLIED VOLTAGE CONDITION *Hiroki Abe, Daisuke Takeuchi, Youtaro Inaba, Takumi Sato and Koji Matsumoto*	49 STUDY ON PERFORMANCE IMPROVEMENT OF AXIAL-FLOW FAN WITH UPSTREAM OBSTACLE *Risa Yoshie, Chisato Ichihara, Koichi Nishibe, Kotaro Sato and Hiroshi Ohue*	
	64 INVESTIGATION OF ANALYTICAL METHOD OF REVERSE KARMAN VORTEX GENERATED FROM A CAUDAL FIN OF A SMALL FISH SWUM IN LOW-REYNOLDS NUMBER FLOW *Kyoka Kondo, Takashi Fukue, Yasuhiro Sugimoto, Hiroaki Sumikawa, Tomoki Saka, Hidemi Shirakawa and Tasuku Miyoshi*	120 LIFT INCREASE MECHANISM OF DRONE HOVERING NEAR UPPER WALL *Wataru Kobayashi, Shota Nakano, Yusuke Koizumi and Koichi Nishibe*	117 OBSERVATION OF FREEZING INITIATION BEHAVIOR OF A SUPERCOOLED WATER DROPLET UNDER VOLTAGE APPLICATION TO WIRE - CYLINDER INTERNAL ELECTRODE SYSTEM *Yusuke Obama and Masanori Fujimoto*	128 VISUALIZATION OF TWO-PHASE FLOW IN UNI-DIRECTIONAL POROUS COPPER *Daiki Suga, Kazuhisa Yuki, Risako Kibushi and Kio Takai*	
	139 REGIMES AND TRANSITIONS OF FLOW AROUND THE AHMED BODY AT LOW REYNOLDS NUMBERS *Masatoshi Mikasa, Suguru Shiratori, Itsuhei Kohri, Hideaki Nagano and Kenjiro Shimano*	151 NUMERICAL STUDY ON THE INSPIRATORY AIRFLOW IN A PULMONARY AIRWAY USING GEOMETRICAL SEGMENT MODELS *Misa Kawaguchi, Tomohiro Fukui, Kanako Kuroyanagi, Shigeru Murata and Yoshiko Kaneko*	119 INVESTIGATION ON THE CHARACTERISTICS OF REFORMING THE COPPER OXIDE LAYER BY MEASURING ICE ADHESION FORCE IN A NANO-SCALE *Youtaro Inaba, Takumi Sato, Kentaro Tsukagoshi, Yuta Kuroiwa and Koji Matsumoto*	159 EVALUATION OF THERMAL CONTACT RESISTANCE UNDER HIGH HEAT FLUX CONDITIONS IN AG PASTE *Hayato Niwa, Risako Kibushi, Kazuhisa Yuki, Noriyuki Unno and Tomoyuki Hatakeyama*	
Break					
HST(UTC-10) 18:00-19:48 GMT(UTC+0) 04:00-05:48 JST(UTC+9) 13:00-14:48	**Technical Session A4** Experimental / Computational Fluid Mechanics 4 Sessin Chair: *Suguru Shiratori*	**Technical Session B4** Energy Systems 1 Sessin Chair: *Yasumasa Suzuki*	**Technical Session C4** Boiling / Multiphase 4 Sessin Chair: *Masaaki Motozawa*	**Technical Session D4** Electronic Packaging 2 Sessin Chair: *Takashi Fukue*	open talk space
	70 FLOW CHARACTERISTICS IN A RECTANGULAR CONTAINER INJECTED AIR FROM A SLIT NOZZLE *Kohei Noguchi, Takahiro Kiwata, Kuniaki Toyoda, Hiroaki Uchida, Masamichi Tsuji and Koichi Uegami*	43 EFFECT OF BAFFLE SHAPE AND DRIFT FLOW ON HEAT PERFORMANCE OF SHELL AND TUBE HEAT EXCHANGER *Shujiro Kamakura, Kazutaka Takata and Yuta Ikemori*	11 VISUALIZATION OF DROPLET EVAPORATION ON NON-PERMEATING MEDIA FOR INKJET TECHNOLOGY *Panus Jongleartttrakull, Kazuyoshi Fushinobu and Masami Kadonaga*	31 SIMULTANEOUS MEASUREMENT OF FLOW AND TEMPERATURE DISTRIBUTION INSIDE A PULSATING HEAT PIPE *Yuya Otaka, Keiko Ishii and Koji Fumoto*	
	71 FLOW CHARACTERISTICS OF A FREE JET ISSUING FROM RECTANGULAR NOZZLE WITH FOUR TAPERED TRIANGULAR TUBES *Naoki Kajitani, Takahiro Kiwata, Riku Ouchi, Takaaki Kono and Hiroshi Teramoto*	46 NUMERICAL ANALYSIS OF THE FLOW GENERATED BY ANNULAR INLET GUIDE VANES WITH A CIRCULAR OUTLET PIPE *Kotaro Yamanaka, Ryota Kobayashi, Kotaro Sato and Koichi Nishibe*	57 NUMERICAL SIMULATION OF WATER DROPLETS COLLIDING WITH A FLAT PLATE *Kouki Murata, Koichi Tsujimoto, Toshihiko Shakouchi, Toshitake Ando and Mamoru Takahashi*	141 FABRICATION OF A POLYMER PULSATING HEAT PIPE ON A THIN POLYMER SHEET *Koito and Yoshimoto*	
	73 NUMERICAL STUDY ON EXCITED JETS USING THE VORTEX METHOD *Hiroki Sasayama, Kotaro Sato, Koichi Nishibe, Donghyuk Kang and Kazuhiko Yokota*	47 NUMERICAL STUDY ON THE WAKE BEHAVIOR BETWEEN TWO OFFSHORE WIND TURBINES IN TANDEM ARRANGEMENT *Qidun Soesanto, Tsukasa Yoshinaga, Akiyoshi Iida, Yoshinobu Yamade and Chisachi Kato*	92 FLOW ANALYSIS OF PLANE LIQUID JET WITH A CONTROLLED SHEAR LAYER USING TEMPORAL NUMERICAL SIMULATION *Yuma Terao, Hiroaki Sugiura, Koichi Tsujimoto, Toshihiko Shakouchi, Toshitake Ando and Mamoru Takahashi*	142 Operational Characteristics of an ABS Polymer Pulsating Heat Pipe with an HFE Working Fluid (Effect of Orientation) *Pei, Shimogaki, Samuta and Koito*	
	74 FLOW CONTROL USING EXCITED JETS WITH COANDA SURFACES *Yu Tamanoi, Ryota Kobayashi, Kotaro Sato, Koichi Nishibe and Donghyuk Kang*	106 NON-ENZYMEC SACCHARIFICATION OF CELLULOSE USING ULTRASONIC WELDING *Shinfuku Nomura, Taiki Murase and Yukiharu Iwamoto*	96 STUDY OF AIR-WATER INTERFACE BEHAVIOR IN STRAIGHT AND CURVED RECTANGULAR DUCTS *Yoichi Ogata, Shotaro Nakada, Kyosuke Akiyama, Ji Ma, Qing Wu, Keiya Nishida, Ryo Yamamoto, Akira Nakashima, Kazuhiro Nakamura, Kentaro Marui, Masato Nishimura and Hideaki Yokohata*	157 THERMO-FLUID BEHAVIOR IN A MICRO-GROOVED EVAPORATOR OF LHP BASED ON MICROSCALE INFRARED / VISIBLE OBSERVATIONS *Yoshihisa Nakatsugawa, Kimihide Odagiri and Housei Nagano*	
	80 EFFECT OF THE CURVATURE RADIUS FOR 90-DEGREE CURVED CIRCULAR NOZZLE ON INTERNAL FLOW AND OIL JET BEHAVIOR. *Mikimasa Kawaguchi, Keita Mimura, Keiya Nishida, Masanobu Koutoku, Ryo Yamamoto, Akira Nakashima and Yoichi Ogata*	107 INFLUENCE OF IMPELLER PROJECTION AREA ON THE MIXING PERFORMANCE USING DOUBLE VERTICAL PADDLE IMPELLERS *Kazutaka Takata, Serene Ong and Masaki Kobayashi*	121 EFFECT OF THE WETTABILITY OF POROUS ELECTRODES ON BUBBLE DYNAMICS AND OVERPOTENTIAL IN ALKALINE WATER SPLITTING *Ryuichi Iwata, Lenan Zhang, Kyle L. Wilke, Shuai Gong, Mingfu He, Betar M. Gallant and Evelyn N. Wang*	158 STUDY OF A KW SCALE LOOP HEAT PIPE FOR THE HIGH HEAT TRANSPORT DESIGNED BY BAYESIAN OPTIMIZATION *Masakazu Hashimoto, Yoshitada Aono, Noriyuki Watanabe and Hosei Nagano*	
	100 FLOW AND HEAT TRANSFER CHARACTERISTICS OF IMPINGING JETS EXCIED WITH BLOOMING CONTROL *Kentaro Echigo, Koichi Tsujimoto, Toshihiko Shakouchi, Toshitake Ando and Mamoru Takahashi*				

Program at a glance 3/3

Day 3	HST(UTC-10) Oct.15, 14:10-19:48 GMT(UTC+0) Oct.16, 00:10-05:48 JST(UTC+9) Oct.16, 09:10-14:48				
	Room A	Room B	Room C	Room D	Lounge
HST(UTC-10) 14:10-14:50 GMT(UTC+0) 00:10-00:50 JST(UTC+9) 09:10-09:50	**Plenary Lecture 3** MOMENTUM AND HEAT TRANSPORT THROUGH STOCHASTIC POROUS MEDIA *Kyung Chun Kim* Sessin Chair: *Satoshi Someya*				
Break					
HST(UTC-10) 15:10-16:40 GMT(UTC+0) 01:10-02:40 JST(UTC+9) 10:10-11:40	**Technical Session A5** Measurement / Imaging 1 Sessin Chair: *Akira Rinoshika*	**Technical Session B5** Energy Systems 2 Sessin Chair: *Shuichi Torii*	**Technical Session C5** Combustion and Reacting Flows Sessin Chair: *Shinfuku Nomura*	**Technical Session D5** Electronic Packaging 3 Sessin Chair: *Risako Kibushi*	open talk space
	24 INVESTIGATION ON BEHAVIORS OF FINE SPRAY DROPLETS IMPINGED ON A WALL BY USING ULTRA-HIGH-SPEED IMAGING TECHNIQUE *Keishi Kikuchi, Yoshinori Kasahara, Yoshio Zama and Tomohiko Furuhata*	126 NUMERICAL STUDY ON THE FLOW CHARACTERISTICS INSIDE A MULTI-STAGE ORIFICE DEPENDING ON THE ORIFICE HOLE DIAMETER SIZES AT THE DESIGN CONDITION *Gong-Hee Lee, June-Ho Bae and Soon-Ho Kang*	29 NUMERICAL SIMULATION OF AMMONIA BURNER WITH HYDROGEN FLAME STABILIZER *Yukihiko Okumura, Tsukasa Hori, Fumiteru Akamatsu, Takahiro Kitano, Tomohiro Tsubota and Naoya Matsuda*	28 INVESTIGATION OF BRANCHING AND CONFLUENCE PRESSURE DROP AROUND FINNED HEAT SINKS FOR FLOW AND THERMAL RESISTANCE NETWORK MODELING *Masaya Fukada, Takashi Fukue, Yasuhiro Sugimoto, Tomoyuki Hatakeyama and Masaru Ishizuka*	
	90 OBSERVATION OF VORTEX STRUCTURES IN A ROUND JET WITH ARTIFICIALLY BRANCHED FLOWS USING TIME-RESOLVED 3D IMAGING AND PIV *Kohei Tanaka and Akinori Muramatsu*	127 ADEQUACY REVIEW OF UPSTREAM STRAIGHT LENGTHS FOR ORIFICE PLATES RECOMMENDED IN ASME PTC-19.5; MULTIPLE 90 BENDS IN THE SAME PLANE CASE *Gong Hee Lee*	40 THREE-DIMENSIONAL DIRECT NUMERICAL SIMULATION OF INTERACTING NON-PREMIXED HYDROGEN-OXYGEN FLAMES *Defne Kiran, Yuki Minamoto, Masayasu Shimura and Mamoru Tanahashi*	32 TRANSIENT COMPACT THERMAL MODEL DEVELOPMENT FOR MICROPROCESSOR PACKAGES *Koji Nishi*	
	110 EXPERIMENTAL VISUALIZATION OF MAGNETIC FLUID USING LUMINASCENT MICRO-ENCAPSULATION *Keiko Ishii and Koji Fumoto*	129 NUMERICAL STUDY OF TURBULENT FLOW AROUND A ROTATING WELLS TURBINE *Eru Kurihara, Shinji Kusumi, Takaya Sasaki and Hiromitsu Hamakawa*	42 EFFECT OF AMBIENT TEMPERATURE ON FLUORESCENCE INTENSITY OF INEXPENSIVE INORGANIC FLUORESCENT TRACER FOR PARTICLE IMAGE VELOCIMETRY OF IN-CYLINDER GASEOUS FLOWS IN ENGINES *Chihiro Kondo, Keiji Muramatsu and Tomomi Okamoto*	75 PREDICTION OF OPTIMIZED SILICON NANOSTRUCTURE AS THERMOELECTRICS BY EXHAUSTIVE SEARCH *Takuma Hori*	
	131 STUDY ON SHOCK WAVE CONFINEMENT USING SMALL HIGH-PRESSURE CHAMBER SHOCK TUBE *Koki Miyaoku, Hiroshi Fukuoka, Shigeto Nakamura, Shinichi Enoki, Kazuki Hiro and Masanori Yao*	149 EVALUATION OF CONTROLLING FACTORS FOR REDUCING HYDROGEN CONCENTRATION IN A CLOSED CONTAINER WITH A RECOMBINATION CATALYST *Gaku Takase and Kazuyuki Takase*	123 COMBUSTION OF SINGLE OXYGEN DROPLETS IN HYDROGEN IN MICROGRAVITY – EXPERIMENTS AND NUMERICAL MODELING *Florian Meyer, Christian Eigenbrod, Volker Wagner, Wolfgang Paa, James Hall, Jon Frydman, Michael Zody and James Hermanson*	91 TEMPERATURE PREDICTION MODELING IN PRODUCTION PRINTING SYSTEM BY USING MACHINE LEARNING *Takamasa Hase, Shunsuke Kawasaki, Erdem Dursunkaya, Takumi Ishikura, Kaori Hemmi, Kimiharu Yamazaki, Shinichi Kuramoto, Koichi Kato and Kazuyoshi Fushinobu*	
	132 DEVELOPMENT AND EVALUATION OF WIRE MESH SENSOR FOR GAS-LIQUID TWO-PHASE FLOW IN SMALL DIAMETER PIPE *Masaaki Muto, Takuya Wakiyama, Hiroaki Tsubone, Takahashi and Kikura*	154 NUMERICAL ANALYSIS OF BEHAVIOR OF VAPOR GENERATED BY RECOMBINED REACTION OF H2 AND O2 WITH CATALYSTS INSTALLED IN A LONG-TERM STORAGE CONTAINER FOR RADIOACTIVE WASTE *Gaku Takase and Kazuyuki Takase*	152 VISUALIZATION OF DETONATION WAVES PROPAGATING INSIDE A ROTATING-DETONATION ROCKET ENGINE BY USING POINT-DIFFRACTION INTERFEROMETRY *Toshiharu Mizukaki, Iwasaki, Kojima, Kawashima, Matsuyama, Iwata, Nunome and Tanno*	122 DATA DRIVEN MODELS FOR PREDICTION OF TEMPERATURES IN DATA CENTERS *Dhaval Patel, Jayati Athavale and Yogendra Joshi*	
Break					
HST(UTC-10) 18:00-19:48 GMT(UTC+0) 04:00-05:48 JST(UTC+9) 13:00-14:48	**Technical Session A6** Measurement / Imaging 2 Sessin Chair: *Kazuyuki Takase*	**Technical Session B6** Fuel Cell Sessin Chair: *Eru Kurihara*	**Technical Session C6** Heat Exchanger Sessin Chair: *Yuki Minamoto*	**Technical Session D6** Electronic Packaging 4 Sessin Chair: *Koji Nishi*	open talk space
	25 PRODUCTION AND CHARACTERISTICS OF STABLE BIODIESEL EMULSION FUEL *Shuichi Torii and Takumi Iwanaga*	21 DEVELOPMENT OF DIAGNOSTICS FOR POLYMER ELECTROLYTE FUEL CELL (PEFC) - CONFIRMATION OF VALIDITY OF OUR MODEL, USING AIC - *Tatsuhiro Nasu, Kimihiko Sugiura, Yasumasa Yoshitani, Kiyoshi Daigo and Tetsuya Murakami*	8 HEAT TRANSFER ENHANCEMENT USING METAL FIBROUS POROUS MEDIA IN MINI CHANNEL FLOW *Ryoto Tasaka, Takashi Yamada and Naoki Ono*	45 EXPERIMENTAL STUDY ON THE PERFORMANCE OF SOLAR-ASSISTED HEAT PUMP USING LOW GWP REFRIGERANTS R1234YF AND R1234ZE(E) *Jinyoung Kim, Minwoo Lee and Yongchan Kim*	
	133 OPTIMIZATION OF TEMPERATURE MEASUREMENT POSITION FOR FLOW RATE MEASUREMENT SYSTEM BASED ON STEM HEAT BALANCE METHOD *Kyosuke Suenaga, Taishu Iriguti, Hiroshi Fukuoka, Masanori Yao, Atsushi Suda, Shigeto Nakamura and Kenichi Iida*	22 DEVELOPMENT OF SELF- WATER MANAGEMENT CATALYST LAYER TO REDUCE THE COST OF PEFC UNDER NON- HUMIDIFYING CONDITIONS *Saki Teramae, Kimihiko Sugiura and Naoyuki Oya*	84 BOILING HEAT TRANSFER AND PRESSURE DROP OF R410A FLOW INSIDE HORIZONTAL CIRCULAR TUBE INSERTING A TWISTED-TAPE *Hideo Uzuhashi, Hiroyuki Tsunoda, Eiko Torikai, Koichi Ichimiya and Taketoshi Wachi*	54 EVALUATION OF THE THERMAL PERFORMANCE OF A LONG VERTICAL HEAT PIPE *Yuki Sakata, Koji Kise and Hiroaki Ishikawa*	
	134 POD ANALYSIS ON THREE-DIMENSIONAL WAKE STRUCTURES BASED ON TOMOGRAPHIC PIV *Hiroka Rinoshika and Akira Rinoshika*	23 OPTIMIZATION OF MOLTEN SALTS GASIFICATION CONDITION ON HIGH FUNCTIONAL DIRECT CARBON FUEL CELL *Hiroto Uchiyama and Kimihiko Sugiura*	86 A NUMERICAL SIMULATION FOR REPRODUCING CALCIUM CARBONATE SCALE FORMATION ON A HEAT EXCHANGER *Yusuke Ozawa and Yoshihiko Sano*	94 TRANSIENT ANALYSIS OF HEAT PUMP DRYER *Junyoung Choi, Dongchan Lee and Yongchan Kim*	
	136 EFFECT OF NOZZLE SHAPE ON THE DISCHARGE COEFFICIENT OF CRITICAL NOZZLE AT HIGH REYNOLDS NUMBER *Shibanul Haque, Shigeru Matsuo, Toshihiro Morioka, Naoya Sakoda and Masaru Ito*	33 APPLICATION OF ALUMINA TUBE TO SUPPORT TUBE FOR T-MCFC STACK *Junichiro Hara and Kimihiko Sugiura*	98 EXPERIMENTAL STUDY ON CONDENSATION HEAT TRANSFER CHARACTERISTICS OF R600A IN A SPIRAL FIN-TUBE HEAT EXCHANGER *Sung Hyuk Oh, Sang Hun Lee and Yongchan Kim*	103 CRITICAL HEAT FLUX ENHANCEMENT USING A HIGH POROSITY SINTERED FIBER ATTACHED ON THE HEATED SURFACE *Edgar Santiago-Galicia, Yusuke Otomo and Koji Enoki*	
	153 NUMERICAL ANALYSIS OF DETONATION STRUCTURE BY USING CHARIOT *Faming Wang, Toshiharu Mizukaki and Shingo Matsuyama*	50 INFLUENCE OF THE STRUCTURE OF CATALYST LAYER ON CELL PERFORMANCE IN PEFC USING INKJET COATING PRINTER *Tamaki Yushi and Sugiura Kimihiko*	102 DEVELOPMENT OF HEAT TRANSFER MODEL WITH PHASE CHANGE IN MICROCHANNEL STACKED HEAT EXCHANGER HAVING DIFFERENT SECTIONAL SHAPE *Yosuke Mizutani, Yutaka Abe, Akiko Kaneko and Yutaka Suzuki*	167 PROPOSAL OF A GAS-COOLED CONCEPT WITE UNI-DIREDTIONAL POROUS COPPER PIPES FOR A DIVERTOR IN NUCLEAR FUSION REACTORS *Yoshiaki Miyamoto, Risako Kibushi, Yuki Abe, Noriyuki Unno, Kazuhisa Yuki, Shigeru Tanaka and Kazuyuki Hokamoto*	
		140 SIMULTANEOUS MEASUREMENTS OF LOCAL TEMPERATURES AND LIQUED WATER DISTRIBUTION WITHIN PEFC *Yuta Inoue, Katsuyuki Kawamura, Takashi Sasabe, Hiroshi Naito and Shuichiro Hirai*			