

ISTP-21 PROGRAM

TIME	NOVEMBER 2, 2010
15:00-18:00	REGISTRATION
17:00-19:00	COCKTAIL RECEPTION
	NOVEMBER 3, 2010
08:00-08:30	REGISTRATION
08:30-08:50	CONFERENCE OPENING
	KEYNOTE SPEECH
	Professor RICHARD J. GOLDSTEIN
08:50-09:50	EFFECT OF UPSTREAM WALL SHEAR ON FLOW AND HEAT (MASS) TRANSFER ON A FLAT PLATE AND IN A TURBINE CASCADE
9:50-10:10	COFFEE BREAK
10:10-12:00	MEMORIAL SESSION FOR PROFESSOR WEN-JEI YANG
12:00-13:20	LUNCH
	A01 MICRO- AND NANO-SCALE TRANSPORT – THERMAL
13:20-15:00	Professor Masataro Suzuki
180	NUMERICAL ANALYSIS ON THERMOPHORETIC PHENOMENON IN SLIP FLOW REGIME CONSIDERING THERMAL STRESS EFFECT Akira Hoshino, Masataro Suzuki and Wataru Masuda
219	MODELING OF THERMAL RESISTANCE MODEL FOR TWO CONTACTING PARTICLES Azri Bin Alias, Nakamoto Youhei, Kuwagi Kenya, Hirano Hiroyuki and Takami Toshihiro
252	CHARACTERISTICS OF A FLOW VECTOR SENSOR OVER THE FLAT PLATE Jun Fujisawa, Yoshimitsu Kanaoka, Shigeo Kimura, Takahiro Kiwata, Nobuyoshi Komatsu and Michael Vynnychy
266	COMPOSITE NANOCANNELS AS NANOPUMPS DRIVEN BY SYMMETRIC TEMPERATURE GRADIENTS Chong Liu and Zhigang Li
	B01 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: VISCOUS
	Professor Chin Tsau Hsu
15	TRANSIENT FLOW IN A THERMOSYPHON WITH SMALL INCLINATIONS Michael Ho and S. Seng Leong
34	EFFECT OF PARTICULATE TYPE ON TWO-FLUID MODELING SIMULATION OF GAS-SOLID SUSPENSIONS FOR SUB-GRID DESCRIPTION OF RISER FLOWS Eloi Rotava, Christian Milioli and Fernando Milioli

6	MULTIDISCIPLINARY STUDIES OF TRANSPORT PHENOMENA IN BOUNDARY LAYERS
	Nina Yurchenko
23	A MESHLESS RBF COLLOCATION METHOD FOR VISCOUS FLOWS IN NONCONVEX DOMAINS
	Jiahn-Horng Chen
270	DYNAMIC DISCRETE ORDINATE METHOD TO SOLVE BOLTZMANN EQUATION FOR VISCOUS GAS FLOWS
	Chin Tsau Hsu, K. F. Sin and S.W. Chiang
234	EXPERIMENTAL STUDY OF TRANSITION AND STABILITY IN TAYLOR-COUETTE FLOW
	Xin-Cheng Tu, Dong Liu and Hyoung-Bum Kim
13:20-15:00	C01 MICRO- AND NANO-SCALE TRANSPORT--FLOW
	Professor Huihe Qiu
269	DESIGN AND EVALUATION OF A UNIFORM FLOW MICROREACTOR
	Ji Min Park, Seung Jae Yi and Kyung Chun Kim
206	MD-CFD HYBRID SIMULATION FOR MICROBUBBLE DYNAMICS
	Ryo Nabika and Mitsuhiro Matsumoto
133	UNSTEADY SIMULATION OF FLOW IN MICRO VERTICAL AXIS WIND TURBINE
	Bayeul-Lainé Annie-Claude and Bois Gérard
128	ACOUSTIC FLOW STREAMING AND DROPLET BREAKUP IN MICROCHANNELS
	Yin Nee Cheung and Huihe Qiu
129	EFFECTS OF ACOUSTIC VIBRATION ON VAPOR BUBBLE INCIPIENCE IN A MICROCHANNEL
	Xiaopeng Qu and Huihe Qiu
42	EXPERIMENTAL MEASUREMENT OF FREEZE DRYING CHARACTERISTICS OF SPRAY FROZEN PARTICLES IN A TRAY AND IN A VIAL
	Chi Sung Song, Jae-Hyung Kim and Jin Hyun Nam
13:20-15:20	D01 FUTURE RESEARCH TREND THERMAL, FLUID AND ENERGY DIVISION IN TAIWAN
	Professor Ping-Hei Chen
	PLANNING ON FUTURE RESEARCH DIRECTIONS OF BIO-FLUID MECHANICS
	Prof. Mei-Jiau Huang
	PLANNING ON FUTURE RESEARCH DIRECTIONS OF HEAT AND MASS TRANSFER
	Prof. Chang-Hsien Tai
	PLANNING ON FUTURE RESEARCH DIRECTIONS OF SOLAR ENERGY AND LED
	Prof. Jeng-yang Chang
	PLANNING ON FUTURE RESEARCH DIRECTIONS OF HYDROGEN AND WIND ENERGY

	Prof. Wen-Mon Yan
13:20-15:00	E01 TRANSPORT IN POROUS MEDIA(INVITED SESSION 03)
	Professor Pierre Bénard and Professor Jinsheng Xiao
IS03-01	A REVIEW: TRANSPORT IN FRACTAL MEDIA Boming Yu
IS03-02	MODELING AND DESIGN OF WATER PROTECTION LAYER IN NON-HUMIDIFYING PEM FUEL CELLS Maji Luo , Xin Zhang, Zhiping Luo, Zhigang Zhan
IS03-03	SIMULATION FOR CHARGE AND DISCHARGE OF ACTIVATED CARBON HYDROGEN STORAGE TANK Jinsheng Xiao, Rong Peng, Daniel Cossement, Pierre Bénard, Richard Chahine
IS03-04	FINITE ELEMENT SIMULATION FOR CHARGE AND DISCHARGE OF ADSORPTIVE HYDROGEN STORAGE TANK Pierre Bénard, Jinsheng Xiao, Jijuan Wang, Daniel Cossement, Richard Chahine
15:00-15:20	COFFEE BREAK
15:20-17:05	A02 MANUFACTURING AND MATERIALS PROCESSING
	Professor Shuji Hattori
162	A NUMERICAL STUDY ON THE INFLUENCE OF PHOSPHOR CONFIGURATION ON THE TEMPERATURE DISTRIBUTION IN A LIGHT EMITTING DIODE PACKAGE Hyuck Keun Oh, Kenneth David Kihm, Ohmyoung Kwon, Young Ki Choi and Joon Sik Lee
120	THE STUDY OF THE THERMAL DIFFUSION IN A LASER WELDING OF THERMOPLASTIC POLYMER Ryo Okuizumi, Shinichi Hirota, Youhei Takagi, Masao Sudoh and Yasunori Okano
137	THE PROMOTION AND APPLICATION OF SURFACE WETTABILITY BY LOW-TEMPERATURE PLASMA IRRADIATION Manabu NAKAGAWASAI, Takashi TUNODA, Kouhei KAWANO and Shigeaki INADA
142	CAVITATION EROSION RESISTANCE OF PLASTICS Shuji Hattori and Takamoto Itoh
200	A COMBINED INVESTIGATION OF PARTICLE MORPHOLOGIES IN SOLUTION PLASMA SPRAYING Yanguang Shan, Xi Qi, Yuan Hu and Tom Coyle
228	THE EFFECTS OF A BEAM WAVELENGTH ON LASER MICRO PROCESSING OF CERAMICS Tatsuhiko Mori, Takuhito Otofujii, Hiromi Kubota, Yasuyuki Takata and Masamichi Kohno
174	MAGNESIUM ALLOY MELT PROTECTION BY PHASE TRANSITION Sheng-Chung Yang, Kuo-Cheng Lee, Tzu-Chen Kuo, Chang-Pen Chen and Yu-Cheng Lin
15:20-17:05	B02 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: (PIV-1)
	Professor Tomomasa Uemura
179	PIV EXPERIMENT ON THE FLOW PAST A SQUARE CYLINDER WITH CORNER CURVATURE Kazuo Ohmi, Akira Hiratsuka and Yu Zhang

205	PIV MEASUREMENT OF PULSATING TURBULENT PIPE FLOW FOR ENERGY SAVING Akiko Souma, Kaoru Iwamoto and Akira Murata
183	PIV MEASUREMENTS OF SEPARATING AND REATTACHING FLOWS OVER PERMEABLE WALLS Satoshi Tominaga, Motoyasu Mori, Masayuki Kaneda and Kazuhiko Suga
75	IMPROVEMENT OF COLOR DEFOCUS METHOD FOR 3D PTV IMAGING WITH SINGLE CAMERA Tomomasa Uemura, Manabu Iguchi, Yasufumi Yamamoto and Kazuki Fukumasu
173	EFFECT OF PULSATING AMPLITUDE ON FLOW STRUCTURE AND ASSOCIATED HEAT TRANSFER AROUND THE FLAT PLATE INSTALLED IN PULSATING DUCT FLOW Yuichirou Yoshioka and Hironori Saitoh
182	EFFECT OF SWIRLER SETTING ANGLE ON NON-REACTING FLOWFIELD OF A LOW SWIRL BURNER Hang Yin, Ren Dai and Shili Zhong
191	RESPONSE COMPENSATION OF CONSTANT-CURRENT HOT-WIRE ANEMOMETER Kazuhide Kaifuku, Soe Minn Khine, Tomoya Houra and Masato Tagawa
15:20-17:05	C02 HEAT EXCHANGER Professor Christos Spitas
84	THERMAL-FLUID FLOW TRANSPORT PHENOMENON IN SINGLE PLATE HEAT EXCHANGER WITH VARIOUS PLATE SHAPE FORMED BY SHOCK PROCESSING METHOD Keita Izumi and Shuichi Torii
254	A PERFORMANCE INDEX FOR HEAT EXCHANGERS Motoaki Utamura
157	NUMERICAL PERFORMANCE SIMULATION OF A THERMOACOUSTIC REFRIGERATOR Andreia Aoyagui Nascimento, Ricardo Fortes Miranda, Marcelo Hayashi Ney and Francisco Paulo Léapore Neto
26	EFFECTS OF SHIELD ON THERMAL-FLUID PERFORMANCE OF VAPOR CHAMBER HEAT SINK Hung-Yi Li and Ming-Hung Chiang
263	THERMAL ANALYSIS OF THE UCCE-A HEAT EXCHANGER USING AN ELEMENT METHOD WITH LOCALISED FLOW PROPERTIES Christos Spitas and Yu Song
122	STUDY ON A NOVEL COOLING SYSTEM FOR FUEL CELL/LITHIUM BATTERY POWER SOURCES Yi-Hsuan Hung, Hsien-Chang Shih, Tun-Ping Teng, Yeou-Feng Lue, S.F. Lee, C.F. Lin and P.H. Lin
15:40-17:05	D02
15:20-17:05	E02 THERMAL MANAGEMENT OF ELECTRONIC EQUIPMENT (INVITED SESSION 01)

Professor Masaru Ishizuka and Professor Tomoyuki Hatakeyama	
IS01-01	THE PERFORMANCE OF COMPACT FINNED HEAT SINKS FOR LSI PACKAGES IN COMBINED NATURAL AND FORCED CONVECTION AIR FLOWS Masaru Ishizuka, Tomoyuki Hatakeyama, Shinji Nakagawa
IS01-02	MODELING OF THE TEMPERATURE ENVIRONMENT IN A CAR UNDER INSOLATION BY USING THERMAL NETWORK METHOD Tomoyuki Hatakeyama, Masaru Ishizuka, Shinji Nakagawa
IS01-03	RESISTANCE NETWORK ANALYSIS OF AIRFLOW AND HEAT TRANSFER IN A THIN ELECTRONIC EQUIPMENT ENCLOSURE WITH AN AXIAL COOLING FAN Takashi Fukue, Masaru Ishizuka, Tomoyuki Hatakeyama, Shinji Nakagawa, Katsuhiro Koizumi, Wataru Nakayama
IS01-04	HEAT TRANSFER AND PRESSURE DROP IN CROSSFLOW OF WATER OVER PINFIN HEATSINKS Keisuke Horiuchi, Atsuo Nishihara
IS01-05	TEMPERATURE CONTROL FOR HIGH HEAT DISSIPATION DENSITY CHIP BY USING SPRAY COOLING SYSTEM Yusuke HIOKI, Tomoyuki HATAKEYAMA, Yoshiro Nakata, Notohiro Kuji, Masaru ISHIZUKA, Shinji NAKAGAWA
IS01-06	COOLING TECHNIQUE OF THE NEXT GENERATION POWER DEVICES BY BOILING HEAT TRANSFER WITH NANO-POROUS STRUCTURES Kazuhisa Yuki, Koichi Suzuki
IS01-07	ACCELERATION OF MICROBUBBLE EMISSION BOILING BY ULTRASONIC VIBRATION IN SUBCOOLED POOL BOILING OF WATER AND ETHANOL MIXTURES (FUNDAMENTALS ON COOLING TECHNOLOGY FOR POWER ELECTRONICS) Koichi Suzuki, Kazuhisa Yuki, Cyungpyo Hong, Ichiro Ueno
IS01-08	NUMERICAL ANALYSIS OF INCOMPRESSIBLE FLOWS BY THE LATTICE BOLTZMANN METHOD BASED ON THE PROJECTION METHOD Takeshi Seta
IS01-09	EXPERIMENTAL STUDY ON EFFECTIVE THERMAL CONDUCTIVITY OF PRINTED CIRCUIT BOARD Toshio Tomimura, Yoshihiro SHIOTSU, Yasushi Koito, Masaru Ishizuka, Tomoyuki Hatakeyama
TIME	NOVEMBER 4, 2010
08:30-09:00	REGISTRATION
09:00-10:00	KEYNOTE SPEECH
	Professor SIGMAR L.K. WITTIG
	HEAT TRANSFER – THE KEY TO NEW GENERATION AERO ENGINE AND GAS TURBINE DEVELOPMENT
10:00-10:20	COFFEE BREAK
10:20-12:00	A03 COMBUSTION AND REACTING FLOWS
	Professor Tsuyoshi Yamamoto
29	A NEW FUEL/AIR PREMIXING SYSTEM FOR GAS TURBINES AND ITS INFLUENCES ON THE PERFORMANCE AND EMISSION CHARACTERISTICS Nikolaus Spyra, Andreas Hupfer, Wolfgang Erhard, Hans-Peter Kau, Markus Schmidt and Markus Simon

220	CHARACTERISTICS OF LEAN PREMIXED FLAMES WITH SWIRLING FLOW IN INHOMOGENEOUS FUEL CONCENTRATION DISTRIBUTIONS
	Kazumi Araki, Masaharu Komiyama and Kenichiro Takeishi
258	CHARACTERISTICS OF LEAN PREMIXED FLAME IN VARIOUS AIR COMPOSITIONS
	Kiyonobu Nakayama, Masaharu Komiyama and Kenichiro Takeishi
79	A STUDY ON THE REACTION KINETICS OF NO FORMATION FROM PYRROLE UNDER FLOW REACTOR CONDITIONS
	Tsuyoshi YAMAMOTO and Takuya KUWAHARA
210	EFFECTS OF PRESSURE ON SPRAY FLAME STRUCTURE IN A COUNTERFLOW
	Mariko Nakamura
10:20-12:00	B03 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: (PIV-2)
	Professor Nobuyuki Fujisawa
250	EXPERIMENTAL AND NUMERICAL STUDY ON INFLOW PHENOMENON IN NEAR FIELD OF BUOYANT JET
	Nobuyuki Fujisawa, Atsushi Maeda, Tomoaki Syuto and Takayuki Yamagata
53	EVALUATION OF COST FUNCTION METHOD TO CORRECT FLOW AND SCALAR FIELDS BY COMBINING MEASURED DATA AND CFD
	Hiroshi Nakagawa and Akira KONDO
62	INFLUENCE OF THIN WATER FILM ON NATURE OF BOUNDARY LAYER AND WAKE ON SYMMETRIC PROFILE
	Milan Matejka and Viktor Syrovatka
264	INITIAL DEVELOPMENT OF DISTURBANCES IN A PULSATING PIPE FLOW
	Jiun-Jih Miao, Ri-Hui Huang, Hong-Sen Lo Hong-Sen Lo and Hao Liu
77	AN EXPERIMENTAL STUDY ON SWIRLING FLOW IN A VERTICAL CIRCULAR PIPE
	Tae-Hyun CHANG, Sang-Cheol Kil and Deog Hee Doh
241	NUSSELT NUMBER DISTRIBUTIONS IN BOTH UNCONFINED AND CONFINED MILLI-SCALE LAMINAR IMPINGING SLOT JETS
	D.H. Lee, U.J. Lee, H.J. Park, J.S. Lee and M.K. Kim
10:20-12:00	C03 HEAT AND MASS TRANSFER: CONVECTION
	Professor Koichi Ichimiya
2	BEHAVIOR OF THERMAL PLUMES AND HEAT TRANSFER FROM THREE HEATED BLOCKS
	Koichi Ichimiya, Seiji Iwama and Koji Toriyama
130	CHARACTERISTICS OF SWIRL-TYPE MIXED CONVECTIVE HEAT TRANSFER IN A HORIZONTAL SQUARE DUCT WITH HEATED AND COOLED SIDE WALL
	Koji Toriyama and Koichi Ichimiya

227	FORCED CONVECTION IN A CONCENTRIC ANNULUS WITH A MOVING HEATED CORE Ganbat Davaa and Odgerel Jambal
230	HEAT TRANSFER CHARACTERISTIC OF RIB-ROUGHENED CHANNEL WITH LOW PITCH-TO-HEIGHT RATIO Hidetake Maeda, Kenichiro Takeishi, Masaharu Komiyama, Katsuhiko Ishida and Tomoko Hagari
217	HEAT TRANSFER AND PRESSURE DROP OF OFFSET-STRIP FIN HEAT EXCHANGER Jonghyeok Lee, Min-Soo Kim and Kwan-Soo Lee
229	CONTROL OF SOLID-LIQUID INTERFACE GROWTH DURING UNIDIRECTIONAL SOLIDIFICATION IN NATURAL CONVECTION Masanori UEDA, Shigeo KIMURA, Takahiro KIWATA and Nobuyoshi KOMATSU
10:20-12:00	D03 HEAT AND MASS TRANSFER IN PEFC (INVITED SESSION 05) Professor Yoshio Utaka
IS05-01	SIMULTANEOUS MEASUREMENT OF GAS DIFFUSIVITY AND IMAGING OF LIQUID WATER BY X-RAY COMPUTED TOMOGRAPHY IN MICRO POROUS MEDIA Tadafumi DAITOKU, Takuto ARAKI, Shunsuke KONDO, Koichi OTA, Yasuyuki Omori, Haruki KANEKO, Kentaro UESUGI, Yoshio UTAKA
IS05-02	MODELING OF MASS TRANSPORT AND OVERPOTENTIAL DISTRIBUTIONS INSIDE PEMFC CATALYST LAYER Takuto Araki, Tomoaki Ae, Ryo Kambayashi
IS05-03	STUDY OF MASS TRANSFER CHARACTERISTICS IN POROUS MEDIA APPLYING SIMULTANEOUS MEASUREMENT METHOD OF WATER VISUALIZATION BY NEUTRON RADIOGRAPHY AND OXYGEN DIFFUSIVITY MEASUREMENT Yutaka TASAKI, Yoshio UTAKA, Shixue WANG, Daigo IWASAKI, Norihisa WAKI, Pierre Boillat, Gabriel Frei, Pierre Oberholzer, Günther G. Scherer, Eberhard H. Lehmann
IS05-04	MEASUREMENTS OF HEAT AND MASS TRANSPORT PROPERTIES THROUGH PEMFC GDL Takuto Araki, Kohichi Ota, Haruki Kaneko, Nobuyoshi Tachibana
251	ENERGY SAVINGS OF A SOLID-OXIDE FUEL CELL COMBINED HEAT AND POWER SYSTEM FOLLOWING A HEATED OR ELECTRICITY-LED CONTROL STRATEGY Janghyun Kim, Woojin Cho and Kwan-Soo Lee
193	AN ANALYSIS OF CARBON FORMATION IN AN INTERNAL INDIRECT REFORMING TYPE SOFC Grzegorz Brus, Robert Kaczmarczyk and Janusz Szmyd
10:20-12:00	E03 GREEN AND CLEAN ENERGY (INVITED SESSION 13) Professor Wei-Hsin Chen
IS13-01	AN INVESTIGATION INTO THE PASSIVE COOLING OF PHOTOVOLTAIC CELLS UNDER CONCENTRATED ILLUMINATION Chien-Hsiung Tsai, Cheng-Peng Yeh, Tsung-Te Lin, Hau-Te Pu, Ruey-Jen Yang
IS13-02	COMPARISON OF HYDROGEN PRODUCTION VIA ONE-STAGE AND TWO-STAGE REACTIONS Wei-Hsin Chen, Mu-Rong Lin, Jau-Jang Lu, Yu-Chao, Tzong-Shyng Leu

IS13-04	LONG-TERM STABILITY TESTS OF PALLADIUM MEMBRANE SUPPORTED ON SURFACE-OXIDIZED POROUS STAINLESS STEEL TUBE Yu-Li Lin, Yen-Hsun Chi, Ting-Wei Huang, Chang-Chung Yang
IS13-05	THE INTEGRATION OF DIRECT METHANOL FUEL CELL AND DC-DC CONVERTER IN THE PORTABLE APPLICATIONS Yean-Der Kuan, Yu-Wei Lin
IS13-06	EFFECT OF FUEL SPRAY DROPLET SIZE ON THE CHARACTERISTICS OF HYDROGEN PRODUCED BY A METHANOL REFORMER WITH THERMAL MANAGEMENT Rong-Fang Horng, Wei-Cheng Chiu, Cheng-Shun Liao
IS13-07	OPERATIONAL STRATEGY FOR FIXED-BED BIOMASS GASIFIER H.M. Lee, Y.J. Yu, L.C. Tsai, L.C. Chang, C.C. Tzeng
IS13-08	CURRENT STATUS OF DIMETHYL ETHER RESEARCH AT INER H.M. Lee, K.C. Liang, C.T. Hsieh, M.H., Huang, F.M. Yeh, C.C. Tzeng
IS13-09	EXPERIMENTAL STUDY OF CWS PREMIXED SPRAY FEEDING IN AN ENTRAINMENT BED GASIFIER Cheng-Hsien Shen, Heng-Wen Hsu, Tzu-Hsien Hsieh, Jieh-Yn Sheu
IS13-10	EFFICIENT SIMULATION OF LOCAL SEEBECK COEFFICIENT MEASUREMENT USING MODEL ORDER REDUCTION Chen-I Hung, Kuen-Hsien Wu, Wei-Hsin Chen
IS13-11	THERMAL CONVERSION OF SIX WOODY BIOMASS IN A FLUIDIZED BED GASIFIER Keng-Tung Wu, Kai-Cheng Yang, Po-Chang Hu, Yue-Han Chiou, Jung-Ying Shie
12:00-13:20	LUNCH
13:20-15:00	A04 TRANSPORT PHENOMENA IN MULTI-PHASE SYSTEMS: BUBBLE
	Professor Albert Tong
108	THERMAL TRANSPORT IN MULTIPHASE MATERIALS Bashir Suleiman
245	A NUMERICAL STUDY ON THE DYNAMICS OF BUBBLE GROWTH AND DETACHMENT FROM AN ORIFICE Albert Tong, Yin Guan and S Takkallapally
239	EXPERIMENTAL STUDY OF REDUCING THE SEPARATION BUBBLE USING THE VORTEX GENERATOR Hyoung-Woo Kim, In-Su Kang and Hyoung-Bum Kim
107	NUMERICAL AND EXPERIMENTAL SIMULATION AIR-WATER FLOW THROUGH A POSEIDON BLADE CASCADE El Mifdol MOHAMED, Gérard BOIS and Philippe PAGNIER
149	EXCITATION OF SHAPE OSCILLATION OF BUBBLES UNDER ACOUSTIC FIELD Tsuyoshi HANYU and Ichiro UENO
13:20-15:00	B04 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: DROPLET
	Professor Shinzaburo Umeda
233	SPREADING AND RECEDING BEHAVIOR OF A SHEAR-THINNING DROPLET IMPACTING ON A DRY SOLID SURFACE AT VARIOUS WETTABILITY AND VELOCITY CONDITIONS Sang Mo An and Sang Yong Lee

115	EFFECTS OF WALL CONCAVITY ON OSCILLATIONS OF FLIP-FLOP FLOWS FROM DIAMOND-SHAPED CYLINDER BUNDLES
	Shinzaburo Umeda, Kazuaki Iijima, Kouichi Shinmura and Wen-Jei Yang
201	SIMULATION OF MICRO DROPLET IMPINGEMENT ON SOLID WALL
	Mitsuhiro Matsumoto and Go Taura
261	Numerical Study on Turbulence Attenuation Model for Liquid Droplet Impingement Erosion in BWRs
	Rui LI and Hisashi NINOKATA
253	EXPERIMENTAL INVESTIGATION OF RISING OF NEWTONIAN AND NON-NEWTOANIN DROPLETS IN A VISCOSE FLUID
	Bahar Firoozabadi, Milad AminZadeh, Amir Maleki Zamenjani and Hossein Afshin
232	FINITE-ELEMENT FORMULATION OF FLUID FLOW WITH MOVING BOUNDARIES ON DYNAMICALLY DISTRIBUTED NODES
	Shintaro Matsuoka, Takeshi Omori and Takeo Kajishima
13:20-15:00	C04 HEAT AND MASS TRANSFER: THERMODYNAMIC AND CONDENSATION
	Professor Michel J. Cervantes
109	THERMODYNAMIC ANALYSIS AND EXPERIMENTAL INVESTIGATION OF SWIRL TUBE FLOW
	Frantisek Marsik, Bernhard Kobiela, Pavel Novotný and Bernhard Weigand
202	FLOW BOILING HEAT TRANSFER CHARACTERISTICS IN NARROW CHANNELS BETWEEN FINS
	Kazutoshi KAJIMOTO, Shinichi MIURA, Hiroyuki KOBAYASHI, Yasuhisa SHINMOTO and Haruhiko OHTA
7	3D THERMOHYDRODYNAMIC ANALYSIS OF A TURBULENT TEXTURED SLIDER
	Michel J. Cervantes and Samuel Cupillard
208	NON-EQUILIBRIUM CONDENSATION IN AN IDEALLY-EXPANDED SUPERSONIC JET
	Miah Md. Ashraful ALAM, Tokitada HASHIMOTO, Junji NAGAO, Shigeru MATSUO, Toshiaki SETOGUCHI and Heuy Dong KIM
165	LIQUID PRECURSOR DROPLETS EVAPORATION MODEL IN A PLASMA ENVIRONMENT
	Yuan Hu and Yanguang Shan
38	MARANGONI CONDENSATION OF STEAM-ETHANOL MIXTURES ON A HORIZONTAL TUBE BANK AT ATMOSPHERIC PRESSURE
	Hassan Ali, Adrian Briggs and Hua Sheng Wang
13:20-15:00	D04 TRANSPORT PROCESSES IN ENVIRONMENTAL FLOWS
	(INVITED SESSION 06)
	Professor Shigeo Kimura and Professor Robert McKibbin
IS06-01	PASSIVE, ACTIVE AND CONTRGRADIENT TRANSPORT OF SUBSTANCES IN STRATIFIED AND ROTATING FLOWS

	Yuli D. Chashechkin
IS06-02	AN OBJECT-ORIENTED APPROACH TO ENVIRONMENTAL FLUID MODELLING T.Shintani, K.Nakayama
IS06-03	MATHEMATICAL MODELLING OF AEROSOL TRANSPORT: EFFECT OF DISPERSION COEFFICIENTS ON PREDICTED GROUND DEPOSITS Robert McKibbin
IS06-04	AN INTRODUCTION TO THE SHOCK TUBE MODEL FOR HYDROTHERMAL ERUPTIONS Luke.A. Fullard, T.A. Lynch
IS06-05	INTENSIVE CHEMICAL AND PHYSICAL MODIFICATION OF ASIAN DUST PARTICLES ALONG THEIR LONG-RANGE TRANSPORT A. Matsuki, Y. Tobo, F. Kobayashi, M. Teruya, M. Kakikawa, Y. Iwasaka
IS06-06	EFFECT OF LEAF AREA DENSITY ON THE EDDY DIFFUSIVITY IN DECIDUOUS FOREST S.Kimura, J.Ogawa, T.Kiwata, N.Komatsu, K.Nakayama
13:20-15:00	E04 RENEWABLE ENERGY AND ITS UTILIZATION (INVITED SESSION 12) Professor Ning Zhu
IS12-04	NUMERICAL SIMULATION ON IMPACTING THE INTERFACE PROCESS OF A SINGLE DROPLET Weidong Jia, Cheng Li
IS12-05	CFD SIMULATION OF THREE MULTI-FOIL SHIELDS Weidong Jia, Cheng Li
IS12-06	BIO-DIESEL FUEL(BDF) SYNTHESIS BASED ON SONOCHEMISTRY IN COMBINATION WITH SOLID BASE CATALYST Ning Zhu, Ai-Ping Shi, Wen-Gang Li, Wei-Chin Chang, Takashi Tsuchiya
IS12-08	RESEARCH DEVELOPMENT of SOLID BASE CATALYSTS for BIODIESEL SYNTHESIS Aiping Shi, Yibing Wang, Yinli Zhang, Lihua Ye
IS12-09	PELTIER COOLING SYSTEM DESIGN FOR NARROW SPACE Ning Zhu, Shigeomi Koshimizhu, Yu Gao
169	SOLAR RADIATION ABSORPTION AND CATALYTIC CHARACTERISTICS OF PELLETIZED CARBON NANOPARTICLES Yuki Kameya and Katsunori Hanamura
15:00-15:20	COFFEE BREAK
15:20-17:05	A05 ADVANCED AND ALTERNATIVE ENERGY SYSTEMS Professor José Antonio Velásquez
189	THE EVALUATION OF ENERGY-SAVING PERFORMANCE APPLYING THE PINCH TECHNOLOGY COMBINED WITH THE HEAT PUMPING SYSTEM OF A THREE-EFFECT EVAPORATOR Chi-I Tuan, Liang-Fong Hsu, Yi-Lung Yeh and Ting-Chien Chen
190	AN INTEGRATED PROCESS FOR BIODEGRADABLE LUBRICANT PRODUCTION FROM VEGETABLE OIL

48	jie Chang, Zhifei Zhu and muying Cai
224	THERMO-ELECTROCHEMICAL MODELING OF MULTI-LAYERED LiCl-LiBr-LiF THERMAL BATTERIES Donghee Kim, Hye-Mi Jung, Sukkee Um, Hyun-Jin Ji and Sung Baek Jo
247	MAXIMIZATION OF THE VOLUMETRIC EFFICIENCY FOR A SINGLE CYLINDER DIESEL ENGINE Stephan Hennings Och, José Antonio Velásquez and Viviana Cocco Mariani
185	STUDY OF AIRFLOW CIRCULATION CELL OF AN AIR CONDITIONING ENERGY-SAVING MECHANISM Nguyen Tuan
5	DISTRIBUTED ENERGY SYSTEMS: CONSTRUCTAL DESIGN OF FLOW OF MASS ON EARTH Sylvie Lorente and Adrian Bejan
18	DEVELOPMENT OF A REAL-TIME MODEL FOR A BATTERY /SUPERCAPACITOR HYBRID ELECTRICAL SCOOTER USING BOND GRAPH APPROACH Yi-Hsuan Hung, Tzung-Jiun Yu, Hsien-Chang Shih, Chi-Yo Huang, Chien-Hsun Wu and P.H. Lin
15:20-17:05	B05 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: JET
	Professor Mamoru Senda
172	ABERG EXHAUST HOOD INTERACTION WITH A WALL Vladimír Krejčí and Jan Košner
242	NUMERICAL SIMULATION OF 3-DIMENSIONAL FLOW STRUCTURES IN A COAXIAL CIRCULAR JET Taichi USUZAWA, Takahiro KIWATA, Nobuyoshi KOMATSU, Shigeo KIMURA and Peter OSHKAI
150	THERMAL FLUID FLOW TRANSPORT CHARACTERISTICS IN CONFINED CHANNELS WITH TWO-DIMENSIONAL DUAL JET IMPINGEMENT Caner Senkal and Shuichii Torii
110	LARGE-EDDY SIMULATION OF AN UNSTEADY SYNTHETIC JET IN QUIESCENT SURROUNDINGS Ardalan Javadi and Wageeh El-Askary
44	HEAT TRANSFER AND FLOW CHARACTERISTICS OF DUAL SWIRLING IMPINGING JETS Mamoru Senda, Sho Tsuritani, Kazuhiko Matsumoto and Kyoji Inaoka
15:20-17:05	C05 INTERFACE TRANSPORT PHENOMENA: FROM DROPLETS AND SPRAYS TO FUEL CELLS (INVITED SESSION 07)
	Professor Signe Kjelstrup and Professor Sergei Sazhin
IS07-02	THE COOLING OF A WATER DROPLET AND THE MPEMBA EFFECT M. Vynnycky
IS07-03	HYDRODYNAMIC AND KINETIC MODELS FOR MONOCOMPONENT DROPLET HEATING AND EVAPORATION: RECENT DEVELOPMENTS

IS07-05	S.S. Sazhin, I.N. Shishkova, I.G. Gusev, M.R. Heikal
IS07-05	NON-EQUILIBRIUM MOLECULAR DYNAMICS SIMULATIONS OF MODEL MEMBRANE PERMEABILITY P.J. Davis, Z. Zhou
15:20-17:05	D05 INDUSTRIAL AERODYNAMICS AND WIND ENGINEERING
	Professor Ryo Amano
3	DESIGN OF PRECISION AERODYNAMIC BALANCE AND LOW SPEED WIND TUNNEL TESTING FOR UNMANNED AERIAL VEHICLES AIRFOILS Luis VELAZQUEZ and Jiří NOŽIČKA
73	THE EFFECTS OF PITCH ANGLE ON THE PERFORMANCE OF VAWT SYSTEM Chien-Chang Chen and Cheng-Hsiung Kuo
76	EFFECT OF VORTEX GENERATORS ON FLOW CONDITIONS OF AIRFOIL WITH DEFLECTED FLAP Natalie Souckova, Lukas Popelka, Milan Matejka and David Simurda
24	FLOW CONTROL OF VEHICLE EXTERNAL MIRROR BY DIMPLE SURFACE STRUCTURE Akira RINOSHIKA and Daisuke WATANABE
43	AERODYNAMIC INVESTIGATION OF HIGH LIFT AIRFOIL UNDER THE INFLUENCE OF HEAVY RAIN EFFECTS Tung Wan and Chi-Ju Chou
103	OPTIMIZATION IN DESIGN OF WIND TURBINE ROTOR BLADES Ryo Amano
15:20-17:05	E05 HEAT AND MASS TRANSFER: COOLING
	Professor Yutaka Oda
97	COOLING SYSTEM OF SOLAR CELL USING VENTURI TECHNIQUE Shuichi TORII
147	HEAT AND MOISTURE TRANSFER IN AIR GAP BETWEEN SWEATING SURFACES AND CLOTHING WITH PERIODIC MOTION Yoshio Morozumi, Kenichi Akaki and Naomasa Tanabe
22	NOVEL DESIGN CONCEPT FOR 1U HORIZONTAL BOX WITH PASSIVE COOLING Lian-Tuu Yeh
152	NUMERICAL SIMULATION OF FILM COOLING WITH SWIRLING COOLANT AIR Dai Shimizu, Kenichiro Takeishi, Yutaka Oda and Yuta Egawa
153	LARGE EDDY SIMULATION OF FILM COOLING FLOWS WITH A COOLING HOLE MODEL BASED ON RANDOMFOURIER MODES Masataka Uchibori, Yutaka Oda and Kenichiro Takeishi
151	A HIGH HEAT FLUX TRANSFER DEFROSTING DESIGN FOR FREEZERS Chin-Ting Yang and Chuan-Jui Chen
212	EXPERIMENTAL STUDY ON KEY PARAMETERS OF MINIATURE OSCILLATING HEAT PIPES Shuangfeng Wang, Zirong Lin, Jinjian Chen and Winston Zhang
17:10-18:30	POSTER SESSION

18:30-21:00	BANQUET & ISTP-22 Presentation – 2011, Nederland ISTP-23 Presentation – 2012, New Zealand
TIME	NOVEMBER 5, 2010
08:30-09:00	REGISTRATION
	KEYNOTE SPEECH
09:00-10:00	Professor S.H. WINOTO
	WALL SHEAR STRESS IN CONCAVE SURFACE BOUNDARY LAYER FLOW
10:00-10:20	COFFEE BREAK
10:20-12:05	A06 RENEWABLE ENERGY TECHNOLOGIES
	Professor Santiago del Rio Oliveira
198	WIND LOADING ON SOLAR COLLECTOR MODELS: TURBULENT INTENSITY EFFECT Chin-Cheng Chou, Keh-Chin Chang and Kung-Ming Chung
259	MODELLING, SIMULATION & OPTIMIZATION OF SOLAR THERMAL POWER PLANT Bejan Farhanieh, Alireza Faghani nia, Soodabe Ghahramanpour and Hossein Afshin
58	APPLICATION OF THE CONCEPT OF ENTRANSY IN THE ANALYSIS OF SOLAR COLLECTORS OPERATING INTRANSIENT REGIME Santiago del Rio Oliveira and Luiz Fernando Milanez
214	LUMPED PARAMETER MODEL AND DYNAMIC SIMULATION OF ADSORPTIVE HYDROGEN STORAGE TANK Jinsheng Xiao, Zhiqing Zhou, Daniel Cossement, Pierre Benard and Richard Chahine
135	A NUMERICAL STUDY ON THE PERFORMANCE OF THE STRAIGHT-BLADED VERTICAL-AXIS WATERTURBINE Ming-huei Yu, Hsing-nan Wu, Long-jeng Chen, Bang-Fuh Chen and Hsin-hwa Pan
155	DOUBLE-SIDED WET FABRIC EVAPORATOR UTILIZING WIND AND SOLAR ENERGY EFFICIENTLY – THE PERFORMANCE UNDER SUBTROPICAL AND MARITIME CLIMATE CONDITIONS OF OKINAWA ISLAND Nosoko Takehiro
222	NUMERICAL ANALYSIS OF INTEGRATED FUEL PROCESSING SYSTEM CONSIDERING THERMO-CHEMICAL ENERGY BALANCE Jung-Hun Noh, Hey-Mi Jung, Jun-Huan Jang and Sukkee Um
10:20-12:05	B06 EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS: TURBULENT Professor Alexander Osiptsov
188	AERODYNAMIC CHARACTERISTICS ANALYSIS FOR RADIAL INFLOW TURBINE WITH PIVOTING-STATOR Liu Chen and Ren Dai
139	EXPERIMENTAL STUDY ON THE PERFORMANCE OF A GAS-INJECTED HEAT PUMP WITH VARIABLE SPEED COMPRESSOR AT HOT WEATHER CONDITIONS

	Min Woo Jeong, Jaehyeok Heo, Hyun Jun Jeong and Yongchan Kim
39	GRAVITATIONAL CONVECTION OF SUSPENSIONS: VORTEX GENERATION AND BOYCOTT EFFECT Alexander Osiptsov and Yurii Nevskii
132	TWO-DIMENSIONAL COMPUTATIONAL FLUID DYNAMICS ANALYSIS OF LOBE PUMP Yaw-Hong Kang, Ha-Hai Vu and Cheung-Hwa Hsu
197	NUMERICAL INVESTIGATION OF THE EFFECT OF THE STAGGER ANGLES ON THE AERODYNAMIC PERFORMANCES IN THE HIGH-POWER TURBO BLOWER Taegy Park, Heetaeg Chung and Byungil Sung
271	EFFECTS OF ENDPLATES ON THREE-DIMENSIONAL SPIRAL MOTION OF FLOWS PAST A CIRCULAR CYLINDER D.D. Qin, S.W. Chiang and C.T. Hsu
10:20-12:05	C06 HEAT AND MASS TRANSFER: MASS TRANSFER
	Professor Irina Nizovtseva
61	DIRECT NUMERICAL SIMULATION OF A PRACTICAL STEFAN PROBLEM WITH A MUSHY-LAYER Daniel Lee, Dmitri Alexandrov and Huang-Nan Huang
8	THE HYDROCARBON SOLVENT DIFFUSION AND CONVECTIVE DISPERSION IN VAPOR EXTRACTION PROCESS Benyamin Yadali Jamaloei and Riyaz Kharrat
260	RELATIONSHIP BETWEEN CONCENTRATIVE EFFICIENCY AND GEOMETRIC DESIGN FOR 20X PARABOLIC TROUGH CONCENTRATOR Ying-Jen Chang , Ting-Yu Wang and H. Ay
134	THE MUSHY-LAYER MODEL OF FORMATION OF THE «FALSE BOTTOM» IN THE CASE OF TURBULENT BOUNDARY CONDITIONS Irina Nizovtseva
131	MASS TRANSFER OF MG, S AND O BETWEEN NITROGEN BUBBLE AND HOT METAL DURING MAGNESIUM INJECTION PROCESS Haiping Sun and Yung-Chang Liu
146	EFFECT OF EDDY DIFFUSIVITY ON THE UPWELLING FLOW RATE OF PERPETUAL SALT FOUNTAIN Atsuki Komiya, Mikihiro Watanabe, Takashi Yabuki and Shigenao Maruyama
28	MORPHOLOGICAL INSTABILITY OF THE SOLID-LIQUID INTERFACE DURING DIRECTIONAL SOLIDIFICATION OF BINARY MIXTURES WITH A MUSHY LAYER: THE CASE OF CHANNEL FORMATION Dmitri Alexandrov, Alexey Malygin and Irina Alexandrova
10:20-12:05	D06 FUEL CELLS TECHNOLOGIES
	Professor Siyoung Jeong
66	KEY DESIGN PARAMETERS ANALYSIS OF SOLID OXIDE FUEL CELL BASED ON COMPUTERSIMULATION TECHNIQUE Pay-Yu Yan, Chin-Hsien Cheng and Ay Su
67	THEORETICAL INVESTIGATION OF MULTILAYER STRUCTURE CATALYST LAYER OF THE PEMFC –INSIGHTS FROM COMPUTER SIMULATIONS

	Chin-Hsien Cheng, Tien-Fu Yang, T. Leon Yu, Lih-Wu Hourng and Ay Su
177	WARMING UP CHARACTERISTICS OF A PEMFC STACK Siyoung Jeong, Hyung-won Seo, Yongsun Park and Byung-Ki Ahn
215	FLOW FIELD DESIGN AND OPTIMIZATION FOR HIGH-TEMPERATURE PEM FUEL CELLS Jinsheng Xiao, Yang Yang, Yonghua Cai, Bifeng Chen, Haining Zhang and Mu Pan
216	THE INFLUENCE OF GRAIN BOUNDARY ON IONIC CONDUCTIVITY IN SOLID ELECTROLYTES BYMOLECULAR DYNAMICS SIMULATION Shu-Feng Lee, Yi-Hsuan Hung, Chin-Hsien Cheng and Chiu-Feng Lin
125	COMPUTATIONAL STUDY OF HEAT AND MASS TRANSFER ISSUES IN SOLID OXIDE FUEL CELLS Dong Hyup Jeon, Steven Beale, Hae-Won Choi, Jon Pharoah and Helmut Roth
272	OPTIMIZATION OF HYDROGEN GENERATION USING RENEWABLE ENERGY SOURCES C.H. Kuo and Y.L. Shen
10:20-12:05	E06 CONVECTION IN GAS, PLASMA, LIQUID FLOWS (INVITED SESSION 10) Professor Znamenskaya Irina and Professor Uvarov Alexander
IS10-01	HEAT EXCHANGE ON SURFACE OF MOVING SOLAR CAR VEHICLE N.A.Vinnichenko, H.Ay, B.H.Tseng, A.V.Uvarov, I.A.Znamenskaya
IS10-02	INFLUENCE OF HYDRODYNAMIC FLOW ON FLAME FORMATION AND FIRE EXTINGUISHING A.V.Uvarov, N.N.Sysoev, N.A.Vinnichenko, O.S.Yakimchuk
IS10-03	SURFACE NON-EQUILIBRIUM THERMAL LAYER ANALYSIS USING SHOCK WAVE Znamenskaya I.A., Orlov D.M., Ivanov I.E., Kryukov I., Koroteeva E.Yu
IS10-04	INFLUENCE OF NATURAL CONVECTION ON FORMATION OF POSITIVE COLUMN OF GLOW DISCHARGE AT INTERMEDIATE PRESSURE A.V.Uvarov, N.A.Vinnichenko, N.A.Sakharova
IS10-05	APPLICATION OF BOS METHOD FOR ANALYSIS OF THE FLOW AFTER SURFACE DISCHARGE I.A. Znamenskaya, J. Jin, A.E. Lutsky, I.V. Mursenkova, N.A. Vinnichenko
IS11-01	HEAT EXCHANGERS FOR INDUSTRIAL HIGH TEMPERATURE HEAT RECOVERY APPLICATIONS P. Stehlík
12:10-13:20	LUNCH
13:20-15:00	A07 BIOENGINEERING AND BIOTHERMAL FLUIDS DYNAMICS Professor Cheung-Hwa Hsu
114	IN-VITRO HEMODYNAMIC INVESTIGATION ON BLOOD FLOW WITH RESPECT TO THE STENOTIC CORONARY ARTERY ALIGNMENT ANGLE VARIATION Ho Seong Ji, Young Uk Min, Myung Jin Kang and Kyung Chun Kim
105	QUASI-STEADY FLOW DYNAMICS STUDY OF HUMAN AORTIC VALVE: AN EVALUATION WITH NUMERICAL TECHNIQUES Cheung-Hwa Hsu, Ha-Hai Vu, Ba-Son Nguyen and Yaw-Hong Kang

192	MODELING THE STERILIZATION PROCESS OF BIOMATERIALS WITHIN A FLEXIBLE PACKAGE BY OHMIC HEATING
	Romel Somavat, Hussein Mohamed and Sudhir Sastry
235	PENETRATION PROCESSES OF SOFT SOLID MATERIALS BY NEEDLE-FREE MICRO-INJECTIONS
	Muh-Rong Wang, Chun-Hsien Chiu, Chien-Chih Huang, Li-Jay Cheng and Yang-Sheng Yang
13:20-15:00	B07 TRANSPORT PHENOMENA IN MULTI-PHASE SYSTEMS: PHENOMENA
	Professor Shyy Woei Chang
56	THE EFFECT OF SURFACE ROUGHNESS ON THE DYNAMICS OF INTRUDER IN THE VIBRATED GRANULAR BED
	Chi Shou Wu, Chun Chung Liao, Shu San Hsiau and Shang Yu Chiu
85	INTERFACIAL STRUCTURE AND AIRFLOW PRESSURE OF AIR-WATER ANNULAR FLOW IN 90 DEGREE BEND WITH AND WITHOUT VORTEX FIN
	Shyy Woei Chang, C.-M. Hsieh, J.Y. Lin and H.F. Liou
57	THE EFFECTS OF WALL VELOCITY AND SOLID FRACTION ON DENSITY SEGREGATION IN SHEARED GRANULAR FLOW
	Yu Ming Hu, Chun Chung Liao, Shu San Hsiau and Shang Yu Chiu
30	EFFECT OF DISTURBED SETTLING ON CONVECTIVE PARTICLE TRANSPORT IN A HYDROCYCLONE
	Johann Dueck, Leonid Minkov and Thomas Neesse
IS11-03	MICROBUBBLE EMISSION BOILING: APPLICATION FOR HIGH HEAT FLUX COOLING TECHNOLOGY
	K. Suzuki, K. Yuki, C. Hong, I. Ueno, M. Mochizuki, Sameer Khandekar
IS11-04	PULSATING HEAT PIPE HEAT EXCHANGERS
	Sameer Khandekar
15:00-15:30	CONFERENCE CLOSING

	POSTER SESSION
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	HEAT AND MASS TRANSFER 01
	Professor Jr-Ming Miao
50	COMPUTATION OF FLUID FLOW AND HEAT TRANSFER BEHIND THREE SQUARE CYLINDERS USING AN MRT LATTICE BOLTZMANN METHOD
	Mohammed Amine Moussaoui, Ahmed Mezrhab, Hassan Naji and Nora Cherifa Abid
51	FLOW AND HEAT TRANSFER ENHANCEMENT BY WINGLET IN CHANNEL WITH LATTICE BOLTZMANN METHOD
	Mohammed Amine Moussaoui, Ahmed Mezrhab, Hassan Naji and Nora Cherifa Abid
141	RADIATION EFFECTS AND NATURAL CONVECTION IN INHOMOGENEOUS MEDIUM
	Chung-Jen Tseng, Tien-Chun Cheng and Sen-puu Lin
274	ON MECHANICS OF HYSTERESIS PHENOMENA IN TWO-PHASE MIXTURES IN THERMOFLUIDS SYSTEMS

	Tsung-Sheng Sheu, Shuichi Torii and Wen-Jei Yang
207	FULLY DEVELOPED FLUID FLOW AND HEAT TRANSFER IN A CIRCULAR TUBE WITH VARIABLE DENSITIES
	Fang Zhou, Mo Yang and Haiping Deng
74	NUMERICAL SIMULATION METHODS TO DETERMINE AVERAGE CONVECTIVE COEFFICIENTS
	Cristina Tomazeti
226	TRANSIENT COMBINED HEAT TRANSFER OF NATURAL CONVECTION IN AN OPEN CAVITY
	Zhiyun Wang and Mo Yang
HEAT AND MASS TRANSFER 02	
Associate Professor Satoru Momoki	
25	SOLAR ENERGY EQUIPMENT TECHNOLOGY DEPARTMENT A SOLAR EQUIPMENT HEATER IN VACUUM
	Chih-Yung Huang, Muh-Wang Liang, Kang-Feng Lee, Ching-Chiun Wang and Kuan-Chou Chen
55	COOLING RATES IN THE FILM BOILING REGION FOR VERTICAL METAL CYLINDERS OF FINITE-LENGTH
	Kenichi Araki, Satoru Momoki, Toru Shigechi, Takashi Yamada, Kaoru Toyoda and Tomohiko Yamaguchi
171	COMPUTATIONAL STUDY OF MOTOR'S AIR/WATER COOLING HEAT REJECTION SYSTEM DESIGN
	Kyu-Ho Lee, Jae-Ki Byun, Nam-Hyeon Choi, Jong-Keun Shin and Young-Don Choi
184	EXPERIMENTAL STUDIES ON THE BUBBLE BEHAVIOR IN EXTERNAL ELECTRIC FIELD
	Ranran Wei
238	EXPERIMENT RESEARCH ON PULSATING HEAT PIPE WITH DIFFERENT MIXTURES WORKING FLUIDS
	Dadong Wang and Xiaoyu Cui
195	CAPILLARY RETENTION OF CONDENSATE BETWEEN FINS DURING FORCED CONVECTION CONDENSATION ON LOW-FINDED TUBES
	Claire L. Fitzgerald, Adrian Briggs, Huasheng Wang and John W. Rose
175	STUDY OF HYBRID HEAT EXCHANGER BY NUMERICAL SIMULATION
	Mei lu, ShaoJun Huang, Jiaxian Zhu, Ling Li and Mo Yang
HEAT AND MASS TRANSFER 03	
Professor Susumu Noda	
190	NUMERICAL STUDY OF THE HEAT TRANSFER ENHANCEMENT OF NANOFLUIDS
	Ling Li, Yanguang Shan, Mo Yang and Mei Lu
273	SECOND ACTIVATED BOILING ON MICROCONFIGURATED GRAPHITE-METAL COMPOSITE SURFACES
	Tsung-Sheng Sheu, Chyi-Yeou Soong and Wen-Jei Yang
203	NUMERICAL SIMULATION ON FLOW PATTERNS IN A THIN FREE LIQUID FILM EXPOSED TO A TEMPERATURE DIFFERENCE
	Yumi DEKIO and Ichiro UENO

32	MODELING OF TURBULENT NONPREMIXED FLAMES BASED ON AN ASSUMED MULTIVARIATE BETA PDF METHOD
	Susumu Noda, Masato Fujisaka, Yuzuru Nada and Takahiro Ito
161	STUDIES ON HEAT TRANSFER ENHANCEMENT OF COILED SPIRALLY FLUTED TUBE
	Xiaozhan Wang, Xiaoyu Cui and Li Deng
236	NUMERICAL SIMULATION OF HEAT TRANSFER PERFORMANCE FOR DIFFERENT DIAMETER FINNED TUBES
	Yan Wang and Xiaoyu Cui
HEAT AND MASS TRANSFER 04	
Professor Ching-yu Yang	
156	PREPARATION OF FLiNaK MOLTEN SALT WITHOUT HYDRO-FLUORINATION
	Ming Xi Ho and Chin Pan
148	CRYSTAL GROWTH OF METAL ORIENTED NUCLEI IN OSCILLATORY THERMOCAPILLARY CONVECTION FIELD
	Funyo SHINAGAWA and Ichiro UENO
176	FEASIBILITY ANALYSIS OF INTERREGIONAL INTERCONNECTION AND DEPRESSURIZATION IN THE AIR COMPRESSOR STATIONS
	Deli Zhang
181	DEVEROPMENT OF ADVANCED COMBUSTOR FOR BIOMASS
	Masato Urashima and Shuichi Torii
64	HIGH POWER LED PACKAGING THERMAL STRUCTURE AND THE STUDY OF MICRO SENSOR
	Chia-Hung Lin, Yin-Chieh Liu, Chin-Hsien Cheng and Ay Su
168	A FUNDAMENTAL EXPERIMENT OF EXTRACTING SOLID MATERIALS FROM SOLID-LIQUID
	Koichi Shimamoto
186	A SEQUENTIAL METHOD TO ESTIMATE THE STRENGTH OF BIOHEAT SOURCE
	Meei-Jy Shiau and Ching-yu Yang
249	INFLUENCE OF THE MOLAR GAS COMPOSITION W UPON THE RELATIVE DRAG FORCE FOR THE BINARY GAS MIXTURE AT 300 AND 600K AND 1 ATM
	Mohammad Reza Mobinipouyaand
Experimental and Computational Fluid Dynamics	
Associate Professor Kenji Kikuchi	
	EFFECT OF BACK PANEL POROUS DISTRIBUTION DESIGN ON ENERGY SAVING EFFICIENCY FOR OPEN-TYPE REFRIGERATED DISPLAY CABINET
	Chih Hsiung Dai, Wen Der Hsieh, Jian Sheng Huang, Hong Dao Chung and Ruey Yih Tsai
35	SIMULATION OF PARTICLES TRACKS IN A HYDROCYCLONE
	Rome-Ming Wu
140	THE IMPACT OF PIPE SIZING TO THE MIXING PERFORMANCE ON THE X-SHAPED MICRO-CHANNELS
	Tu Shu-Min
144	FAST MICROFLUIDIC MIXERS BASED ON BUBBLES FORMATION (#144)
	Jin-Cherng Shyu, Ching-Jiun Lee and Jr-Ming Miao

166	RESPONSE EXAMINATION USING X-RAY FOR CYLINDRICAL VALVELESS PUMP WITH THE AID OF PELTIER DEVICES AND HEAT DEFORMATION MATERIAL
	Yasuhiro Takakura, Shuichi Torii and Cui Kehang
113	ON THE EFFECT OF HYDRODYNAMIC PARAMETERS ON FLOW ACCELERATED CORROSION THROUGH PIPES WITH SUDDEN AREA CHANGE
	Wael Ahmed
158	SOME ASPECTS OF PARTICLE MOTION UNDER CYCLIC FLOW IN REALISTIC HUMAN AIRWAY MODEL
	Jan Jedelsky, Frantisek Lizal and Miroslav Jicha
196	FLOW ON A HYDROGEL MIMICKED A SURFACE OF LIVING CELL
	Kenji Kikuchi and Osamu Mochizuki
268	NUMERICAL ANALYSIS ON RAPID EXPANSION OF SUPERCRITICAL CARBON DIOXIDE
	C.-H. Hsu, P.-Z. Lee, J.-H. Hong, Y.-T. Deng and K.-C. Chang
FUEL CELLS TECHNOLOGIES	
Professor Chyi-Yeou Soong	
31	REMOVAL OF FLOODING IN A PEM FUEL CELL AT CATHODE BY FLEXURAL WAVE
	Jae-Ki Byun, Kyu-Ho Lee, Nam-Hyeon Choi, Ki-Hoon Nam, Jong-Keun Shin and Young-Don Choi
33	EXPERIMENTAL ANALYSIS FOR VARIATION OF PRESSURE OF PRESSURE DIFFERENCE ON FLOODING IN PEM FUEL CELL AT EXIT OF CATHODE CHANNEL
	Ki-Hoon Nam, Jae-Ki Byun, Kyu-Ho Lee, Nam-Hyeon Choi, Il-Rock Oh, Jong-Keun Shin and Young-Don Choi
65	CFD PREDICTIONS OF PRESSURE AND FLOW DISTRIBUTION INSIDE PEMFC STACK
	Hsiang-Jun Chuang, Chin-Hsien Cheng and Fang-Bor Weng
68	THREE DIMENTIONAL FULL-SIZE NUMERICAL STUDY OF THE TRANSPORT PHENOMENA INSIDE A MICRO FUEL CELL
	Wun-Ting Chen, Chin-Hsien Cheng and Fang-Bor Weng
69	NUMERICAL STUDY OF THE CATHODE CATALYST LAYER DESIGN PARAMETERS OF PROTON EXCHANGE MEMBRANE FUEL CELLS
	Wan-Xiu Tsai, Chin-Hsien Cheng, Chiu-Feng Lin and Ay Su
70	INVESTIGATION OF TEMPERATURE AND ACID DOPING LEVEL EFFECTS OF PBI BASED HIGH TEMPERATURE PEM FUEL SIMULATIONS
	Jen Hou, Chin-Hsien Cheng and Shih-Hung Chan
211	MECHATRONICS, THERMAL MANAGEMENT, AND CONTROL OF AN ADVANCED PEM FUEL CELL/BATTERY EXPERIMENTAL PLATFORM
	Yi-Hsuan Hung, Tzung-Jiun Yu, J.H Chen, Yeou-Feng Lue, Chin-Guo Kuo, Chia-Jui Chiang, Tun-Ping Teng and J.F. L
265	AN EXPERIMENTAL STUDY ON PEMFC COMBINED HEAT AND POWER SYSTEM
	Jenn Jiang Hwang and Tsung Ming Tsai