



Wednesday, Sep 10									
Time	Program	Grand Hall	Rm 401	Rm 402	Rm 301	Rm 302	Rm 303	Rm 304	Rm 305
8:00	Registration								
9:00	Keynote Lectures 1	P01353	P01251	P01278	P01270	P01292	P01253		
9:30	Oral Presentation 1	P00172	P00143	P00278	P00007	P01296	P01248	P00076	P00157
9:45		P00042	P00105	P01313	P00147	P00220	P01339	P00124	P00033
10:00		P00056	P00082	P00079	P01227	P00120	P00145	P01327	P00099
10:15		P00097	P00256	P00153	P01218	P01302	P00077	P00193	P01255
10:30	20min Break								
10:50	Keynote Lectures 2	P01357	P01363	P01362	Prof. Romie O. Bura	P01365	Prof. Jung-II Choi		
11:20	Oral Presentation 2	P00060	P00152	P00203	P01275	P00043	P00165	P00026	P00264
11:35		P00198	P00109	P00031	P00148	P00154	P00186	P01283	P01241
11:50		P00098	P00127	P01231	P01329	P00253	P00061	P00247	P00014
12:05		P00216	P00229		P00128	P00117	P00034	P00018	
12:20	Lunch								
13:40	Opening Ceremony								
13:55	Plenary Lecture 1	Prof. Alan Giacomini							
14:40	Plenary Lecture 2	Prof. Hee Chang Lim							
15:25	20min Break								
15:45	Oral Presentation 3	P00095	P00030	P00201	P00134	P00011	P00169	P00187	P00243
16:00		P00142	P01321	P00212	P00270	P01341	P00267	P00107	P00227
16:15		P00049	P00219	P00228	P00171	P01222	P01369	P00241	P01328
16:30		P01331	P00196	P00135	P20002			P00158	P00265
16:45		P00218	P00037	P00181					P01246
17:00		P01219	P01314	P00073					P01247
17:15		P00275		P00054					
17:30				P00012					



Thursday, Sep 11									
Time	Program	Grand Hall	Rm 401	Rm 402	Rm 301	Rm 302	Rm 303	Rm 304	Rm 305
8:00		Registration							
9:00	Plenary Lecture 3	Prof. Hongyou Liu							
9:45	Plenary Lecture 4	Prof. Joseph Mathew							
10:30	20min Break								
10:50	Oral Presentation 4	P00067	P00202		P00094	P01345	P01239	P00009	P00199
11:05		P00036	P00221		P00288	P00211	P01232	P00027	P01268
11:20		P00075	P01333		P00104	P00184	P00268	P00204	P00205
11:35		P00237	P01342		P00122		P00123		P01323
11:50		P01336	P01317		P00102		P01300		P00180
12:05		P00081			P00071				
12:20	Lunch								
13:40	Poster Session								
14:55	Oral Presentation 5	P00041	P00283		P00232	P00191	P00182	P00125	P00016
15:10		P00046	P01230		P00242	P00083	P00126	P01286	P00024
15:25		P00053	P00255		P01316	P00190	P00072	P00192	P01212
15:40		P00021	P00262		P01273	P01209	P01367	P01309	P00279
15:55			P00141		P01319	P00058	P00259		P00074
16:10	20min Break								
16:30	Oral Presentation 6	P00115	P00164		P01322	P00246		P00025	
16:45		P01272	P01301		P01233	P00096		P01306	
17:00		P00289	P01257		P01287	P00238		P00235	
17:15		P00280	P00089		P01340	P01215		P01348	
17:30		P00252	P00057						
18:00	Banquet								

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Wednesday, Sep 10

8:00

Registration

MNF01		Particle and Bubble Dynamics
Chair		Prof. Hyejeong Kim (Korea University, Republic of Korea)
Room		Grand Hall
We51-KL1	9:00-9:30	Nanoparticle collection using thermoplasmonics Prof. Masahiro Motosuke (Tokyo University of Science, Japan)
We51-OP11	9:30-9:45	Migration of Prolates and Microspheres in Elasto-inertial Microfluidics Co-flow Configurations Presenter: Raihan Hadi Julio (Chonnam National University, Republic of Korea) Corresponding Author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
We51-OP12	9:45-10:00	Variables for Bubble Generation in Double T-junction Microchannel Presenter: Jeong Heum Baek (Pusanl National University, Republic of Korea) Corresponding Author: Prof. Seungho Kim (Pusanl National University, Republic of Korea)
We51-OP13	10:00-10:15	Effect of microbubble void fraction on the breakup of free-falling jet Presenter: Jungjae Woo (Korea University, Republic of Korea) Corresponding Author: Prof. Hyejeong Kim (Korea University, Republic of Korea)
We51-OP14	10:15-10:30	Variables for Bubble Generation in Double T-junction Microchannel Presenter: Jeong Heum Baek (Seoul National University, Republic of Korea) Corresponding Author: Prof. Hyungmin Park (Seoul National University, Republic of Korea)
AAA01		Wing and Rotor Dynamics
Chair		Prof. Ling Zhou (Beijing Institute of Technology, China)
Room		Rm 401
We41-KL1	9:00-9:30	Unsteady aerodynamic performance improvement and flow mechanism of bending morphing wing Prof. Yuting Dai (Beihang University, China)
We41-OP11	9:30-9:45	Fluid-structure interaction characteristics of continuously varying camber wing Presenter: Zhengdong Zhang (Xi'an Jiaotong University, China) Corresponding Author: Prof. Gang Chen (Xi'an Jiaotong University, China)
We41-OP12	9:45-10:00	Numerical Study on Vortex Control with Porous Structure for a Rotor Blade Presenter: Jaehyeon Park (GIST, Republic of Korea) Corresponding Author: Prof. Solkeun Jee (GIST, Republic of Korea)
We41-OP13	10:00-10:15	Experimental investigation of the aerodynamic and aeroacoustic performance of a quadcopter blade with lattice tip Presenter: Jumin Hong (Seoul National University, Republic of Korea) Corresponding Author: Prof. Wontae Hwang (Seoul National University, Republic of Korea)
We41-OP14	10:15-10:30	Effects of Leading-Edge Tubercles on UAV Rotor Aeroacoustics and Flow Dynamics Presenter: Yisu Shin (UNIST, Republic of Korea) Corresponding Author: Prof. Jooha Kim (UNIST, Republic of Korea)
MPF01		Particle-Fluid Interaction
Chair		Prof. Yoshiyuki Tagawa (Tokyo University of Agriculture and Technology, Japan)
Room		Rm 402
We42-KL1	9:00-9:30	The Many Faces of Phoretic Active Matter Prof. Lailai Zhu (National University of Singapore, Singapore)
We42-OP11	9:30-9:45	Effects of Large Particles on Pressure Drop in Turbulent Pipe flow Presenter: Prof. Seiichiro Izawa (University of Toyama, Japan) Corresponding Author: Prof. Seiichiro Izawa (University of Toyama, Japan)
We42-OP12	9:45-10:00	Stability analysis on the rotational dynamics of a spheroid in simple shear flows: Effect of slip-induced fluid inertial torque Presenter: Dr. Zhiwen Cui (Hunan University, China) Corresponding Author: Dr. Lihao Zhao (Tsinghua University, China)
We42-OP13	10:00-10:15	Mechanism of lateral force acting on a spherical particle in square duct flow Presenter: Masafumi Hayashi (Osaka University, Japan) Corresponding Author: Prof. Kazuyasu Sugiyama (Osaka University, Japan)
We42-OP14	10:15-10:30	Enhanced Microplastic Separation in a Mini Hydrocyclone using Microbubbles Presenter: Jeongmin Seo (Korea University, Republic of Korea) Corresponding Author: Prof. Hyejeong Kim (Korea University, Republic of Korea)

CSD01		High-Speed Compressible Flow Dynamics
Chair		Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Room		Rm 301
We31-KL1	9:00-9:30	High-speed fluid mechanics research at the University of Queensland Dr. Tamara Sopek (The University of Queensland, Australia)
We31-OP11	9:30-9:45	Numerical study on transition of high-speed laminar boundary layers with transpiration cooling Presenter: DiviaHarshaVardini R C (Keimyung University, Republic of Korea) Corresponding Author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
We31-OP12	9:45-10:00	Numerical investigations of hypersonic film cooling performance using an integrated genetic algorithm-pareto framework Presenter: Davoud Hoseinzadeh (Keimyung University, Republic of Korea) Corresponding Author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
We31-OP13	10:00-10:15	Numerical Analysis of Linear Global Modes in Hypersonic Boundary Layer Flows Presenter: Yuma Kuroda (Tohoku University, Japan) Corresponding Author: Prof. Naofumi Ohnishi (Tohoku University, Japan)
We31-OP14	10:15-10:30	Numerical Analysis of Mixing Process of Supersonic Jets Injected into a Pressurized Gas Presenter: Yoshiaki Hatsuse (Osaka Sangyo University, Japan) Corresponding Author: Prof. Miah Md Ashraful Alam (Osaka Sangyo University, Japan)
HMT01		Interfacial Phenomena
Chair		Prof. Wonjung Kim (Yonsei University, Republic of Korea)
Room		Rm 302
We32-KL1	9:00-9:30	Surface Plasmon Resonance Imaging: Near-Field Visualization for Interfacial Phenomena Prof. Seong Hyuk Lee (Chung-Ang University, Republic of Korea)
We32-OP11	9:30-9:45	Influence of Surface Wettability on Vapor Accumulation Between Droplets on Heated Substrates Presenter: Won Yeong Hwang (Chung-Ang University, Republic of Korea) Corresponding Author: Prof. Seong Hyuk Lee (Chung-Ang University, Republic of Korea)
We32-OP12	9:45-10:00	Experimental Investigation on unsteady evolution of single cavitation bubble in liquid nitrogen Presenter: JIACHENG CHEN (Beijing Institute of Technology, China) Corresponding Author: Prof. TAIHAN CHEN (Beijing Institute of Technology, China)
We32-OP13	10:00-10:15	Experimental study on boiling sound induced by high-frequency oscillation of vapor bubbles in microbubble emission boiling (MEB) Presenter: Hirotochi Machigaki (Tokyo University of Science, Japan) Corresponding Author: Prof. Ichiro Ueno (Tokyo University of Science, Japan)
We32-OP14	10:15-10:30	Controlling viscosity for uniform particle distribution in drying polydisperse colloids Presenter: Seongmin Park (Sogang University, Republic of Korea) Corresponding Author: Prof. Wonjung Kim (Sogang University, Republic of Korea)
CFD01		Fluid-Structure Interaction I
Chair		Prof. Sung Goon Park (Seoul National University of Science and Technology, Republic of Korea)
Room		Rm 303
We33-KL1	9:00-9:30	Vortex dynamics and hydrodynamic performance enhancement mechanism of a swimming batoid fish Prof. Wei-Xi Huang (Tsinghua University, China)
We33-OP11	9:30-9:45	Prediction of Drag Reduction Effects on Underwater Vehicles Using Slip-Length-Based Superhydrophobic Surface Modeling Presenter: Gyutae Park (Korea University, Republic of Korea) Corresponding Author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
We33-OP12	9:45-10:00	Numerical simulation of flow past a Delta Wing with and without twin tails Presenter: Shreya Rajak (IIT Kanpur, India) Corresponding Author: ProfMs. Shreya Rajak (IIT Kanpur, India)
We33-OP13	10:00-10:15	Three-dimensional self-propelled flexible plate with time-varying flapping frequency Presenter: Prof. Jongmin Yang (Jeju National university, Republic of Korea) Corresponding Author : Prof. Jongmin Yang (Jeju National university, Republic of Korea)
We33-OP14	10:15-10:30	Flexible fin flapping near air-water interface Presenter: Sang Jin Ji (Seoul National University of Science and Technology, Republic of Korea) Corresponding Author: Prof. Sung Goon Park (Seoul National University of Science and Technology, Republic of Korea)

HMT02		Heat Transfer Enhancement by Structured Surface
Chair		Prof. Yu Rao (Shanghai Jiao Tong University, China)
Room		Rm 304
We34-OP11	9:30-9:45	Flow and heat transfer of double-wall cooling unit with diamond TPMS effusion Presenter: Kirttayoth Yeranee (Shanghai Jiao Tong University, China) Corresponding Author: Prof. Yu Rao (Shanghai Jiao Tong University, China)
We34-OP12	9:45-10:00	Turbulent Flow and Conjugate Heat transfer of Effusion Cooling Based on the Triply Periodic Minimal Surface Structures Presenter: Chao Xu (Shanghai Jiao Tong University, China) Corresponding Author: Prof. Yu Rao (Shanghai Jiao Tong University, China)
We34-OP13	10:00-10:15	Numerical Study of Heat Transfer Enhancement in a Circular Tube with Continuous Protruded Twisted Tapes Presenter: Prachya Samruaisin (Mahanakorn University of Technology, Thailand) Corresponding Author: Prof. Smith Eiamsa-ard (Mahanakorn University of Technology, Thailand)
We34-OP14	10:15-10:30	Heat Transfer Enhancement in a Round Tube Fitted with Gradient Quadruple Twisted Tapes Presenter: Prof. Smith Eiamsa-ard (Mahanakorn University of Technology, Thailand) Corresponding Author: Prof. Smith Eiamsa-ard (Mahanakorn University of Technology, Thailand)
FIN01		Flow Induced Noise and Vibration I
Chair		Prof. Md. Mahbub Alam (Harbin Institute of Technology, China)
Room		Rm 305
We35-OP11	9:30-9:45	On the hydrodynamic noise from turbulent flows past a submarine model using the wall-modelled LES Presenter: Peng Jiang (Shanghai Jiao Tong University, China) Corresponding Author: Prof. Shijun Liao (Shanghai Jiao Tong University, China)
We35-OP12	9:45-10:00	Mechanics of flow-induced pitching of an inverted foil undergoing cross-flow Presenter: KAI Qi (Harbin Institute of Technology, China) Corresponding Author: Prof. Md. Mahbub Alam (Harbin Institute of Technology, China)
We35-OP13	10:00-10:15	Hydrodynamic resonance of an elastic loop in an oscillatory gap-flow Presenter: Seyoung Joung (KAIST, Republic of Korea) Corresponding Author: Prof. Daegyoum Kim (KAIST, Republic of Korea)
We35-OP14	10:15-10:30	Hydrodynamic Forces and Flow Characteristics of a Zigzag-Rising Cylinder in a Fluid Presenter: Dongwoo Kang (UNIST, Republic of Korea) Corresponding Author: Prof. Jooha Kim (UNIST, Republic of Korea)

10:30-10:50	Break
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MNF02		Bio-microfluidics
Chair		Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
Room		Grand Hall
We51-KL2	10:50-11:20	Microfluidic Technologies for Advanced Disease Modeling and Drug Testing Prof. Jessie S. Jeon (KAIST, Republic of Korea)
We51-OP21	11:20-11:35	Electrochemically Driven Ion Transport for Non-Invasive Ophthalmic Drug Delivery via Contact Lens Presenter: Mr. Wonho Cho (Sungkyunkwan University, Republic of Korea) Corresponding Author: Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
We51-OP22	11:35-11:50	Direct Isolation of Bacteria in Elasto-inertial Microfluidics Presenter: Hyun-Uk Kim (Chonnam National University, Republic of Korea) Corresponding Author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
We51-OP23	11:50-12:05	Collective Motility and Hydrodynamic Interaction of Methylomicrobium in Microfluidic Systems Presenter: Eunrae Lee (Seoul National University, Republic of Korea) Corresponding Author: Prof. Hyungmin Park (Seoul National University, Republic of Korea)
We51-OP24	12:05-12:20	Droplet acoustofluidics for rapid antibiotic susceptibility test Presenter: Woohyuk Kim (Chonnam National University, Republic of Korea) Corresponding Author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)

AAA02		High Speed Flow
Chair		Dr. Chungil Lee (Tohoku University, Japan)
Room		Rm 401
We41-KL2	10:50-11:20	Boundary Layer Transition: Low Speed, High Speed, and Control Prof. Solkeun Jee (GIST, Republic of Korea)
We41-OP21	11:20-11:35	Numerical Investigation of Turbulent Transition Control in Hypersonic Boundary Layer using Porous Surface Presenter: Minjae Jeong (GIST, Republic of Korea) Corresponding Author: Prof. Solkeun Jee (GIST, Republic of Korea)
We41-OP22	11:35-11:50	Numerical investigation of transpiration cooling with evaporation Presenter: Tomoyuki Kuremoto (Kyoto University, Japan) Corresponding Author: Prof. Taku Ohwada (Kyoto University, Japan)
We41-OP23	11:50-12:05	Development of hybrid multi-emitter for FEEP thruster using gallium propellant Presenter: Kyung Heon Kim (Sungkyunkwan University, Republic of Korea) Corresponding Author: Prof. Han Seo Ko (Sungkyunkwan University, Republic of Korea)
We41-OP24	12:05-12:20	Three-Dimensional Coherent Structure Analysis of Underexpanded Screeching Jets Presenter: Dr. Chungil Lee (Tohoku University, Japan) Corresponding Author: Dr. Chungil Lee (Tohoku University, Japan)
MPF02		Interfacial Behaviors
Chair		Prof. Sanghun Choi (Kyungpook National University, Republic of Korea)
Room		Rm 402
We42-KL2	10:50-11:20	Direct Numerical Simulation of Phase Interface motion featuring Complex Interfacial Physics Prof. Seungwon Shin (Hongik University, Republic of Korea)
We42-OP21	11:20-11:35	Numerical investigation of shock-induced reactive droplets with phase change Presenter: Jiaxi Song (Northwestern Polytechnical University, China) Corresponding Author: Prof. Shucheng Pan (Northwestern Polytechnical University, China)
We42-OP22	11:35-11:50	A CFD-Based Study on Improving the Disinfection Efficiency of an Ozone Contact basin Presenter: Dr. Tae Kyun Kim (Seoul Water Institute, Seoul Metropolitan Government, Republic of Korea) Corresponding Author: Dr. Tae Kyun Kim (Seoul Water Institute, Seoul Metropolitan Government, Republic of Korea)
We42-OP23	11:50-12:05	Simulation of gas-liquid flow using a meshless single-phase formulation Presenter: Varnit Kapoor (Indian Institute of Technology Delhi, India) Corresponding Author: Prof. Prapanch Nair (Indian Institute of Technology Delhi, India)
CSD02		Shock Wave Dynamics
Chair		Dr. S.A. Martin Britto Dhas (Keimyung University, Republic of Korea)
Room		Rm 301
We31-KL2	10:50-11:20	A Review of Flow Control for Shock-Wave/Boundary-Layer Interactions in Hypersonic Flows Prof. Romie O. Bura (Republic of Indonesia Defense University, Indonesia)
We31-OP21	11:20-11:35	Numerical Study of Oblique Shock Wave and Thickened Boundary Layer Interactions Presenter: Jihoon Kim (Korea University, Republic of Korea) Corresponding Author: Prof. Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
We31-OP22	11:35-11:50	Experimental investigations of reversible phase transition on Zinc Telluride induced by acoustic shock wave Presenter: Dr. S.A. Martin Britto Dhas (Keimyung University, Republic of Korea) Corresponding Author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
We31-OP23	11:50-12:05	Theoretical Prediction of Shock Wave Attenuation in a Pipe Presenter: Jae Sung Hwang (Korea University, Republic of Korea) Corresponding Author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
We31-OP24	12:05-12:20	Theoretical study on the entry impulse wave produced in a high-speed railway tunnel Presenter: Dr. Taeho Kim (Andong National University, Republic of Korea) Corresponding Author: Prof. Heuy Dong Kim (Andong National University, Republic of Korea)
FCM01		Flow Stability and Control
Chair		Prof. Jooha Kim (UNIST, Republic of Korea)
Room		Rm 302
We32-KL2	10:50-11:20	Variable Fluidic Optical Devices: From Modular Units to Integrated Systems Prof. Sang Kug Chung (Myongji University, Republic of Korea)
We32-OP21	11:20-11:35	Plastron stability on superhydrophobic longitudinal micro-trenches of a finite length Presenter: Jihun Jeon (UNIST, Republic of Korea) Corresponding Author: Prof. Jae Hwa Lee (UNIST, Republic of Korea)
We32-OP22	11:35-11:50	Bistable Flow Characteristics of a Paraglider Wing with Leading-edge Tubercles Presenter: Jeonghan Shin (UNIST, Republic of Korea) Corresponding Author: Prof. Jooha Kim (UNIST, Republic of Korea)
We32-OP23	11:50-12:05	The Experimental Study on Attitude Control of Ventilated Cavity Vehicle Based on Rudder Presenter: ZICHAO SHAO (Beijing Institute of Technology, China) Corresponding Author: Prof. TAOTAO LIU (Beijing Institute of Technology, China)
We32-OP24	12:05-12:20	Simultaneous drag and lift reduction by half rotation for laminar flow and turbulent flow past a bluff body Presenter: Sheng-Sheng Lu (Zhejiang Ocean University, Taiwan) Corresponding Author: Prof. Chien-Cheng Chang (Zhejiang Ocean University, Taiwan)

CFD02		Fluid-Structure Interaction II	
Chair		Prof. Sung Goon Park (Seoul National University of Science and Technology, Republic of Korea)	
Room		Rm 303	
We33-KL2	10:50-11:20	Immersed boundary projection methods for fluid-structure interaction problems Prof. Jung-Il Choi (Yonsei University, Republic of Korea)	
We33-OP21	11:20-11:35	A peridynamic shell model of fluid-structure interaction Presenter: Housheng Zhang (Beijing Institute of Technology, China) Corresponding Author: Prof. Xin Zhao (Beijing Institute of Technology, China)	
We33-OP22	11:35-11:50	Implicit scheme of incompressible multiphase model for fluid-structure interaction based on multi-moment finite volume method Presenter: Jiangxu Hao (Shanghai Jiao Tong University, China) Corresponding Author: Dr. Bin Xie (Shanghai Jiao Tong University, China)	
We33-OP23	11:50-12:05	A generic balanced-force algorithm for multiphase flows with FSI on unstructured grids Presenter: Yichen Huang (Shanghai Jiao Tong University, China) Corresponding Author: Dr. Bin Xie (Shanghai Jiao Tong University, China)	
We33-OP24	12:05-12:20	Numerical solutions of flow past a normal flat plate at $Re = 5 - 10,000$ Presenter: Daeun Song (Seoul National University, Republic of Korea) Corresponding Author: Prof. Haecheon Choi (Seoul National University, Republic of Korea)	
FCM02		Flow Measurement and Optimization	
Chair		Prof. Han Seo Ko (Sungkyunkwan University, Republic of Korea)	
Room		Rm 304	
We34-OP21	11:20-11:35	Particle image velocimetry measurement of Internal Flow in TPMS Structures Presenter: Jong-bae Lee (Chosun University, Republic of Korea) Corresponding Author: Prof. Sung Yong Jung (Chosun University, Republic of Korea)	
We34-OP22	11:35-11:50	Simultaneous Measurement of Velocity and Shear Stress fluctuation in Polymer-Added Flows under Drag Reduction Presenter: JUMPEI ASAOKA (Nagoya University, Japan) Corresponding Author: JUMPEI ASAOKA (Nagoya University, Japan)	
We34-OP23	11:50-12:05	Topology optimization of manifold fluid channels for mass flowrate control using the k- ϵ turbulence model Presenter: KEWEI GAO (Chonnam National University, Republic of Korea) Corresponding Author: Prof. HYUN WOOK KANG (Chonnam National University, Republic of Korea)	
We34-OP24	12:05-12:20	Analysis of enhanced gas flow in CVD reactor with showerhead and baffles Presenter: Min Sang Yoo (Sungkyunkwan University, Republic of Korea) Corresponding Author: Prof. Han Seo Ko (Sungkyunkwan University, Republic of Korea)	
FIN02		Flow Induced Noise and Vibration II	
Chair		Prof. Emad Uddin (National University of Sciences and Technology, Pakistan)	
Room		Rm 305	
We35-OP21	11:20-11:35	Numerical Analysis of a Simple Two-Dimensional Fluidic Oscillator Presenter: Hiroto Iriyama (Doshisha University, Japan) Corresponding Author: Prof. Katsuya Hirata (Doshisha University, Japan)	
We35-OP22	11:35-11:50	Experimental Study on Underexpanded Jets from Rectangular Nozzle with Aft-Deck Presenter: Jiacheng Liu (Northwestern Polytechnical University, China) Corresponding Author: Prof. Shucheng Pan (Northwestern Polytechnical University, China)	
We35-OP23	11:50-12:05	Experimental Investigation of Active Flapping Energy Harvesting with a Circular Cylinder Presenter: Muhammad Talha (National University of Sciences and Technology, Pakistan) Corresponding Author: Prof. Emad Uddin (National University of Sciences and Technology, Pakistan)	
12:20-13:40		Lunch	
Room		Grand Hall	
	13:30-13:55	Opening Ceremony	
Chair		Prof. Heuy Dong Kim (Andong National University, Republic of Korea)	
We51-PL1	13:55-14:40	Unveiling Polymer Viscoelasticity Through Bead-Rod Modeling Prof. Alan Jeffrey Giacomini (University of Nevada, USA)	
Chair		Prof. Jaiyoung Ryu (Korea University, Republic of Korea)	
We51-PL2	14:40-15:25	Machine Learning-Based Solutions and Applications for Various Fluid Dynamics Problems Prof. Hee Chang Lim (Pusan National University, Republic of Korea)	
15:25-15:45		Break	

MNF03		Interfacial Phenomena
Chair		Prof. Jonghyun Ha (Ajou University, Republic of Korea)
Room		Grand Hall
We51-OP31	15:45-16:00	Tracking the explosive motion of Leidenfrost-induced spherical hydrogels Presenter: Minseong Cho (Ajou University, Republic of Korea) Corresponding Author: Prof. Jonghyun Ha (Ajou University, Republic of Korea)
We51-OP32	16:00-16:15	Mechanics of peeling oxide layer of EGaIn from substrates Presenter: Sangyun Jung (Yonsei University, Republic of Korea) Corresponding Author: Prof. Wonjung Kim (Yonsei University, Republic of Korea)
We51-OP33	16:15-16:30	Hygroresponsive braille surface for refreshable tactile displays Presenter: Seokmin Moon (Ajou University, Republic of Korea) Corresponding Author: Prof. Jonghyun Ha (Ajou University, Republic of Korea)
We51-OP34	16:30-16:45	Visualization and Mechanical Analysis of Ice Detachment on Solid Surfaces Presenter: Jihyun Kim (Pusan National University, Republic of Korea) Corresponding Author: Prof. Seungho Kim (Pusan National University, Republic of Korea)
We51-OP35	16:45-17:00	Dissolution and precipitation dynamics of mineral under density-driven natural convection Presenter: Jinil Park (Hanyang University, Republic of Korea) Corresponding Author: Prof. Rhokyun Kwak (Hanyang University, Republic of Korea)
We51-OP36	17:00-17:15	Direct Observation of Mineral Dissolution, Precipitation, and Pore-Clogging dynamics in a Single-Channel Microfluidic System Presenter: SEUNGHYEOK HAN (Hanyang University, Republic of Korea) Corresponding Author: Prof. Rhokyun Kwak (Hanyang University, Republic of Korea)
We51-OP37	17:15-17:30	Influence of fluid physical properties on the jettability of multi-nozzle inkjet printing Presenter: Sanghyun Park (Hanyang University, Republic of Korea) Corresponding Author: Prof. Je Hoon Oh (Hanyang University, Republic of Korea)
We51-OP38	17:30-17:45	Study on CO2 huff-n-puff multiphase flow mechanism and EOR in shale oil reservoirs considering microscale effects Presenter: Mingjian Wang (China University of Petroleum, China) Corresponding Author: Prof. Yuliang Su (China University of Petroleum, China)
AAA03		Aeroacoustics, High Speed Flows and Optimization
Chair		Prof. Cong-Truong Dinh (Hanoi University of Science and Technology, Viet Nam)
Room		Rm 401
We41-OP31	15:45-16:00	Aeroacoustic characteristics of an electric propulsion fan with smooth suction duct lip Presenter: Hoang-Quan Chu (Le Quy Don Technical University, Viet Nam) Corresponding Author: Dr. Cong-Truong Dinh (Hanoi University of Science and Technology, Viet Nam)
We41-OP32	16:00-16:15	Acoustic metasurface with flow condition for reducing flow-induced noise Presenter: Dr. Sung Won Lee (Seoul National University, Republic of Korea) Corresponding Author: Prof. Joo Hwan Oh (Seoul National University, Republic of Korea)
We41-OP33	16:15-16:30	Numerical study of separation of steam in Supersonic curved nozzle Presenter: SungJin Kim (Chungnam National University, Republic of Korea) Corresponding Author: Prof. Byoungjae Kim (Chungnam National University, Republic of Korea)
We41-OP34	16:30-16:45	Flow Analysis of Twin Supersonic Impinging Jets using IDDES with Adaptive Mesh Refinement and Flow Prediction by Operator Learning Approach Presenter: Chanho Park (Gwangju Institute of Science and Technology, Republic of Korea) Corresponding Author: Prof. Seongim Choi (Gwangju Institute of Science and Technology, Republic of Korea)
We41-OP35	16:45-17:00	Experimental investigation of bleeding characteristics behind isotropic porous square cylinders Presenter: Chansoo Seol (Seoul National University of Science and Technology, Republic of Korea) Corresponding Author: Prof. Taehoon Kim (Seoul National University of Science and Technology, Republic of Korea)
We41-OP36	17:00-17:15	Multi-Objective Optimization of Ducted Propeller Exit Configurations for Enhanced Aerodynamic Performance and Noise Reduction Presenter: Hwangyo Kim (Sungkyunkwan University, Republic of Korea) Corresponding Author: Prof. Younjea Kim (Sungkyunkwan University, Republic of Korea)
We41-OP37	17:15-17:30	Shear-stress-based inverse design and deep learning optimization for airfoil design at ultralow-Reynolds flow regimes Presenter: Alireza Malekpour (Isfahan university of technology, Islamic Republic of Iran) Corresponding Author: Prof. Mahdi Nili-Ahmadabadi (Isfahan university of technology, Islamic Republic of Iran)
We41-OP38	17:30-17:45	An accelerated aerodynamic surrogate-based optimization method via deep learning-driven flow field modeling Presenter: Prof. Chunlin Gong (Northwestern Polytechnical University, China) Corresponding Author: Prof. Chunlin Gong (Northwestern Polytechnical University, China)

DDF01		High Speed Flow and Turbulence
Chair		Prof. Ratnesh Kumar Shukla (Indian Institute of Science, India)
Room		Rm 402
We42-OP31	15:45-16:00	A GNN-based framework for heat flux prediction on hypersonic aircraft Presenter: Xin Li (Xi'an Jiaotong University, China) Corresponding Author: Prof. Gang Chen (Xi'an Jiaotong University, China)
We42-OP32	16:00-16:15	Multilayer-Perceptron based Optimal Stencil Selection and Order Detection for High-Order Shock Capturing Presenter: Dr. Sunder Dasika (Indian Institute of Science, India) Corresponding Author: Prof. Ratnesh Kumar Shukla (Indian Institute of Science, India)
We42-OP33	16:15-16:30	Reconstruction of Flame Structure Based on Hydrogen jet and Combustion Noise Using Proper Orthogonal Decomposition Presenter: Yuki Akimoto (Saitama University, Japan) Corresponding Author: Prof. Akihito Kiyama (Saitama University, Japan)
We42-OP34	16:30-16:45	Turbulence Modeling with Bayesian Uncertainty Quantification: A Comparative Study of Finite Volume and High-Order Discontinuous Galerkin Methods Presenter: Boyang An (Beihang University, China) Corresponding Author: Dr. Zhenhua Jiang (Beihang University, China)
We42-OP35	16:45-17:00	An experience-learning intelligent optimization framework for aerodynamic shape design with direct embedding of physical information Presenter: Ziyang Liu (Xi'an Jiaotong University, China) Corresponding Author: Prof. Gang Chen (Xi'an Jiaotong University, China)
We42-OP36	17:00-17:15	Turbulence Model Enhancement for Transitional Boundary Layer with Field Inversion and Machine Learning Presenter: Mir Hamed Mohafez (GIST, Republic of Korea) Corresponding Author: Prof. Solkeun Jee (GIST, Republic of Korea)
We42-OP37	17:15-17:30	Nonlinear Turbulence Models for Buoyancy-Driven Channel Flow with Riblets Presenter: Jiyoung Lee (University of Melbourne, Australia) Corresponding Author: Prof. Andrew Ooi (University of Melbourne, Australia)
We42-OP38	17:30-17:45	Learning Capability of Micro-swimmers in a Two-Dimensional Turbulent Environment Presenter: Gurkan Kilicaslan (Bilkent University, Turkey) Corresponding Author: Dr. Luca Biancofiore (University of L'Aquila, Italy)
CSD03		Shock and High-Speed Flow
Chair		Prof. Romie Oktovianus Bura (Republic of Indonesia Defense University, Indonesia)
Room		Rm 301
We31-OP31	15:45-16:00	Experimental investigations of shock wave-assisted photocatalytic enhancement of zirconium dioxide/graphitic carbon nitride composites for water purification Presenter: Dr. P Sivaprakash (Keimyung University, Republic of Korea) Corresponding Author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
We31-OP32	16:00-16:15	MOLECULAR DYNAMICS PREDICTION OF MEDIA INDUCED BY THE PASSAGE OF A NORMAL SHOCK WAVE Presenter: ALEX JOSEPH PUTHOOR (Andong National University, Republic of Korea) Corresponding Author: Prof. HEUY DONG KIM (Andong National University, Republic of Korea)
We31-OP33	16:15-16:30	Analysis of the flow produced by bio-inspired fast-closing claws of different geometries Presenter: Dr. Jose Rogelio Valdes (Universidad Iberoamericana, Mexico) Corresponding Author: Dr. Francisco Antonio Godinez (Universidad Nacional Autonoma de Mexico, Instituto de ingenieria, Mexico)
We31-OP34	16:30-16:45	The Flow Physics of Vortical Flow on the Diamond Wing at High Subsonic Speed Presenter: Nadhie Juliawan (Konkuk Aerospace Design Airworthiness Institute, Republic of Korea) Corresponding Author: Prof. Romie Oktovianus Bura (Republic of Indonesia Defense University (RIDU), Indonesia)
We31-OP35	16:45-17:00	Effect of Inlet Pressure Perturbation on Flow Characteristics of Underexpanded Supersonic Free Jet Presenter: Prof. A. B. M. Toufique Hasan (Bangladesh University of Engineering and Technology (BUET), Bangladesh) Corresponding Author: Prof. A. B. M. Toufique Hasan (Bangladesh University of Engineering and Technology (BUET), Bangladesh)
We31-OP36	17:00-17:15	Numerical Analysis of Fuel Injection Pressure Variation on Air-Fuel Mixing in an Upstream Dual-Cavity Scramjet Combustor Presenter: Rakiba Benta Kalam (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding Author: Prof. Dr. Mohammad Ali (Bangladesh University of Engineering and Technology, Bangladesh)
We31-OP37	17:15-17:30	NUMERICAL INVESTIGATION OF SUPERSONIC WIND TUNNEL'S NOZZLE WITH SETTLING CHAMBER Presenter: Duc-Bao PHAM (Hanoi University of Science and Technology, Viet Nam) Corresponding Author: Dr. Cong-Truong DINH (Hanoi University of Science and Technology, Viet Nam)
We31-OP38	17:30-17:45	Flowfield Characteristics in A Supersonic Inlet Isolator with Fluctuating Wall Thermal Condition Presenter: Raihan Ali Khan (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding Author: Prof. A. B. M. Toufique Hasan (Bangladesh University of Engineering and Technology,

FIS01		Instability in Complex Flows
Chair		Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
Room		Rm 302
We32-OP31	15:45-16:00	BUOYANCY-INDUCED INSTABILITY AROUND A JANUS PARTICLE Presenter: Efe Taner Özdemir (Bilkent University, Turkey) Corresponding Author: Prof. Francesco Viola (Bilkent University, Turkey)
We32-OP32	16:00-16:15	Non-Modal Stability Analysis of Round Jets Using Parametric Velocity Profiles Presenter: Denis Ashurov (Lomonosov Moscow State University, Russian Federation) Corresponding Author: Prof. Francesco Viola (Bilkent University, Turkey)
We32-OP33	16:15-16:30	Bi-global stability and resolvent analysis of wedge flow Presenter: Mayank Pravinkumar Thummar (Marwadi Univeristy, Rajkot, India, India) Corresponding Author: Dr. Rameshkumar Bhoraniya (Marwadi Univeristy, Rajkot, India, India)
We32-OP34	16:30-16:45	The onset of Darcy-Forchheimer convection in an inclined porous media with temperature-dependent viscosity and anisotropic thermal diffusivity Presenter: PALLAWI BHARTI (Indian Institute of Technology, India)
We32-OP35	16:45-17:00	Stability of compressible flow past a compliant solid Presenter: Dr. Mandeep Deka (Jawaharlal Nehru Centre for Advanced Scientific Research, India) Corresponding Author: Prof. Viswanathan Kumaran (Jawaharlal Nehru Centre for Advanced Scientific Research, India)
We32-OP36	17:00-17:15	Thermal Dispersion and Vertical Throughflow Effects on the Onset of Convection in Darcy-Brinkman Porous Media Presenter: Pappu Kumar Mourya (IIT HYDERABAD, India)
We32-OP37	17:15-17:30	Stability analysis of a perturbed liquid layer over a vibrating boundary that oscillates sinusoidally Presenter: MRITYUNJOY SAHA (Indian Institute of Technology Jodhpur, India) Corresponding Author: Dr. Sukhendu Ghosh (Indian Institute of Technology Jodhpur, India)
We32-OP38	17:30-17:45	Influence of stationary perturbations on the stability of a laminar jet flow Presenter: Denis Ashurov (Lomonosov Moscow State University, Russian Federation) Corresponding Author: Prof. Vasily Vedeneev (Lomonosov Moscow State University, Russian Federation)
NNF01		Non-Newtonian Flows
Chair		Dr. SWARUP BARIK (SRM Institute of Science and Technology, India)
Room		Rm 303
We33-OP31	15:45-16:00	Transport of solute in a Casson fluid flow through a tube with wall absorption: A multi-scale approach Presenter: RADHA S (SRM Institute of Science and Technology, Kattankulathur, India) Corresponding Author: Dr. SWARUP BARIK (SRM Institute of Science and Technology, Kattankulathur, India)
We33-OP32	16:00-16:15	Evaporation of hydro-alcoholic solutions of hydroxypropyl methylcellulose Presenter: Rimjhim Spandan (Indian Institute of Science, India) Corresponding Author: Dr. Pratikash P Panda (Indian Institute of Science, India)
We33-OP33	16:15-16:30	Numerical Simulation of Multi-angle Droplet Impact on Flowing Thin Water Film and Secondary Droplet Generation Presenter: Dr. Wei Guo (Nanjing University of Aeronautics and Astronautics, China) Corresponding Author: Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
We33-OP34	16:30-16:45	Entropy Generation and Transport Dynamics of MHD Carreau-Yasuda Fluid in an Asymmetric Peristaltic Channel: Overlapping Grid-Based Spectral Collocation Approach Presenter: Prof. Muhammad Idrees Afridi (Hanjiang Normal University, China)
We33-OP35	16:45-17:00	Shock-induced aero-breakup of evaporating nanofluid droplet Presenter: Gautham Vadlamudi (Indian Institute of science, India) Corresponding Author: Prof. Saptarshi Basu (Indian Institute of science, India)
We33-OP36	17:00-17:15	Experimental Study on Turbulent Rayleigh-Bénard Convection with Polymer Additives Presenter: Ning Wei (Xi'an Jiaotong University, China) Corresponding Author: Dr. Yi Chao Xie (Xi'an Jiaotong University, China)
We33-OP37	17:15-17:30	Behavior of the viscoelastic drop in an electric field Presenter: Sarika Shivaji Bangar (Indian Institute of Science, Bengaluru, India) Corresponding Author: Prof. Gaurav Tomar (Indian Institute of Science, Bengaluru, India)

MPM01		Porous Media and Granular Flows
Chair		Prof. Zhenxun Gao (Beihang University, China)
Room		Rm 304
We34-OP31	15:45-16:00	Efficient Full-Domain Simulation and Heat Reduction Mechanisms of Gaseous Transpiration Cooling in Porous Media Presenter: Fuyun Wang (Beihang University, China) Corresponding Author: Prof. Zhenxun Gao (Beihang University, China)
We34-OP32	16:00-16:15	Layered Structure of Dense Liquid-Particle Flow in an Inclined Channel by RIM Presenter: Prof. Xiaoliang Wang (Beijing Institute of Technology, China) Corresponding Author: Prof. Xiaoliang Wang (Beijing Institute of Technology, China)
We34-OP33	16:15-16:30	Attenuation of Wave Forces on a Seawall with Porous Structures in the Presence of a Floating Elastic Plate Presenter: Dr. GAGAN SAHOO (National Taiwan Ocean University, Taiwan) Corresponding Author: Prof. Tai-Wen Hsu (Center of Excellence for Ocean Engineering, National Taiwan Ocean University, Taiwan)
We34-OP34	16:30-16:45	Droplet-particle collision in mid-air: scaling relation and physical mechanism behind the reduced wetting area Presenter: Prof. Ikroh Yoon (Korea Military Academy, Republic of Korea) Corresponding Author: Prof. Ikroh Yoon (Korea Military Academy, Republic of Korea)
We34-OP35	16:45-17:00	Effect of ocean currents on wave scattering by inverse T-type compound dock Presenter: Aman Kumar Kushwaha (IIT INDORE, India) Corresponding Author: Prof. Harekrushna Behera (IIT INDORE, India)
We34-OP36	17:00-17:15	A modified kinetic theory model with two-phase modelling for the particle-liquid mixture flow Presenter: Yuxin Tian (Beijing Institute of Technology, China)
We34-OP37	17:15-17:30	Dynamics of underwater granular collapse on rough beds by CFD-DEM simulation Presenter: Menghan Pan (Beijing Institute of Technology, China) Corresponding Author: Prof. Qingquan Liu (Beijing Institute of Technology, China)
We34-OP38	17:30-17:45	Transport of settling particles induced from a periodic source in turbulent open channel flow Presenter: James Dinakaran Narjinary (Coochbehar Panchanan Barma University, India) Corresponding Author: Prof. Kajal Kumar Mondal (Coochbehar Panchanan Barma University, India)
CCF01		Combustion and Chemical Fluid Mechanics
Chair		Prof. Hyung Sub Sim (Sejong University, Republic of Korea)
Room		Rm 305
We35-OP31	15:45-16:00	Combined experimental and numerical study of the ignition and combustion processes in high-pressure Spray A-3 flames Presenter: Seungwon Song (Sejong University, Republic of Korea) Corresponding Author: Prof. Hyung Sub Sim (Sejong University, Republic of Korea)
We35-OP32	16:00-16:15	Numerical Investigation on Predictive Modelling of Convective Heat Transfer of Supercritical n-Dodecane with Pyrolysis in a Regenerative Cooling Channel Presenter: Minseo LEE (Pukyong National University, Republic of Korea) Corresponding Author: Prof. Hyung Ju LEE (Pukyong National University, Republic of Korea)
We35-OP33	16:15-16:30	An investigation on the cooling performance of effusion hole configuration for the liner wall of combustion chamber Presenter: Sajan Tamang (Changwon National University, Republic of Korea) Corresponding Author: Prof. Heesung Park (Changwon National University, Republic of Korea)
We35-OP34	16:30-16:45	Numerical Study of the Effect of Hydrogen-Blended Gas on Combustion Characteristics and Heat Exchange Efficiency of Heat-Sensitive Equipment Presenter: Dr. JungMin Cho (Seoul National University of Science and Technology, Republic of Korea) Corresponding Author: Prof. MinJung Lee (Seoul National University of Science and Technology, Republic of Korea)
We35-OP35	16:45-17:00	Modal Analysis of High-Speed Planar Laser-Induced Fluorescence and Schlieren Imaging of High-Pressure Spray Flames Presenter: Lin Yun (Sejong University, Republic of Korea) Corresponding Author: Prof. Hyung Sub Sim (Sejong University, Republic of Korea)
We35-OP36	17:00-17:15	STATISTICAL PHYSICS ANALYSIS OF HYDROGEN ENRICHED SLUSH LNG FORMATION Presenter: ALEX JOSEPH PUTHOOR (Andong National University, Republic of Korea) Corresponding Author: Prof. LIJO VINCENT (Andong National University, Republic of Korea)
We35-OP37	17:15-17:30	Fuel injection strategies for biogas fuelled MGT Presenter: MANISH SINGH (India Institute of Technology Jodhpur, India) Corresponding Author: Dr. Sudipto Mukhopadhyay (India Institute of Technology Jodhpur, India)
We35-OP38	17:30-17:45	Role of wall material in planar stepped micro-combustor flame instabilities Presenter: Vinay Sankar (Indian Institute of Technology Jodhpur, India) Corresponding Author: Prof. Ratna Kishore Velamati (Indian Institute of Technology Jodhpur, India)

Thursday, Sep 11		
8:00	Registration	
Plenary Talk		
Room		Grand Hall
Chair		Prof. Song Fu (Tsinghua University, China)
Th51-PL3	09:00-09:45	Turbulent Dynamics of Sandstorms Prof. Hongyou Liu (Lanzhou University, China)
Chair		Prof. A M Pradeep (Indian Institute of Technology Bombay, India)
Th51-PL4	09:45-10:30	Turbulent Jets Prof. Joseph Mathew (Indian Institute of Science, India)
10:30~10:50	Break	
MNF04		Surface Tension and Wetting Flows
Chair		Prof. Ildoo Kim (Konkuk University, Republic of Korea)
Room		Grand Hall
Th51-OP41	10:50-11:05	Dynamics of liquid transfer between flat surfaces Presenter: Mr. Hyeokgyun Moon (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
Th51-OP42	11:05-11:20	Soft wetting coupled with mechanical instabilities in elastic nanofilms Presenter: Prof. So Nagashima (Nagoya University, Japan) Corresponding author: Prof. So Nagashima (Nagoya University, Japan)
Th51-OP43	11:20-11:35	Solutal Marangoni-driven spreading of liquid droplets on different agarose gel substrates Presenter: Ms. SongHyeon Chung (KAIST, Republic of Korea) Corresponding author: Prof. Hyoungsoo Kim (KAIST, Republic of Korea)
Th51-OP44	11:35-11:50	Particle Deposition Dynamics in Evaporating Droplets on Wettability-patterned Substrates Presenter: Mr. Heemin Lee (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Th51-OP45	11:50-12:05	The temperature dependence of surface tension of surfactant solutions Presenter: Prof. Ildoo Kim (Konkuk University, Republic of Korea) Corresponding author: Prof. Ildoo Kim (Konkuk University, Republic of Korea)
Th51-OP45	12:05-12:20	Investigation of De-Wetting Phenomena Induced by Marangoni Flow in Surfactant-Laden Droplets Deposited on an Oil Layer Above Water Pool Presenter: Mr. Donghoon Lee (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
AAA04		Rotor and Turbomachine
Chair		Dr. Zhaolin Chen (Nanjing University of Aeronautics and Astronautics, China)
Room		Rm 401
Th41-OP41	10:50-11:05	Multi-Objective Design Optimization of a Martian Rotor System Presenter: Dr. Jason (Zhaolin) Chen (Nanjing University of Aeronautics and Astronautics, China) Corresponding author: Dr. Jason (Zhaolin) Chen (Nanjing University of Aeronautics and Astronautics, China)
Th41-OP42	11:05-11:20	Experimental and Computational Validation of Mars Rotor Aerodynamics in Simulated Low-Density Environments Presenter: Mr. Yi Liu (Nanjing University of Aeronautics and Astronautics, China) Corresponding author: Dr. Zhaolin Chen (Nanjing University of Aeronautics and Astronautics, China)
Th41-OP43	11:20-11:35	Basic Research to Improve the Performance of Contra-Rotating Propeller Wind Turbine Presenter: Mr. Naoki Tsuji (Tokushima University, Japan) Corresponding author: Prof. Toru Shigemitsu (Tokushima University, Japan)
Th41-OP44	11:35-11:50	High Fidelity Computation of Flow in the Vicinity of Helicopter Blades During Cruise Presenter: Ms. Kashmeera P B (Indian Institute of Technology Kanpur, India) Corresponding author: Dr. Navrose Navrose (Indian Institute of Technology Kanpur, India)
Th41-OP45	11:50-12:05	Numerical and Experimental Study on Sand Erosion Resistance of Aero-Engine Fan Blades in Wind-Sand Environments Presenter: Ms. Yushang Hu (Xinjiang University, China) Corresponding author: Ms. Yushang Hu (Xinjiang University, China)

TUB01		Wall-Bounded Flow and Vortex Ring
Chair		Prof. Jinyul Hwang (Pusan National University, Republic of Korea)
Room		Rm 301
Th31-OP41	10:50-11:05	Contribution of Self-Similar Uniform Momentum Zones to the Logarithmic Layer in Turbulent Pipe Flow Presenter: Ms. Dongmin Kim (Pusan National University, Republic of Korea) Corresponding author: Prof. Jinyul Hwang (Pusan National University, Republic of Korea)
Th31-OP42	11:05-11:20	Oblique Collision and Reconnection of Swirling Vortex Rings Presenter: Dr. Watchapon Rojanaratanangkule (Chiang Mai University, Thailand) Corresponding author: Dr. Watchapon Rojanaratanangkule (Chiang Mai University, Thailand)
Th31-OP43	11:20-11:35	Skin-Friction Modulation Induced by a Single Bubble in Turbulent Channel Flow Presenter: Mr. Changyong Lee (Pusan National University, Republic of Korea) Corresponding author: Prof. Jinyul Hwang (Pusan National University, Republic of Korea)
Th31-OP44	11:35-11:50	AttC37:J46enuation and Enhancement of Turbulence by Solid Particles Under Gravity Presenter: Dr. Yutaro Motoori (Osaka University, Japan) Corresponding author: Dr. Yutaro Motoori (Osaka University, Japan)
Th31-OP45	11:50-12:05	Energy Contribution of Wall-Coherent Motions in Turbulent Pipe Flows Presenter: Mr. Jeonghoon Yoon (Pusan National University, Republic of Korea) Corresponding author: Prof. Jinyul Hwang (Pusan National University, Republic of Korea)
Th31-OP46	12:05-12:20	Experimental Comparison of Anisotropy in Bulk and Near Wall Regions in a Turbulent Rayleigh-Bénard Convection Presenter: Mr. Sanal Kizhakkedathu Mohanan (Indian Institute of Technology Madras, India) Corresponding author: Mr. Sanal Kizhakkedathu Mohanan (Indian Institute of Technology Madras, India)
HMT03		Multiphysics Transport Phenomena
Chair		Prof. Jonghyun Ha (Ajou University, Republic of Korea)
Room		Rm 302
Th32-OP41	10:50-11:05	Numerical Simulation of Silicon Carbide Deposition in a Methyltrichlorosilane-H ₂ CVD Process Presenter: Mr. Sangwon Ryu (Korea University, Republic of Korea) Corresponding author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
Th32-OP42	11:05-11:20	How Crucial is Micro-rotational Velocity for Solute Transport in Hydromagnetic Micropolar-Newtonian Blood Flow? Presenter: Mr. SOHEL AHMED (Cooch Behar Panchanan Barma University, India) Corresponding author: Dr. NANDA PODDAR (University of Galway, Ireland)
Th32-OP43	11:20-11:35	Inertia Wheel Stabilization of a Restrained Slender Body at High Incidence in Uniform Flow Presenter: Prof. Oded Gottlieb (Technion - Israel Institute of Technology, Israel) Corresponding author: Prof. Oded Gottlieb (Technion - Israel Institute of Technology, Israel)
Th32-OP44	11:35-11:50	Droplet Impact of Stable Water-in-Oil Microemulsions on Heated Substrate Presenter: Ms. Joita Chakraborty (Indian Institute of Science, Bengaluru, India) Corresponding author: Prof. Saptarshi Basu (Indian Institute of Science, Bengaluru, India)
Th32-OP45	11:50-12:05	Shock Induced Breakup of Evaporating Microemulsion Droplets Presenter: Mr. Bal Krishan (Indian Institute of Science, Bengaluru, India) Corresponding author: Prof. Saptarshi Basu (Indian Institute of Science, Bengaluru, India)
Th32-OP46	12:05-12:20	Modeling Reactive Solute Transport in Oscillatory Flow: A Dual Deterministic-Stochastic Approach Presenter: Dr. Nanda Poddar (University of Galway, Ireland) Corresponding author: Dr. Niall Madden (University of Galway, Ireland)
CFD03		Advanced CFD Methods
Chair		Prof. Shucheng Pan (Northwestern Polytechnical University, China)
Room		Rm 303
Th33-OP41	10:50-11:05	Very High-Order Multi-Moment Method for Convection-Diffusion Equations Presenter: Dr. Arpiruk Hokpunna (Chiang Mai University, Thailand) Corresponding author: Dr. Arpiruk Hokpunna (Chiang Mai University, Thailand)
Th33-OP42	11:05-11:20	Accelerating Flux Reconstruction Methods with Mixed-Precision Computing on AI Hardwares Presenter: Dr. Yixuan Lian (Northwestern Polytechnical University, China) Corresponding author: Prof. Shucheng Pan (Northwestern Polytechnical University, China)
Th33-OP43	11:20-11:35	DSPXFLUIDS: An innovative unified cross-architecture mixed-precision CFD solver optimized for heterogeneous computing architectures Presenter: Mr. Renfei Zhang (Northwestern Polytechnical University, China)
Th33-OP44	11:35-11:50	Exploration of Single Bubble Rising Characteristics predicted by Multiple Neural Operator Presenter: Mr. SeokYong Lee (Kyungpook National University, Republic of Korea) Corresponding author: Prof. Sanghun Choi (Kyungpook National University, Republic of Korea)
Th33-OP45	11:50-12:05	Comparative Study of Quantum and Classical Backends for Lattice Boltzmann Flow Simulation Presenter: Mr. CHANHYEONG LEE (Yonsei University, Republic of Korea) Corresponding author: Prof. JOONSANG LEE (Yonsei University, Republic of Korea)
Th33-OP46	12:05-12:20	Microfluidic and LBM Investigations on Fluid Dynamics and Enhanced Oil Recovery Mechanisms of CO ₂ Pre-injection Fracturing in Laminated Shale Reservoirs Presenter: Dr. Dian Zhang (China University of Petroleum, China) Corresponding author: Prof. Yuliang nil Su (China University of Petroleum, China)

HMT04		Advanced Cooling Technology
Chair		Prof. Venugopal Arumuru (Indian Institute of Technology Bhubaneswar, India)
Room		Rm 304
Th34-OP41	10:50-11:05	Effect of Air Injection Direction on Thermal-flow Characteristics of a Swirl Furnace Presenter: Mr. Dong-Hyun Kim (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Youn-jea Kim (Sungkyunkwan University, Republic of Korea)
Th34-OP42	11:05-11:20	Impingement Heat Transfer Enhancement using Flexible Film Flapping Jet Presenter: Mr. Tanmoy Sadhukhan (Indian Institute of Technology Bhubaneswar, India) Corresponding author: Prof. Venugopal Arumuru (Indian Institute of Technology Bhubaneswar, India)
Th34-OP43	11:20-11:35	Computational Study on the Influence of Surface Injection on the Coupled Thermal Effects of Ablative Thermal Protection Systems under Long-Duration Flight Conditions Presenter: Dr. Qi You (Beihang University, China) Corresponding author: Prof. Zhenxun Gao (Beihang University, China)
Th34-OP44	11:35-11:50	Numerical Investigation of Heat Transfer Characteristics in Liquid-Cooled Heat Sinks for SiC MOSFET Power Inverters Presenter: Mr. Athul Pradeep (IIT Madras, India) Corresponding author: Mr. Athul Pradeep (IIT Madras, India)
Th34-OP45	11:50-12:05	Effect of interconnection on the performance of a two phase inter-connected microchannel heat sink Presenter: Prof. A K M Monjur Morshed (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding author: Prof. A K M Monjur Morshed (Bangladesh University of Engineering and Technology, Bangladesh)
Th34-OP46	12:05-12:20	Laminar Convective Heat Transfer through Trapezoidal Corrugated Pipe by Applying Non-Uniform Heat Flux Presenter: Mr. Md Insiat Islam Rabby (Military Institute of Science and Technology (MIST), Bangladesh) Corresponding author: Mr. Md. Rakidul Islam (Military Institute of Science and Technology (MIST), Bangladesh)
BFM01		Biological Fluid Mechanics
Chair		Prof. Hyun Jin, Kim (KAIST, Republic of Korea)
Room		Rm 305
Th35-OP41	10:50-11:05	Evaluating unsteady forces by vortex force map method at low Reynolds numbers Presenter: Dr. Shuji Otomo (Tokyo University of Agriculture and Technology, Japan) Corresponding author: Dr. Shuji Otomo (Tokyo University of Agriculture and Technology, Japan)
Th35-OP42	11:05-11:20	Sensitivity of Pulsatile Parameters of Computed Fractional Flow Reserve using a Reduced-order Model Presenter: Mr. Wonjin Choi (KAIST, Republic of Korea) Corresponding author: Prof. Hyun Jin Kim (KAIST, Republic of Korea)
Th35-OP43	11:20-11:35	Experimental study on the characteristics and control mechanism of the wake vortex during the C-turn of living zebrafish Presenter: Dr. Mengchen Gao (University of Chinese Academy of Sciences, China) Corresponding author: Prof. Yongliang Yu (University of Chinese Academy of Sciences, China)
Th35-OP44	11:35-11:50	Dental Suction Tip Geometry Influence Analysis and Optimization for Aerodynamic Noise Reduction Presenter: Mr. Seung Cheol Ko (Yonsei University, Republic of Korea) Corresponding author: Dr. Joon Sang Lee (Yonsei University, Republic of Korea)
Th35-OP45	11:50-12:05	Electroosmotically driven flow of non-Newtonian hybrid nanofluid through a porous overlapping irregular stenosed artery: Drug delivery application Presenter: Mr. Aditya Singh (Motilal Nehru National Institute of Technology Allahabad, India) Corresponding author: Mr. Aditya Singh (Motilal Nehru National Institute of Technology Allahabad, India)
12:20~13:40	Lunch	
13:40~14:55	Poster Session	
MNF05		Droplet Dynamics
Chair		Prof. Seungho Kim (Pusan National University, Republic of Korea)
Room		Grand
Th51-OP51	14:55-15:10	Drop Impact on elastic circular disks and its implications for energy harvesting Presenter: Mr. Jaehyeok Bae (Pusan National University, Republic of Korea) Corresponding author: Prof. Seungho Kim (Pusan National University, Republic of Korea)
Th51-OP52	15:10-15:25	Experimental study on the impact of liquid metal droplets on a liquid film over a pre-filled microstructured substrate(PFMS) Presenter: Dr. Rui Zhi Chen (University of Chinese Academy of Sciences, China) Corresponding author: Prof. Zhao Hui Yao (University of Chinese Academy of Sciences, China)
Th51-OP53	15:25-15:40	Automated Double Emulsion Droplet Library Generator Presenter: Mr. Seonghun Shin (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
Th51-OP54	15:40-15:55	Vapor-driven digital microfluidics Presenter: Dr. Junil Ryu (KAIST, Republic of Korea) Corresponding author: Prof. Hyoungsoo Kim (KAIST, Republic of Korea)
Th51-OP55	15:55-16:10	Dynamics of Droplet Formation in Microchannel with Asymmetrically Positioned Constricted Outlet Presenter: Mr. Md. Rafidul Rafi (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding author: Prof. A. B. M. Toufique Hasan (Bangladesh University of Engineering and Technology,

DDF02		Turbulence and Unsteady Flow
Chair		Prof. Solkeun Jee (Gwangju Institute of Science and Technology, Republic of Korea)
Room		Rm 401
Th41-OP51	14:55-15:10	A novel dynamic neural-network-based subgrid-scale model Presenter: Mr. Chonghyuk Cho (Seoul National University, Republic of Korea) Corresponding author: Prof. Haecheon Choi (Seoul National University, Republic of Korea)
Th41-OP52	15:10-15:25	OF-MLP: A turbulence temporal super-resolution model based on optical flow and multilayer perceptron Presenter: Prof. Xinliang Li (Institute of Mechanics, CAS, China) Corresponding author: Prof. Xinliang Li (Institute of Mechanics, CAS, China)
Th41-OP53	15:25-15:40	Adaptive Correction of a Turbulence Model for Separated Flows Presenter: Ms. Seoyeon Heo (Gwangju Institute of Science and Technology, Republic of Korea) Corresponding author: Prof. Solkeun Jee (Gwangju Institute of Science and Technology, Republic of Korea)
Th41-OP54	15:40-15:55	Exploring Shallow Decoder for low latency flow reconstruction Presenter: Mr. FARHAN AHSAN KHAN (Indian Institute of Technology Kanpur, India) Corresponding author: Dr. NAVROSE NAVROSE (Indian Institute of Technology Kanpur, India)
Th41-OP55	15:55-16:10	Energy transfer perspective on Hopf bifurcation: Analysis with low-dimensional Galerkin model Presenter: Mr. Yuto Nakamura (Tohoku University, Japan) Corresponding author: Mr. Yuto Nakamura (Tohoku University, Japan)
TUB02		Homogeneous Isotropic Turbulence and Taylor-Couette Flow
Chair		Prof. Wennan Zou (Nanchang University/Institute of Fluid Mechanics, China)
Room		Rm 301
Th31-OP51	14:55-15:10	Hidden universality in non-ideal turbulence Presenter: Dr. Takuya Kitamura (Nagasaki University, Japan) Corresponding author: Dr. Takuya Kitamura (Nagasaki University, Japan)
Th31-OP52	15:10-15:25	Scale locality of energy cascade in developed turbulence Presenter: Mr. Keisuke Endo (Osaka University, Japan) Corresponding author: Mr. Keisuke Endo (Osaka University, Japan)
Th31-OP53	15:25-15:40	Preferential concentration of particles in a decaying isotropic turbulence in dilute regime Presenter: Mr. Abishek Sarkar (Indian Institute of Technology Gandhinagar, India) Corresponding author: Mr. Abishek Sarkar (Indian Institute of Technology Gandhinagar, India)
Th31-OP54	15:40-15:55	Contrasting viscosity models in confined Taylor-Couette laminar flow: Deviation analyses/measurements and helical streamline pattern Presenter: Dr. Jian He (Nanchang University/Institute of Fluid Mechanics, China) Corresponding author: Prof. Wennan Zou (Nanchang University/Institute of Fluid Mechanics, China)
Th31-OP55	15:55-16:10	Plastron-Induced Drag Reduction in Featureless Turbulent Taylor-Couette Flow Presenter: Mr. Woobin Song (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
HTM05		Natural and Forced Convection
Chair		Prof. Andrew Ooi (University of Melbourne, Australia)
Room		Rm 302
Th32-OP51	14:55-15:10	Comparative analysis of numerical methods for simulating natural convection in enclosed domains Presenter: Dr. Igor V. Miroshnichenko (Tomsk State University, Russia) Corresponding author: Dr. Igor V. Miroshnichenko (Tomsk State University, Russia)
Th32-OP52	15:10-15:25	Direct Numerical Simulation of the Turbulent Flow Inside a Tilted Vertical Natural Convection Channel Presenter: Prof. Andrew Ooi (The University of Melbourne, Australia) Corresponding author: Prof. Andrew Ooi (The University of Melbourne, Australia)
Th32-OP53	15:25-15:40	Ratio of salt and heat fluxes in turbulent convection between two vertical walls at different temperatures and salt concentrations Presenter: Prof. Emily S.C. Ching (The Chinese University of Hong Kong, Hong Kong) Corresponding author: Prof. Emily S.C. Ching (The Chinese University of Hong Kong, Hong Kong)
Th32-OP54	15:40-15:55	Numerical investigation of forced convection with plasma actuator considering flow acceleration and gas heating Presenter: Mr. Akinori Nishizawa (Tokyo University of Agriculture and Technology, Japan) Corresponding author: Mr. Akinori Nishizawa (Tokyo University of Agriculture and Technology, Japan)
Th32-OP55	15:55-16:10	Experimental study on convective heat transfer within a gas turbine vane trailing edge cavity – part II (heat transfer measurements) Presenter: Mr. Kyungho Yoon (Seoul National University, Republic of Korea) Corresponding author: Prof. Wontae Hwang (Seoul National University, Republic of Korea)

CFD04		Aerodynacmis I
Chair		Prof. Romie Oktovianus Bura (Republic of Indonesia Defense University, Indonesia)
Room		Rm 303
Th33-OP51	14:55-15:10	High order compact fully-discrete scheme for compressible flow Presenter: Dr. Tong Zhou (Northwestern Polytechnical University, China) Corresponding author: Prof. Shucheng Pan (Northwestern Polytechnical University, China)
Th33-OP52	15:10-15:25	Computational Study of Supersonic Flow in a 3D Y-intake Presenter: Mr. Varun Pant (Indian Institute of Technology Kanpur, India) Corresponding author: Dr. Sanjay Mittal (Indian Institute of Technology Kanpur, India)
Th33-OP53	15:25-15:40	Transitional RANS and HRLM simulations for DU-91-W2-250 at high Reynolds number Presenter: Mr. Haitian Lin (Tsinghua University, China) Corresponding author: Prof. Song Fu (Tsinghua University, China)
Th33-OP54	15:40-15:55	Numerical Simulation of Ice Accretion on Three-Dimensional Helicopter Rotor Blades Presenter: Dr. Chenglin Tian (Nanjing University of Aeronautics and Astronautics, China) Corresponding author: Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Th33-OP55	15:55-16:10	Turbulence Model Improvement with Field Inversion for Supersonic Flow around an Axisymmetric Body Presenter: Mr. Junho Eom (GIST, Republic of Korea) Corresponding author: Prof. Solkeun Jee (GIST, Republic of Korea)
HMT06		Heat and Mass Transfer Enhancement by Structured Surface
Chair		Prof. Ikroh Yoon (Korea Military Academy, Republic of Korea)
Room		Rm 304
Th34-OP51	14:55-15:10	Flow characteristics and cooling performance of TPMS-based effusion cooling Presenter: Mr. Yuli Cheng (Shanghai Jiao Tong University, China) Corresponding author: Prof. Yu Rao (Shanghai Jiao Tong University, China)
Th34-OP52	15:10-15:25	Evaluation of Heat Transfer Performance of a Heat Exchanger Tube with Circular Ring Turbulators Presenter: Mr. Supapat Pingta (Mahanakorn University of Technology, Thailand) Corresponding author: Mr. Supapat Pingta (Mahanakorn University of Technology, Thailand)
Th34-OP53	15:25-15:40	Influence of Twisted Baffle Configurations on Heat Transfer Enhancement in a Solar Air Heater Presenter: Dr. Krit Ruengpayungsak (Mahanakorn University of Technology, Thailand) Corresponding author: Dr. Krit Ruengpayungsak (Mahanakorn University of Technology, Thailand)
Th34-OP54	15:40-15:55	Quantitative study of pore structure evolution during in-situ conversion of medium-low maturity shale Presenter: Prof. Weibing Tian (China University of Petroleum, China) Corresponding author: Prof. Jian Hou (China University of Petroleum, China)
Th34-OP55	15:55-16:10	A Numerical Investigation on Heat Transfer Enhancement by Nanofluid in Elliptical Dimpled Pipe with Twisted Tape Presenter: Mr. Soumyanil Sadhu Deep (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding author: Prof. Dr. Mohammad Ali (Bangladesh University of Engineering and Technology, Bangladesh)
CFD05		Energy System
Chair		Prof. Eunseop Yeom (Pusan National University, Republic of Korea)
Room		Rm 305
Th35-OP51	14:55-15:10	Quarter channel design for thermal management of Solid Oxide Fuel Cell Presenter: Mr. Junhak Lee (Pusan National University, Republic of Korea) Corresponding author: Prof. Eunseop Yeom (Pusan National University, Republic of Korea)
Th35-OP52	15:10-15:25	Application of optimized cell to SOFC stack Presenter: Mr. Jeongin Choi (Pusan National University, Republic of Korea) Corresponding author: Prof. Eunseop Yeom (Pusan National University, Republic of Korea)
Th35-OP53	15:25-15:40	Development of Predictive Model for Characterizing Hydrogen Leakage in Underground Hydrogen Refuelling Station Presenter: Dr. Hong-Cheol Shin (Korea Institute of Civil Engineering and Building Technology, Republic of Korea) Corresponding author: Dr. Inju Hwang (Korea Institute of Civil Engineering and Building Technology, Republic of Korea)
Th35-OP54	15:40-15:55	Investigation of Battery Spacings in a Square Configuration on Heat Dissipation Performance under Natural Convection Mechanism Presenter: Mr. Congyu Mao (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Th35-OP55	15:55-16:10	Effect of swell propagation angle on the performance and wake dynamics in an offshore wind farm Presenter: Mr. Van-Hoang Nguyen (Seoul National University of Science and Technology, Republic of Korea) Corresponding author: Prof. Sung Goon Park (Seoul National University of Science and Technology, Republic of Korea)
16:10~16:30		Break

MNF06		Electrokinetics and Colloidal Pretreatment
Chair		Prof. Rhokyun Kwak (Hanyang University, Republic of Korea)
Room		Grand
Th51-OP61	16:30-16:45	Experimental Investigation of the Coupling between Natural Convection and Electroconvection in Charge Selective Systems Presenter: Mr. Jeonghwan Kim (Hanyang University, Republic of Korea) Corresponding author: Prof. Rhokyun Kwak (Hanyang University, Republic of Korea)
Th51-OP62	16:45-17:00	Dimensionless Number for Electrothermally-induced Fluid Flow Presenter: Prof. Jae-Sung Kwon (Incheon National University, Republic of Korea) Corresponding author: Prof. Jae-Sung Kwon (Incheon National University, Republic of Korea)
Th51-OP63	17:00-17:15	Enhanced electroosmotic mixing of a power-law fluid in a corrugated charged micro/nano-fluidic system with temperature gradient and heterogeneous surface charge density Presenter: Dr. Abhishek Banerjee (SRM Institute of Science and Technology, India) Corresponding author: Dr. Abhishek Banerjee (SRM Institute of Science and Technology, India)
Th51-OP64	17:15-17:30	Acoustofluidic-assisted Preparation of nano AgCl particles and their Properties Analysis Presenter: Mr. Shuo Liu (Xi'an Jiaotong University, China) Corresponding author: Prof. Xueyong Wei (Xi'an Jiaotong University, China)
Th51-OP65	17:30-17:45	Electrokinetic energy conversion in viscoelastic fluids: Effect of surface charge-dependent slip Presenter: Mr. Kalyan Saha (University of North Bengal, India) Corresponding author: Mr. Kalyan Saha (University of North Bengal, India)
FCM03		Fluid Machinery
Chair		Prof. Ling Zhou (Beijing Institute of Technology, China)
Room		Rm 401
Th41-OP61	16:30-16:45	Analytical and Numerical Investigation on Feedback Control of Cavitation Surge in Rocket Engine Turbopumps Presenter: Mr. Teppei Onuma (Saitama University, Japan) Corresponding author: Prof. Donghyuk Kang (Saitama University, Japan)
Th41-OP62	16:45-17:00	Improving flow performance in a heat pump tumble dryer using magnetic resonance velocimetry-based structural modifications Presenter: Mr. Hangfei Dong (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
Th41-OP63	17:00-17:15	Experimental and Numerical Investigation of Blended Blade and Endwall Technique for Mitigating Corner Boundary Layer Interaction in Compressor Cascades Presenter: Dr. Huiling Zhu (Beijing Institute of Technology, China) Corresponding author: Dr. Ling Zhou (Beijing Institute of Technology, China)
Th41-OP64	17:15-17:30	Prediction of rotation speed in external gear pump caused by hydraulic circuits Presenter: Mr. Suhwan Lee (Pusan National University, Republic of Korea) Corresponding author: Prof. Eunseop Yeom (Pusan National University, Republic of Korea)
Th41-OP65	17:30-17:45	Experimental study on convective heat transfer within a gas turbine vane trailing edge cavity – part I (flow measurements) Presenter: Mr. Donggeun Lee (Seoul National University, Republic of Korea) Corresponding author: Prof. Wontae Hwang (Seoul National University, Republic of Korea)
TUB03		Bluff body and Aerodynamics
Chair		Prof. Navrose Navrose (Indian Institute of Technology Kanpur, India)
Room		Rm 301
Th31-OP61	16:30-16:45	Turbulence Generation Using Opposing Arrays of Multiple Fans Presenter: Mr. Haruyuki Sakai (Kyoto University, Japan) Corresponding author: Dr. Tomoaki Watanabe (Kyoto University, Japan)
Th31-OP62	16:45-17:00	Numerical Simulation of Leading Edge Vortices Over an Aerial Payload at Various Angles of Attack and Side-Slip Angles Presenter: Mr. Junaid Ahmed (Indian Institute of Technology Kanpur, India) Corresponding author: Prof. Abhishek Abhishek (Indian Institute of Technology Kanpur, India)
Th31-OP63	17:00-17:15	Development of an Unsteady Multiple-Fan Wind Generator with Counter-Rotating Fans Presenter: Mr. Takumi Shibata (Kyoto University, Japan) Corresponding author: Prof. Koji Nagata (Kyoto University, Japan)
Th31-OP64	17:15-17:30	A Study on the Effects of Multi Rotor DWOV on the Human Body Using CFD Presenter: Ms. YooJin Chang (Hanseon University, Republic of Korea) Corresponding author: Dr. Yeongmin Jo (Hanseon University, Republic of Korea)
Th31-OP65	17:30-17:45	Numerical simulation of flow over a bluff body using a compressible multifluid six-equation formulation Presenter: Mr. AKHIL S PILLAI (Karunya Institute of Technology and Sciences, India) Corresponding author: Mr. AKHIL S PILLAI (Karunya Institute of Technology and Sciences, India)

UTF01		Unsteady and Transient Flows
Chair		Prof. Tairan Chen (Beijing Institute of Technology, China)
Room		Rm 302
Th32-OP61	16:30-16:45	Mechanism Study of Cryogenic Inducer Tip Leakage Vortex Cavitation and Stall Flow Instability with Large Eddy Simulation Presenter: Mr. Qilin Yang (Beijing Institute of Technology, China) Corresponding author: Prof. Tairan Chen (Beijing Institute of Technology, China)
Th32-OP62	16:45-17:00	Unsteady motion of a circular cylinder in a two-layered fluid Presenter: Dr. Vasily Kostikov (Xi'an Jiaotong-Liverpool University, China) Corresponding author: Dr. Vasily Kostikov (Xi'an Jiaotong-Liverpool University, China)
Th32-OP63	17:00-17:15	3D Wake Evolution Behind Freely Descending Plates Presenter: Mr. Mahmoud Rasti (Pusan National University, Republic of Korea) Corresponding author: Prof. Kyung Chun KIM (Pusan National University, Republic of Korea)
Th32-OP64	17:15-17:30	Unsteady Drag Characteristics and Vortex Evolution of Flexible Plates During Accelerating Motion Presenter: Mr. Xintian Li (Beijing Institute of Technology, China) Corresponding author: Prof. Guosheng He (Beijing Institute of Technology, China)
Th32-OP65	17:30-17:45	Oscillatory Stokes flow past a spherical Janus particle Presenter: Ms. Dadi Dimple Satya Sree (University of Hyderabad, India) Corresponding author: Ms. Dadi Dimple Satya Sree (University of Hyderabad, India)
CFD06		General CFD I
Chair		Prof. Jaesung Kwon (Incheon National University, Republic of Korea)
Room		Rm 303
Th33-OP61	16:30-16:45	Hydrodynamic Characteristics of Bioinspired Underwater Body Designs during Steady turning Presenter: Mr. Swapnil Laxman Jagadale (Indian Institute of Technology Kharagpur, India) Corresponding author: Prof. Om Prakash Sha (Indian Institute of Technology Kharagpur, India)
Th33-OP62	16:45-17:00	Characterization of Turbulent Spots in Hypersonic Transitional Boundary Layer Presenter: Mr. Ankit Bajpai (Indian Institute of Science, Bengaluru, India) Corresponding author: Mr. Ankit Bajpai (Indian Institute of Science, Bengaluru, India)
Th33-OP63	17:00-17:15	Data-driven Aerodynamic Modeling for Fast Shape Design Optimization Presenter: Prof. Jichao Li (Northwestern Polytechnical University, China) Corresponding author: Prof. Jichao Li (Northwestern Polytechnical University, China)
Th33-OP64	17:15-17:30	Effect of mass ratio and flexibility on Fluid-Structure Interaction of Two Vertical Filaments in Crossflow Presenter: Mr. Shefnaan Fahad Sheikh (Indian Institute of Technology Kanpur, India) Corresponding author: Dr. Sanjay Mittal (Indian Institute of Technology Kanpur, India)
Th33-OP65	17:30-17:45	Effects of Inlet Air Pulsation on the Flow Characteristics of a Transverse Hydrogen Jet in Supersonic Crossflow Presenter: Mr. Sarfaraz Aziz (Bangladesh University of Engineering and Technology, Bangladesh) Corresponding author: Prof. Dr. Mohammad Ali (Bangladesh University of Engineering and Technology, Bangladesh)
FSF01		Fluid-Structure Interaction
Chair		Prof. Sung Goon Park (Seoul National University of Science and Technology, Republic of Korea)
Room		Rm 304
Th34-OP61	16:30-16:45	Modelling Surface Waves Induced by Two Opposing Seafloor Blocks of Varying Height in a Compressible Ocean Presenter: Ms. Ritika Das (Institute of Advanced Study in Science and Technology, Guwahati) Corresponding author: Ms. Ritika Das (Institute of Advanced Study in Science and Technology, Guwahati)
Th34-OP62	16:45-17:00	Hydrodynamic Performance and Stability Analysis of Amphibious Vehicles under Wave Conditions Presenter: Dr. Xinyi Wang (Beijing Institute of Technology, China) Corresponding author: Prof. Tairan Chen (Beijing Institute of Technology, China)
Th34-OP63	17:00-17:15	A physical experiment on ventilated cavity flows around an axisymmetric slender body in gravity-driven vertical water tunnel Presenter: Mr. Chang Shu (Shanghai Jiao Tong University, China) Corresponding author: Prof. Hua Liu (Shanghai Jiao Tong University, China)
Th34-OP64	17:15-17:30	Global stability analysis of shear flow past cylindrical bluff bodies Presenter: Mr. Bipin Kumar Singh (Indian Institute of Technology Kanpur, India) Corresponding author: Mr. Bipin Kumar Singh (Indian Institute of Technology Kanpur, India)
Th34-OP65	17:30-17:45	Experimental and Numerical Analysis of Flag-Based Systems Behind Modified Cylindrical Structures for Wake-Induced Energy Harvesting Presenter: Mr. Wajid Khan (National University of Sciences and Technology, Pakistan) Corresponding author: Dr. Zaib Ali (National University of Sciences and Technology, Pakistan)

CFD07		General CFD II
Chair		Prof. Ildoo Kim (Konkuk University, Republic of Korea)
Room		Rm 305
Th35-OP61	16:30-16:45	Numerical investigation on the effect of viscous dissipation on temperature rise in a vertical planetary mixer Presenter: Mr. Kuralamuthan Veerapandiyan (Indian Institute of Technology Madras, India) Corresponding author: Mr. Kuralamuthan Veerapandiyan (Indian Institute of Technology Madras, India)
Th35-OP62	16:45-17:00	Passive Flow Control of Volute-Induced Pressure Distortion in Centrifugal Compressors for Electric Fuel Cell Turbochargers Presenter: Dr. Richard Amankwa Adjei (University of Nottingham Ningbo, China) Corresponding author: Dr. Richard Amankwa Adjei (University of Nottingham Ningbo, China)
Th35-OP63	17:00-17:15	Wave forces and moment due to interactions between surface waves and multiple porous cylindrical bodies in a finite depth water Presenter: Ms. Mampi Majhi (Diamond Harbour Women's University, India) Corresponding author: Dr. Rumpa Chakraborty (Diamond Harbour Women's University, India)
Th35-OP64	17:15-17:30	A study on intrinsic filters of the finite volume method and the finite difference method Presenter: Mr. Wenzhi Huang (Tsinghua University, China) Corresponding author: Prof. Yuxin Ren (Tsinghua University, China)

Friday, Sep 12

8:00

Registration

MNF08		Multiphase Flow
Chair		Prof. Hyungmin Park (Seoul National University, Republic of Korea)
Room		Grand Hall
Fr51-KL3	9:00-9:30	Drop Dynamics on Superhydrophobic Surfaces: Fundamentals to Applications Prof. Choongyeop Lee (Kyung Hee University, Republic of Korea)
Fr51-OP71	9:30-9:45	Slip and suction flow for heat transfer flow in micropolar hybrid nanofluid via stretching/shrinking sheet: Heat transfer optimization Presenter: Ms. Nur Hazirah Adilla Norzawary (Universiti Putra Malaysia, Malaysia) Corresponding author: Ms. Nur Hazirah Adilla Norzawary (Universiti Putra Malaysia, Malaysia)
Fr51-OP72	9:45-10:00	Boundary layer flow and heat transfer of penta-hybrid nanofluid with velocity and thermal slips over a shrinking sheet: Stability analysis and optimization Presenter: Dr. Nur Syahirah Wahid (Universiti Putra Malaysia, Malaysia) Corresponding author: Dr. Nur Syahirah Wahid (Universiti Putra Malaysia, Malaysia)
Fr51-OP73	10:00-10:15	Optimizing Heat Transfer Rate of a Hybrid Nanofluid over a Radiated Vertical Cylinder using Taguchi Method Presenter: Dr. Shahirah Abu Bakar (Universiti Teknologi Malaysia, Malaysia) Corresponding author: Dr. Shahirah Abu Bakar (Universiti Teknologi Malaysia, Malaysia)
Fr51-OP74	10:15-10:30	Characterization of the gas assisted jetting using shear thinning fluids Presenter: Ms. Zahra (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
FCM04		Interfacial Physics and Vortex Dynamics
Chair		Prof. Hyoungsoo Kim (KAIST, Republic of Korea)
Room		Rm 401
Fr41-KL3	9:00-9:30	Numerical and Experimental Study on Interface Behavior for Electrohydrodynamic Flow Prof. Han Seo Ko (Sungkyunkwan University, Republic of Korea)
Fr41-OP71	9:30-9:45	Experimental and theoretical investigation of ventilated two-dimensional supercavitation in a still fluid Presenter: Mr. Jeonghyeon Nam (KAIST, Republic of Korea) Corresponding author: Prof. Yeunwoo Cho (KAIST, Republic of Korea)
Fr41-OP72	9:45-10:00	Koopman-based reduced-order modeling and control of fluid-structure interaction Presenter: Prof. Shunxiang Cao (Tsinghua University, China) Corresponding author: Prof. Shunxiang Cao (Tsinghua University, China)
Fr41-OP73	10:00-10:15	Vortex behaviors created by an inclined sweeping jet in crossflow Presenter: Prof. Masaki Fuchiwaki (Kyushu Institute of Technology, Japan) Corresponding author: Prof. Masaki Fuchiwaki (Kyushu Institute of Technology, Japan)
Fr41-OP74	10:15-10:30	Tip vortex cavitating flow around a hydrofoil Presenter: Mr. Rafat Ivan Ahamed Simanto (Chungnam National University, Republic of Korea) Corresponding author: Prof. Byoung Kwon Ahn (Chungnam National University, Republic of Korea)
MRF03		Bubble Behaviors
Chair		Prof. Huang Biao (Beijing Institute of Technology, China)
Room		Rm 402
Fr42-KL3	9:00-9:30	Experimental Investigation On Rising Bubbles With/Without Liquid Crossflow Prof. Yang Xu (Beihang University, China)
Fr42-OP71	9:30-9:45	Study on the Collapse Process of an Air Bubble in Water Presenter: Mr. Rajasekar Jayabal (Andong National University, Republic of Korea) Corresponding author: Mr. Rajasekar Jayabal (Andong National University, Republic of Korea)
Fr42-OP72	9:45-10:00	Investigation of the elastic boundary response during bubble collapse and focus on the plate energy absorption Presenter: Dr. Han Lei (Beijing Institute of Technology, China) Corresponding author: Prof. Huang Biao (Beijing Institute of Technology, China)
Fr42-OP73	10:00-10:15	Bubble behaviors in PEM Water electrolysis: PTL pore uniformity effect Presenter: Mr. Seong Keun Kim (Chosun University, Republic of Korea) Corresponding author: Prof. Sung Yong Jung (Chosun University, Republic of Korea)
Fr42-OP74	10:15-10:30	Enhancement of the Vapor-Air Mixture Bubble Condensation by the Effects of Geometry and Inlet Velocity Presenter: Mr. Sun Youb Lee (UNIST, Republic of Korea) Corresponding author: Prof. Jae Hwa Lee (UNIST, Republic of Korea)

HMD01		Hemodynamics
Chair		Prof. Hyun Jin Kim (KAIST, Republic of Korea)
Room		Rm 301
Fr31-KL3	9:00-9:30	Microfluidic Approaches to Hemorheology: Engineering Perspectives on Cellular and Coagulation Dynamics Prof. Sehyun Shin (Korea University, Korea)
Fr31-OP71	9:30-9:45	Synthesized 4D CT-Guided Coronary Hemodynamic Analysis with Fluid-Structure Interaction Presenter: Mr. Jun Hong Kim (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr31-OP72	9:45-10:00	Neck 4D Flow MRI as boundary condition for cerebral hemodynamic simulation Presenter: Mr. Jung Jae Yoon (Korea University, Republic of Korea) Corresponding author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
Fr31-OP73	10:00-10:15	Patient-Specific Coronary Flow Field Prediction Using Physics-Informed Neural Operators Presenter: Mr. Hyeong Jun Lee (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr31-OP74	10:15-10:30	Enhancing Flow-Rate-Constrained Physics-Informed Neural Networks for Transient Hemodynamic Analysis: Clustering-Based Optimization for Improved Convergence Presenter: Mr. Jihun Kang (Kangwon National University, Republic of Korea) Corresponding author: Prof. Hojin Ha (Kangwon National University, Republic of Korea)
FMR		Fluid Machinery and Rotating Flows I
Chair		Prof. Song Fu (Tsinghua University, China)
Room		Rm 302
Fr32-KL3	9:00-9:30	Effect of surface roughness on axial compressor performance Prof. A M Pradeep (Indian Institute of Technology Bombay, India)
Fr32-OP71	9:30-9:45	Numerical simulation on single-stage transonic axial compressor Presenter: Ms. Xinzui Wang (Tsinghua University, China) Corresponding author: Prof. Song Fu (Tsinghua University, China)
Fr32-OP72	9:45-10:00	Performance Enhancement of a Refrigeration Centrifugal Compressor Using Multi-Objective Optimization Presenter: Mr. Uideok Lee (Korea University, Republic of Korea) Corresponding author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
Fr32-OP73	10:00-10:15	Investigation of multiscale cavitation flow around propeller and induced pressure characterization Presenter: Mr. Ming Hong (Beijing Institute of Technology, China) Corresponding author: Prof. Biao Huang (Beijing Institute of Technology, China)
Fr32-OP74	10:15-10:30	Internal Flow Measurement of Mini Centrifugal Pumps Having Different Blade Outlet Angle by PIV Measurement Presenter: Mr. Shinnosuke Oku (Tokushima University, Republic of Korea) Corresponding author: Prof. Toru Shigemitsu (Tokushima University, Republic of Korea)
FSF02		Instability and Interfacial Transport
Chair		Prof. Yoshiyuki Tagawa (Tokyo University of Agriculture and Technology, Japan)
Room		Rm 303
Fr33-KL3	9:00-9:30	Control of jet entrainment and diffusion by modification of initial velocity distribution Prof. Yasumasa ITO (Nagoya University, Japan)
Fr33-OP71	9:30-9:45	Quantification of Entrainment and Diffusion Mechanisms in Round Jet Presenter: Mr. Xingkun Huang (Nagoya University, Japan) Corresponding author: Prof. Yasumasa Ito (Nagoya University, Japan)
Fr33-OP72	9:45-10:00	Numerical analysis of acceleration phenomena during interaction between liquid films and micro single and multiple pillars Presenter: Mr. Kazuma EGO (Tokyo University of Science, Japan) Corresponding author: Prof. Ichiro Ueno (Tokyo University of Science, Japan)
Fr33-OP73	10:00-10:15	Marangoni Bursting of a Non-volatile Surfactant on a Liquid Interface Presenter: Dr. Christian Vaquero-Stainer (Okinawa Institute of Science and Technology, Japan) Corresponding author: Dr. Christian Vaquero-Stainer (Okinawa Institute of Science and Technology, Japan)
Fr33-OP74	10:15-10:30	Sloshing in rotating closed rectangular vessel - Dynamic wetting and frequency response Presenter: Ms. Yuki Ban (Tokyo University of Science, Japan) Corresponding author: Prof. Ichiro Ueno (Tokyo University of Science, Japan)

EFM01		Pollutant Removal and Transport
Chair		Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Room		Rm 304
Fr34-OP71	9:30-9:45	Biocompatible Interpenetrating Polymeric Network (IPN) Hydrogel for Efficient Removal of Amine-Modified Nanoplastics Presenter: Dr. Somen Mondal (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Jinkee Lee (Sungkyunkwan University, Republic of Korea)
Fr34-OP72	9:45-10:00	Analysis of Gaseous Pollutant Removal in a Livestock Building under Various Mechanical Ventilation Modes Presenter: Mr. Hongdi Jin (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Fr34-OP73	10:00-10:15	Analysis of Contaminant Removal and Dead Zone Characteristics in Semi-Open Buildings Based on Opening Conditions Presenter: Mr. Woo Young Cho (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Fr34-OP74	10:15-10:30	Analysis of solute transport in a rotating electro-osmotic flow between two parallel plates using a multi-scale approach Presenter: Ms. Aruna A(SRM Institute of Science and Technology, India) Corresponding author: Dr. Swarup Barik(SRM Institute of Science and Technology, India)
ECT01		Energy Conversion and Thermo-Fluid Dynamics
Chair		Prof. Je Ir Ryu (New York University Abu Dhabi, United Arab Emirates)
Room		Rm 305
Fr35-OP71	9:30-9:45	Effect of Flow Guide Blades on Outlet Temperature in a Single-Evaporator Household Refrigerator Presenter: Mr. Mohammad Nazemibabadi (Pusan National University, Republic of Korea) Corresponding author: Prof. Eunseop Yeom (Pusan National University, Republic of Korea)
Fr35-OP72	9:45-10:00	Machine learning force field for modeling initial degradation mechanisms in lithium-sulfur batteries Presenter: Mr. Se Young Kim (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr35-OP73	10:00-10:15	A hydrophobic carbon fabric based seawater evaporator for a high rate of clean water production via photothermal and electrothermal Joule heating effect Presenter: Dr. Anindya Sundar Patra(POSTECH, Republic of Korea) Corresponding author: Prof. SangJoon Lee(POSTECH, Republic of Korea)
Fr35-OP74	10:15-10:30	Evaluation of average Nusselt number and cooling efficiency on cold plate viaa developed liquid-cooled thermal management test platform Presenter: Mr. Min Liang Wang (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)

10:30-10:50	Break
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MNF08		Acoustofluidics and Colloidal Manipulation
Chair		Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
Room		Grand Hall
Fr51-KL4	10:50-11:20	Acoustic assisted microfluidic technology for fabrication, manipulation and detection Prof. Xueyong Wei (Xi'An Jiaotong University, China)
Fr51-OP81	11:20-11:35	Acoustofluidic Separation of Oblate and Prolate Ellipsoid from Spheroid using Acoustic Radiation Torque and Force Presenter: Mr. Muhammad Soban Khan (Chonnam National University, Republic of Korea) Corresponding author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
Fr51-OP82	11:35-11:50	Removal of Microplastics/Nanoplastics from Drinking Water Using Surface Acoustic Wave-driven Acoustic Radiation Force Presenter: Ms. Won Chae (Chonnam National University, Republic of Korea) Corresponding author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
Fr51-OP83	11:50-12:05	Enhancement of droplet mixing based on acoustically excited bubbles in a digital microfluidic device Presenter: Mr. Hyunwoo Kim (Myongji University, Republic of Korea) Corresponding author: Dr. Jeongmin Lee (Microsystems, Inc., Republic of Korea)
Fr51-OP84	12:05-12:20	Regulation of Microdroplet Size and Charge Using a Superhydrophobic Mesh for Liquid-solid Triboelectric Nanogenerator Presenter: Mr. Young-Su Ko (Kyung Hee University, Republic of Korea) Corresponding author: Dr. Choongyeop Lee (Kyung Hee University, Republic of Korea)

FIS02		Non-linear Instability and Vortex Dynamics
Chair		Prof. Masato Nagata (Kyoto University, Japan)
Room		Rm 401
Fr41-KL4	10:50-11:20	Rayleigh-Benard convection in confined systems Prof. Yuji Tasaka (Hokkaido University, Japan)
Fr41-OP81	11:20~11:35	Odd and Unpredictable Marangoni Instabilities: Unraveling the Complex Dynamics at the Liquid–Gas Interface Presenter: Prof. Hyoungsoo Kim (KAIST, Republic of Korea) Corresponding author: Prof. Hyoungsoo Kim (KAIST, Republic of Korea)
Fr41-OP82	11:35-11:50	Three-Dimensional Visualization and Analysis of Surface Wave Instabilities in Thin Film Flow of Non-Newtonian Fluids on a Rotating Substrate Presenter: Mr. Hyunseok Yang (Hanyang University, Republic of Korea) Corresponding author: Prof. Rhokyun Kwak (Hanyang University, Republic of Korea)
Fr41-OP83	11:50-12:05	Spiral vortex flows in the narrow-gap limit Taylor-Couette system Presenter: Prof. Masato Nagata (Kyoto University, Japan) Corresponding author: Prof. Masato Nagata (Kyoto University, Japan)
Fr41-OP84	12:05-12:20	Optimal Perturbation of Vortex Pair Evolving in a Stratified Medium Presenter: Mr. Dhruv Parikh (Indian Institute of Technology Kanpur, India) Corresponding author: Mr. Dhruv Parikh (Indian Institute of Technology Kanpur, India)
MRF04		Artificial Intelligence and Cavitation
Chair		Prof. Heo Yun Jung (Kyung Hee University, Republic of Korea)
Room		Rm 402
Fr42-KL4	10:50-11:20	Stress fields and morphological evolution in multiphase flow and soft matter: insights from high-speed imaging and AI Prof. Yoshiyuki Tagawa (Tokyo University of Agriculture and Technology, Japan)
Fr42-OP81	11:20~11:35	Predicting Shear-thinning Viscosity through Droplet Impact using Machine Learning Presenter: Mr. Masanori Naito (Tokyo University of Agriculture and Technology, Japan) Corresponding author: Prof. Yoshiyuki Tagawa (Tokyo University of Agriculture and Technology, Japan)
Fr42-OP82	11:35-11:50	Learning Non-Newtonian Free Surface Flow Dynamics: A Graph Neural Network Trained with Smoothed Particle Hydrodynamics Presenter: Dr. Hyo-Jin Kim (Kyung Hee University, Republic of Korea) Corresponding author: Prof. Jaekwang Kim (Hongik University, Republic of Korea)
Fr42-OP83	11:50-12:05	Effect of Hemispherical Bumps on Cavitation Characteristics in a Venturi Flow Presenter: Mr. Jongbin Hwang (UNIST, Republic of Korea) Corresponding author: Prof. Jooha Kim (UNIST, Republic of Korea)
Fr42-OP84	12:05-12:20	Experimental study on single cavitation bubble dynamics in the free field at different water temperatures and ambient pressure Presenter: Mr. Hao Geng (Beijing Institute of Technology, China) Corresponding author: Dr. Tairan Chen (Beijing Institute of Technology, China)
BLF01		High Speed Flow
Chair		Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Room		Rm 301
Fr31-KL4	10:50-11:20	On the Mixing in Hypersonic Laminar Transpiration Cooling Prof. Hassan Saad Ifti (Texas A&M University, USA)
Fr31-OP81	11:20~11:35	Direct-Numerical Simulation of Fundamental Breakdown in Hypersonic Transitional Boundary Layer Presenter: Mr. Suhun Cho (GIST, Republic of Korea) Corresponding author: Prof. Solkeun Jee (GIST, Republic of Korea)
Fr31-OP82	11:35-11:50	Improved wall function method for highspeed reacting turbulent boundary layers Presenter: Mr. Bingliang Li (Beihang University, China) Corresponding author: Prof. Zhenxun Gao (Beihang University, China)
Fr31-OP83	11:50-12:05	Investigation of H-Type Transition in Flat-Plate Boundary Layer for Supercritical Fluids: DNS and Flow Stability Analysis Presenter: Mr. Hongyuan Hu (Beijing Institute of Technology, China) Corresponding author: Prof. Jie Ren (Beijing Institute of Technology, China)
Fr31-OP84	12:05-12:20	Prediction of the Free Interaction of Incident Shock Wave and Wall Boundary Layer Presenter: Mr. John Chemmanoor Joseph (Andong National University, Republic of Korea) Corresponding author: Prof. Prof. Heuy Dong Kim (Andong National University, Republic of Korea)

FMR02		Fluid Machinery and Rotating Flows II
Chair		Prof. Jaesung Kwon (Incheon National University, Republic of Korea)
Room		Rm 302
Fr32-KL4	10:50-11:20	Fully automated, robust, high-fidelity large-eddy simulation of aircraft flows Prof. Wontae Hwang (Seoul National University, Korea)
Fr32-OP81	11:20~11:35	Aerodynamic loss characteristics of a hydrogen-blended gas turbine vane Presenter: Mr. Yoonhyeong Jeong (Korea University, Republic of Korea) Corresponding author: Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
Fr32-OP82	11:35-11:50	Performance and Internal Flow of Small Side Thruster for Shipnear Thrust Rise Cavitation Number Region Presenter: Mr. Taiyo Nishio (Tokushima University, Japan) Corresponding author: Prof. Toru Shigemitsu (Tokushima University, Japan)
Fr32-OP83	11:50-12:05	Aerodynamic Interaction and Performance Evaluation of Coaxial Rotors with Varied Blade Profiles Under Mars Condition Presenter: Mr. Jun Xiao (Nanjing University of Aeronautics and Astronautics, China) Corresponding author: Dr. Zhaolin Chen (Nanjing University of Aeronautics and Astronautics, China)
Fr32-OP84	12:05-12:20	A new nozzle design for a cross-flow turbine with minimized geometric errors by using geometric drafting tools Presenter: Mr. Sangwoo Ham (Kangwon National University, Republic of Korea) Corresponding author: Prof. Hojin Ha (Kangwon National University, Republic of Korea)
CFD08		Aerodynamics II
Chair		Prof. Jaiyoung Ryu (Korea University, Republic of Korea)
Room		Rm 303
Fr33-KL4	10:50-11:20	Fully automated, robust, high-fidelity large-eddy simulation of aircraft flows Prof. Soshi Kawai (Tohoku University, Japan)
Fr33-OP81	11:20~11:35	Toward accurate and efficient multi-moment finite volume method for large eddy simulations of compressible flows on unstructured grids Presenter: Ms. Ying Yang (Shanghai Jiao Tong University, China) Corresponding author: Dr. Bin Xie (Shanghai Jiao Tong University, China)
Fr33-OP82	11:35-11:50	Effect of wing-tip vortex on the sectional lift distribution at high angle of attack Presenter: Mr. Arnab Hazra (Indian Institute of Technology Kanpur, India) Corresponding author: Prof. Sanjay Mittal (Indian Institute of Technology Kanpur, India)
Fr33-OP83	11:50-12:05	An adaptive multiresolution flux reconstruction method with local time stepping and artificial viscosity for compressible flows simulations Presenter: Prof. Shucheng Pan (Northwestern Polytechnical University, China) Corresponding author: Prof. Shucheng Pan (Northwestern Polytechnical University, China)
Fr33-OP84	12:05-12:20	Numerical study of magnetohydrodynamic aerodynamic control using local magnetic interaction number Presenter: Mr. Jiaqi Zhang(Beihang University, China) Corresponding author: Prof. Zhenxun Gao(Beihang University, China)
EFM02		Wave Dynamics, Particle Transport, and Mixing
Chair		Prof. Ping Wang (Lanzhou University, China)
Room		Rm 304
Fr34-OP81	11:20~11:35	Impact of an Elastic Seabed on Acoustic-Gravity Wave Propagation in a Stratified Ocean Presenter: Mr. Injamamul Haque Ahmed (Institute of Advanced Study in Science and Technology Guwahati, India) Corresponding author: Injamamul Haque Ahmed (Institute of Advanced Study in Science and Technology Guwahati, India)
Fr34-OP82	11:35-11:50	Threshold of sediment particle in turbulent flow Presenter: Prof. Ping Wang (Lanzhou University, China) Corresponding author: Prof. Ping Wang (Lanzhou University, China)
Fr34-OP83	11:50-12:05	Asynchrony-driven chaotic mixing in two-dimensional viscous flows Presenter: Mr. Prabhash Kumar (Indian Institute of Technology Madras, India) Corresponding author: Mr. Prabhash Kumar (Indian Institute of Technology Madras, India)
Fr34-OP84	12:05-12:20	Wave scattering by multiple forced floating circular elastic plates over a porous bottom Presenter: Prof. Harekrushna Behera (National Taiwan Ocean University, Taiwan) Corresponding author: Prof. Tai-Wen Hsu (National Taiwan Ocean University, Taiwan)

CFD09		Multiphase Flow
Chair		Prof. Seongwon Kang (Sogang University, Republic of Korea)
Room		Rm 305
Fr35-OP81	11:20~11:35	Temporal Three-Dimensional Prediction of Droplet Evaporation on Flat and Pixel Well via Hybrid Deep Learning of Physics-informed Two-Dimensional Recurrent and Three-Dimensional Convolutional Networks Presenter: Mr. Soon Wook Kwon (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr35-OP82	11:35-11:50	Directional migration of a droplet on a vibrating substrate with asymmetric sawtooth Presenter: Mr. Yanzhao Shi (University of Science and Technology of China, China) Corresponding author: Prof. Hang Ding (University of Science and Technology of China, China)
Fr35-OP83	11:50-12:05	Investigation of Vortex Structures and Bubble Fusion Dynamics in Dual-Gas Jets within a Liquid Crossflow Presenter: Mr. Yuanzhe Wang (Beijing Institute of Technology, China) Corresponding author: Prof. Taotao Liu (Beijing Institute of Technology, China)
Fr35-OP84	12:05-12:20	Effects of nozzle diameter on liquid film behavior in bottom-side injection onto a rotating disk Presenter: Mr. JinGyu Park(Sogang University, Republic of Korea) Corresponding author: Prof. Seongwon Kang(Sogang University, Republic of Korea)

12:20-13:40	Lunch
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DDF03		Data-driven Approach in Fluid Systems
Chair		Prof. Donghyuk Kang (Saitama University, Japan)
Room		Grand Hall
Fr51-OP91	13:40-13:55	Numerical Estimation of Cavitation Dynamic Characteristics Using Dynamic Mode Decomposition with Control Presenter: Mr. Takumi Kimura (Saitama University, Japan) Corresponding author: Prof. Donghyuk Kang (Saitama University, Japan)
Fr51-OP92	13:55-14:10	Hull Form Optimization Utilizing Convolutional Autoencoder and Hull Surface Pressure Surrogate Model Presenter: Prof. Inwon Lee (Pusan National University, Republic of Korea) Corresponding author: Prof. Inwon Lee (Pusan National University, Republic of Korea)
Fr51-OP93	14:10-14:25	Integrating Quantum Neural Networks into CNNs for Robust Lung Cancer Diagnosis Presenter: Mr. Sung Eun Kim (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr51-OP94	14:25-14:40	Exploring HomPINN for Multiple Solutions of Flow System Presenter: Mr. Mohammed Junaid Ahmed (Indian Institute of Technology Kanpur, India) Corresponding author: Dr. Navrose Navrose (Indian Institute of Technology Kanpur, India)
FIS03		Flow Stability Analysis
Chair		Prof. Jie Ren (Beijing Institute of Technology, China)
Room		Rm 401
Fr41-OP91	13:40-13:55	Evolution of the wake of finite span wing perturbed by optimal perturbation in a stably stratified environment Presenter: Mr. Mohd. Suhail Naim(Indian Institute of Technology Kanpur, India) Corresponding author: Mr. Mohd. Suhail Naim(Indian Institute of Technology Kanpur, India)
Fr41-OP92	13:55-14:10	Linear Stability Theory in the Age of Data: Insights from Dataset Support and Pattern-Based N-factor Evaluation Presenter: Mr. Shen'ao Xiao (Beijing Institute of Technology, China) Corresponding author: Prof. Jie Ren (Beijing Institute of Technology, China)
Fr41-OP93	14:10-14:25	A Data-driven Assessment of Nonlinear Parabolized Stability Equations Presenter: Mr. Wenzhuo Yang (Beijing Institute of Technology, China) Corresponding author: Prof. Jie Ren (Beijing Institute of Technology, China)
Fr41-OP94	14:25-14:40	Stability criteria for embedded 3D printing of Newtonian fluid in viscoplastic fluid Presenter: Mr. Hyejoon Jun (KAIST, Republic of Korea) Corresponding author: Prof. Hyoungsoo Kim (KAIST, Republic of Korea)

MRF05		Multiphase Flow Simulation, Cavitation
Chair		Prof. Seungwon Shin (Hongik University, Republic of Korea)
Room		Rm 402
Fr42-OP91	13:40-13:55	An accurate THINC scheme for interface capturing based on the homotopy analysis method and its application to multiphase simulation Presenter: Mr. Dezhu Chen (Shanghai Jiao Tong University, China) Corresponding author: Dr. Bin Xie (Shanghai Jiao Tong University, China)
Fr42-OP92	13:55-14:10	Computational analysis of the effect of tracheotomy on mucus transport and clearance using volume of fluid method Presenter: Mr. Quoc Hung Nguyen (Kyungpook National University, Republic of Korea) Corresponding author: Prof. Sanghun Choi (Kyungpook National University, Republic of Korea)
Fr42-OP93	14:10-14:25	Numerical Methods for Compressible Gas-Particle Flows and Application Presenter: Prof. Baolin Tian (Beihang University, China) Corresponding author: Prof. Baolin Tian (Beihang University, China)
Fr42-OP94	14:25-14:40	Study on the Influence of Cavitation Phenomenon in Axial - flow Pumps on Pressure Pulsation Based on PSD Decomposition Presenter: Mr. Lyu ZhuangYi (Beijing Institute of Technology, China) Corresponding author: Prof. Chen tairan (Beijing Institute of Technology, China)
BLF02		Transition and Turbulence
Chair		Prof. Jae Hwa Lee (UNIST, Republic of Korea)
Room		Rm 301
Fr31-OP91	13:40-13:55	Boundary Layer Transition on a Circular Cylinder with Dimples Presenter: Mr. Vighnesh Ganesh Nimje (Indian Institute of Technology Kanpur, India) Corresponding author: Mr. Vighnesh Ganesh Nimje (Indian Institute of Technology Kanpur, India)
Fr31-OP92	13:55-14:10	Centrifugal Instability of Boundary Layer Flows with Supercritical Fluids Presenter: Dr. Weihang Zhang, State Key Laboratory of Explosion Science and Safety Protection (Beijing Institute of Technology, China) Corresponding author: Prof. Jie Ren, State Key Laboratory of Explosion Science and Safety Protection (Beijing Institute of Technology, China)
Fr31-OP93	14:10-14:25	Boundary-layer stability in near-continuum regime Presenter: Dr. Jihui Ou (Tianjin University, China) Corresponding author: Dr. Jihui Ou (Tianjin University, China)
Fr31-OP94	14:25-14:40	Turbulent Transition Delay Using Porous Surface in Hypersonic Boundary Layer on a Cone Presenter: Mr. Youngwoo Kim (GIST, Republic of Korea) Corresponding author: Prof. Solkeun Jee (GIST, Republic of Korea)
BLF03		Boundary Layer and Roughness
Chair		Prof. Jongmin Yang (Jeju National University, Republic of Korea)
Room		Rm 302
Fr32-OP91	13:40-13:55	Influence of domain length on the sustenance of turbulence in a rough-wall bounded flow Presenter: Dr. Leon Chan (The University of Melbourne, Australia) Corresponding author: Dr. Leon Chan (The University of Melbourne, Australia)
Fr32-OP92	13:55-14:10	Effects of Wall Heating on the Leading Edge Receptivity of a Three-Dimensional Boundary Layer with Roughness Elements Presenter: Prof. Yu Nishio (Seikei University, Japan) Corresponding author: Prof. Yu Nishio (Seikei University, Japan)
Fr32-OP93	14:10-14:25	Roughness Receptivity and Vortex Deformation near the Leading Edge of a Swept Back Cylinder Presenter: Mr. Takahiro Nishizuka (Tokyo University of Science, Japan) Corresponding author: Mr. Takahiro Nishizuka (Tokyo University of Science, Japan)
Fr32-OP94	14:25-14:40	Unsteady Simulation of Piston Driven Channel Flow: Effect of External Disturbances Presenter: Mr. Suvarn Jaiswal (Indian Institute of Technology Kanpur, India) Corresponding author: Prof. Debopam Das (Indian Institute of Technology Kanpur, India)

CFD10		Turbulence Modeling
Chair		Prof. Weixi Huang (Tsinghua University, Republic of Korea)
Room		Rm 303
Fr33-OP91	13:40-13:55	A novel global hybrid RANS/LES method for wall-bounded turbulence flow simulation Presenter: Dr. Quanzheng Li (Northwestern Polytechnical University, China) Corresponding author: Prof. Gang Wang (Northwestern Polytechnical University, China)
Fr33-OP92	13:55-14:10	Data-driven RANS Modeling for Flow Separation from Axisymmetric Bodies Presenter: Ms. Yeji Yun (GIST, Republic of Korea) Corresponding author: Prof. Solkeun Jee (GIST, Republic of Korea)
Fr33-OP93	14:10-14:25	A total-shear-stress-conserved constraint for wall model of large-eddy simulation Presenter: Mr. Huancong Liu (Tsinghua University, China) Corresponding author: Prof. Weixi Huang (Tsinghua University, China)
Fr33-OP94	14:25-14:40	Research on Flow Field Reconstruction Method Driven by Mode decomposition and Sparse sampling Presenter: Dr. Yang Meng (Beijing Institute of Technology, China) Corresponding author: Prof. Taotao Liu (Beijing Institute of Technology, China)
EFM03		Atmospheric Flow Dynamics
Chair		Dr. Yiqing Xia (Tokyo Electric Power Services, Japan)
Room		Rm 304
Fr34-OP91	13:40-13:55	Numerical Simulation of Flow around Vegetation Presenter: Mr. Naoshi Kitase, Tokyo University of Science Corresponding author: Prof. Hitoshi Ishikawa (Tokyo University of Science, Japan)
Fr34-OP92	13:55-14:10	Large-eddy Simulations of a Wind Farm in a Complex Terrain: Effect of Roughness Length and Terrain Feature Presenter: Dr. Yiqing XIA, Tokyo Electric Power Services Co., LTD. (TEPSCO, Japan) Corresponding author: Dr. Yiqing XIA, Tokyo Electric Power Services Co., LTD. (TEPSCO, Japan)
Fr34-OP93	14:10-14:25	Multiscale and multigranular nature of saltating-particle clusters in high-Reynolds-number atmospheric surface layer Presenter: Dr. Xibo He (Lanzhou University, China) Corresponding author: Prof. Hongyou Liu (Lanzhou University, China)
Fr34-OP94	14:25-14:40	
CFD11		Image-based Modeling / Hemodynamics
Chair		Prof. Hanwook Park (Soonchunhyang University, Republic of Korea)
Room		Rm 305
Fr35-OP91	13:40-13:55	Reconstruction of 4D Flow MRI Data for Enhanced Jet Flow Analysis Presenter: Ms. Hyeonjin Lee (Soonchunhyang University, Republic of Korea) Corresponding author: Prof. Hanwook Park (Soonchunhyang University, Republic of Korea)
Fr35-OP92	13:55-14:10	A Comparative Study of Coronary Flow Simulation Approaches Guided by Synthesized 4D CT Imaging Presenter: Mr. Tae Ho Han (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
Fr35-OP93	14:10-14:25	Reconstructing 3D facial Models from 2D Data for Advanced Airflow Dynamics Analysis Presenter: Ms. Da Yeon Choi (Yonsei University, Republic of Korea) Corresponding author: Prof. Joon Sang Lee (Yonsei University, Republic of Korea)
14:40-15:00		Break
Plenary Talk		
Room		Grand Hall
Chair		Prof. Hitoshi Ishikawa (Tokyo University of Science, Japan)
Fr51-PL5	15:00-15:45	Patient-Specific Blood Flow Simulations for Clinical Insights and Applications Prof. Marie Oshima (University of Tokyo, Japan)
Chair		Prof. Simon Song (Hanyang University, Republic of Korea)
Fr51-PL6	15:45-16:30	Is machine-learning-based LES better than traditional physics-based LES? Prof. Haecheon Choi (Seoul National University, Republic of Korea)

Thursday, Sep 11

Chair	Prof. Hojin Ha (Kangwon National University, Republic of Korea)
	Prof. Kyoungsik Chang (Ulsan University, Republic of Korea)
	Prof. Zhang Chuanyu (Xi'an Jiaotong University, China)
	Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Place	4th Floor

Topic	Aeroacoustics, aerodynamics and astronautics
Th-PP1	A topographic mapping for dimensionality reduction in inverse design problems Presenter: Ms. Ying Zhao (Northwestern Polytechnical University, China) Corresponding author: Prof. Sheng Jin Cai (Northwestern Polytechnical University, China)
Th-PP2	Airfoil Optimization Model at Low Reynolds Number Based on Invertible Neural Networks Presenter: Ms. Haochen Shi (Nanjing University of Aeronautics and Astronautics, China) Corresponding author: Mr. Zhaolin Chen (Nanjing University of Aeronautics and Astronautics, China)
Th-PP3	Numerical Study on Choking Limit of Supersonic Two Dimensional Near Earth Flow Field Presenter: Mr. Wenqing Jiang (Beihang University, China)
Th-PP4	Numerical Simulation of Laser Ablation of a Flat Plate under 6 Mach Airflow Presenter: Mr. Guoyou Sun (Beijing Institute of Technology, China) Corresponding author: Prof. Juanmian Lei (Beijing Institute of Technology, China)
Th-PP5	Numerical Study on the aerodynamic characteristics for re-entry rocket with a single jet during the power deceleration process Presenter: Ms. Lingyun Zhang (Beijing Institute of Technology, China) Corresponding author: Prof. Juanmian Lei (Beijing Institute of Technology, China)
Th-PP6	Effect of Nose Bluntness on Static and Dynamic Aerodynamic Coefficients of a Free-Flight Blunted Cone. Presenter: Ms. Eunju Kim (Konkuk University, Republic of Korea) Corresponding author: Prof. Soo Hyung Park (Konkuk University, Republic of Korea)
Th-PP7	Design and Validation of a Three-component Internal Balance for Hypersonic Wind Tunnel. Presenter: Mr. Minhyun Han (Konkuk University, Republic of Korea) Corresponding author: Prof. Soo Hyung Park (Konkuk University, Republic of Korea)
Topic	Biological fluid mechanics
Th-PP8	Pressure Field Estimation in the Aorta Using 4D Flow MRI and Omni-Directional Integration Presenter: Dr. Seungmin Kang (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
Th-PP9	Boundary Condition Effects on Aorta Flow Simulations: Parabolic vs 4D(or 2D) PC MRI-based Profile Presenter: Mr. Minsoo Kang (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
Th-PP10	Effect of inlet swirl on global stability of flow through stenosed pipe Presenter: Prof. Shyam Sunder Gopalakrishnan (Indian Institute of Technology Kanpur, India) Corresponding author: Mr. Challa Sumen (Indian Institute of Technology Kanpur, India)
Th-PP11	Effects of the Trunk Rings on the Flow Characteristics around a Seahorse Presenter: Dr. Yuan Qu (Beijing Jiaotong University, China) Corresponding author: Dr. Yuan Qu (Beijing Jiaotong University, China)
Topic	Boundary layer flows
Th-PP12	Direct numerical simulation of hypersonic boundary layer transition over a lifting body at different angles of sideslip Presenter: Prof. Hongwei Liu (Institute of Mechanics, Chinese Academy of Sciences, China) Corresponding author: Prof. Hongwei Liu (Institute of Mechanics, Chinese Academy of Sciences, China)
Th-PP13	Study on Transition Characteristics of a Flared Cone-Swept Fin Configuration Presenter: Prof. Ling Zhou (Beijing Institute of Technology, China) Corresponding author: Prof. Ling Zhou (Beijing Institute of Technology, China)
Topic	Combustion and chemical fluid mechanics
Th-PP14	A dynamic Conditional Moment Closure for large-eddy simulation of turbulent combustion Presenter: Dr. Changping Yu (Institute of Mechanics, Chinese Academy of Sciences, China) Corresponding author: Dr. Changping Yu (Institute of Mechanics, Chinese Academy of Sciences, China)

Thursday, Sep 11

Chair	Prof. Hojin Ha (Kangwon National University, Republic of Korea)
	Prof. Kyoungsik Chang (Ulsan University, Republic of Korea)
	Prof. Zhang Chuanyu (Xi'an Jiaotong University, China)
	Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Place	4th Floor

Topic	Compressible flows and shock wave dynamics
Th-PP15	Shock wave induced one-pot synthesis of ternary nanocomposites Presenter: Mr. Kiwon Kim (Keimyung University, Republic of Korea) Corresponding author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Th-PP16	Shock wave induced transformation of iron sulfide for superior photocatalytic activity Presenter: Mr. Surendhar Sakthivel (Keimyung University, Republic of Korea) Corresponding author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Th-PP17	Numerical simulation of supersonic turbulent boundary layer over a hemisphere Presenter: Dr. Tongbiao Guo (Institute of Mechanics, Chinese Academy of Sciences, China) Corresponding author: Prof. Xinliang Li (Institute of Mechanics, Chinese Academy of Sciences, China)
Topic	Computational fluid dynamics
Th-PP18	Numerical Study on Aerodynamic Characteristics of Airfoils under Extreme Ocean Surface Effects Presenter: Mr. Weijian Liu (Shanghai University, China) Corresponding author: Prof. Yuhong Dong (Shanghai University, China)
Th-PP19	Application of new wall functions for k- ϵ model on underwater vehicles with superhydrophobic surface Presenter: Dr. Byoeng-Cheon Kim (University of Ulsan, Republic of Korea) Corresponding author: Prof. Kyoungsik Chang (University of Ulsan, Republic of Korea)
Th-PP20	Design of passive heat sink with enhanced thermal performance and mechanical strength using multi-objective topology optimization methods Presenter: Mr. Min Liang Wang (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Th-PP21	Uniform flowrate control in gas channels of proton exchange membrane fuel cell stacks via topology optimization Presenter: Mr. Kewei Gao (Chonnam National University, Republic of Korea) Corresponding author: Prof. Hyun Wook Kang (Chonnam National University, Republic of Korea)
Th-PP22	CFD Investigation of AUV Separation Effects on Parallel Formation in Various Flow Conditions Presenter: Mr. Debashis Mohanty (Indian Institute of Technology Kharagpur, India) Corresponding author: Mr. Debashis Mohanty (Indian Institute of Technology Kharagpur, India)
Th-PP23	Numerical simulation of natural convection in three-dimensional domains filled with porous material using different boundary conditions at the fluid/porous medium interface Presenter: Ms. Marina Sergeevna Astanina (Tomsk State University, Russian Federation) Corresponding author: Ms. Marina Sergeevna Astanina (Tomsk State University, Russian Federation)
Th-PP24	Two-dimensional flow modeling to assess flood inundation reduction in Colombo, Sri Lanka through planned interventions Presenter: Prof. S.B. Weerakoon (University of Peradeniya, Sri Lanka) Corresponding author: Prof. S.B. Weerakoon (University of Peradeniya, Sri Lanka)
Topic	Data-driven fluid mechanics
Th-PP25	Physics-Informed Residual Neural Networks with Adaptive Sampling for Incompressible Laminar Flow Presenter: Mr. Shuaibing Ding (Beijing Institute of Technology, China) Corresponding author: Prof. Juanmian Lei (Beijing Institute of Technology, China)
Th-PP26	Super-Resolution Physics-Informed Neural Operator for Magnetic Resonance Velocimetry Presenter: Mr. Jun Kim (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
Topic	Energy conversion and thermo-fluid dynamics
Th-PP27	A compact ammonia reformer based on triply periodical minimal surfaces for on-board hydrogen production Presenter: Mr. Viacheslav Papkov (Guangdong Technion - Israel Institute of Technology, China) Corresponding author: Mr. Viacheslav Papkov (Guangdong Technion - Israel Institute of Technology, China)

Thursday, Sep 11

Chair	Prof. Hojin Ha (Kangwon National University, Republic of Korea)
	Prof. Kyoungsik Chang (Ulsan University, Republic of Korea)
	Prof. Zhang Chuanyu (Xi'an Jiaotong University, China)
	Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Place	4th Floor

Topic	Environmental fluid mechanics
Th-PP28	Spreading and retraction dynamics of droplet impact onto moving surface Presenter: Mr. Housheng Zhang (Beijing Institute of Technology, China) Corresponding author: Prof. Xin Zhao (Beijing Institute of Technology, China)
Th-PP29	Dual Biomimetic Membrane with Heterogeneous Wettability for Fog Harvesting Presenter: Dr. Liang Jun Zheng (School of Intelligent Manufacturing, Hangzhou Polytechnic, China) Corresponding author: Dr. Liang Jun Zheng (School of Intelligent Manufacturing, Hangzhou Polytechnic, China)
Th-PP30	Study on Influence of Reactor Geometry on Discharge Current and Pollutant Removal in Corona Discharge-Based Water Purification Presenter: Mr. Youngjin Kim (Sungkyunkwan University, Republic of Korea) Corresponding author: Prof. Han Seo Ko (Sungkyunkwan University, Republic of Korea)
Topic	Flow control and measurement
Th-PP31	Study of cavitation effects on the regulation performance of cryogenic ball valve Presenter: Prof. Ikhyun Kim (Keimyung University, Republic of Korea) Corresponding author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Th-PP32	Flow Characteristics of the Wake Behind a Cut-Off Wing Presenter: Mr. Sota Tsukamoto (Nagoya University, Japan) Corresponding author: Prof. Tomomi Uchiyama (Nagoya University, Japan)
Th-PP33	Evaluation of a Paired Inlet-Outlet Air Curtain for Exhaled Aerosol Blocking Presenter: Mr. Fumiya Sato (Akita University, Japan) Corresponding author: Dr. Kotaro Takamure (Akita University, Japan)
Th-PP34	Experimental investigation of tandem liquid jets in cross-flow Presenter: Mr. Wajid Nazir (Indian Institute of Technology Jodhpur, India) Corresponding author: Prof. Ikhyun Kim (Keimyung University, Republic of Korea)
Topic	Fluid machinery and rotating flows
Th-PP35	Effect of an Inducer on the Performance and Cavitation of Deep-well Pumps Presenter: Mr. Minjun Choi (University of Ulsan, Republic of Korea) Corresponding author: Prof. Kyoungsik Chang (University of Ulsan, Republic of Korea)
Th-PP36	Investigation of Axial Spacing Effects on the Performance of Counter-Rotating Turbine Blades Presenter: Prof. Ling Zhou (Beijing Institute of Technology, China) Corresponding author: Prof. Ling Zhou (Beijing Institute of Technology, China)
Topic	Heat and mass transfer flows
Th-PP37	Heat transfer of vortex ring during axial interaction with cylinder Presenter: Dr. Jianwei Zhu (Beijing Institute of Technology, China) Corresponding author: Dr. Jianwei Zhu (Beijing Institute of Technology, China)
Th-PP38	Delayed Detached Eddy Simulation for Turbulent Flow and Heat Transfer in Loosely Spaced Rod Bundles Presenter: Mr. Eunseok Oh (University of Ulsan, Republic of Korea) Corresponding author: Prof. Kyoungsik Chang (University of Ulsan, Republic of Korea)
Th-PP39	Modelling eddy diffusivity in turbulent natural convection between two vertical walls at different temperatures Presenter: Mr. Ho Yin Ng (The Chinese University of Hong Kong, Hong Kong) Corresponding author: Prof. Emily S. C. Ching (The Chinese University of Hong Kong, Hong Kong)
Th-PP40	Thermal Performances Investigation of a Heat Sink Based on High Pore Density Metal Foams Fins Presenter: Prof. Brahim Madani (University of Science and Technology Houari Boumediene, Algeria) Corresponding author: Dr. Ratiba Sabrina Ferfera (University of Science and Technology Houari Boumediene, Algeria)

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Chair	Prof. Hojin Ha (Kangwon National University, Republic of Korea)
	Prof. Kyoungsik Chang (Ulsan University, Republic of Korea)
	Prof. Zhang Chuanyu (Xi'an Jiaotong University, China)
	Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Place	4th Floor

Topic	Hemodynamics
Th-PP41	Hemodynamic Analysis with Integral Parameters Derived from 4D Flow MRI Presenter: Mr. Don-Gwan An (Hanyang University, Republic of Korea) Corresponding author: Prof. Simon Song (Hanyang University, Republic of Korea)
Topic	Micro and nano fluid mechanics
Th-PP42	Machine Vision-Based Quantitative Analysis of Droplet Splash on Superhydrophobic Micro-Patterned Surfaces Presenter: Mr. Hyeonsoo Baek (Kyung Hee University, Republic of Korea) Corresponding author: Prof. Choongyeop Lee (Kyung Hee University, Republic of Korea)
Th-PP43	Designing Microfluidic Systems for Effective Vascularization: Insights from Computational Simulations and Metabolic Studies Presenter: Dr. Joonha Park (Korea Advanced Institute of Science and Technology, Republic of Korea) Corresponding author: Prof. Jessie Sungyun Jeon (Korea Advanced Institute of Science and Technology, Republic of Korea)
Th-PP44	Multifunctional Digital Acoustofluidic System for Sample Preparation Using Rayleigh and Shear-Horizontal Surface Acoustic Waves Presenter: Mr. Junsu Kim (Chonnam National University, Republic of Korea) Corresponding author: Prof. Jinsoo Park (Chonnam National University, Republic of Korea)
Th-PP45	Establishment of a Lung-Vascular Co-Culture System for Antiviral Drug Screening Under Varying Oxygen Levels Presenter: Mr. Jinho Kwon (Korea Advanced Institute of Science and Technology, Republic of Korea) Corresponding author: Prof. Jessie Sungyun Jeon (Korea Advanced Institute of Science and Technology, Republic of Korea)
Th-PP46	Capturing cells and applying shear stress under microfluidic chip with oscillating microbubbles Presenter: Mr. Daesik Kwak (Korea Advanced Institute of Science and Technology, Republic of Korea) Corresponding author: Prof. Jessie Sungyun Jeon (Korea Advanced Institute of Science and Technology, Republic of Korea)
Th-PP47	Glucose-Sensitive Hydrogel Micro-Spring Presenter: Ms. Mi Song Nam (Kyung Hee University, Republic of Korea) Corresponding author: Prof. Yun Jung Heo (Kyung Hee University, Republic of Korea)
Topic	Multi-phase and reacting flows
Th-PP48	Morphology and flow structures evolution of the thermally coupled two-layer thermal convection with solid melting Presenter: Mr. Dongliang Fan (Shanghai University, China) Corresponding author: Prof. Yuhong Dong (Shanghai University, China)
Th-PP49	Ensemble Machine Learning Algorithm for Two-Phase Flow Regime Identification in Square Channel in Various Orientation Presenter: Mr. Geon Ko (Seoul National University, Republic of Korea) Corresponding author: Prof. Hyungmin Park (Seoul National University, Republic of Korea)
Topic	Non-Newtonian flows
Th-PP50	The influence of geometric effects on the migration of particles in a power-law fluid Presenter: Ms. Xiaoyu Qin (Shandong University, China) Corresponding author: Prof. Moli Zhao (Shandong University, China)

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	Prof. Zhang Chuanyu (Xi'an Jiaotong University, China)
	Prof. Chunling Zhu (Nanjing University of Aeronautics and Astronautics, China)
Place	4th Floor

Topic	Turbulence
Th-PP51	Reynolds number dependence of energy spectra in compressible turbulence by high-resolution direct numerical simulations Presenter: Dr. Yoshiki Sakurai (Yokohama National University, Japan) Corresponding author: Dr. Yoshiki Sakurai (Yokohama National University, Japan)
Th-PP52	Effect of Periodic Flow with Phase Difference Generated by Two Fans on Flow Development Presenter: Mr. Shoma Sakakibara (Akita University, Japan) Corresponding author: Dr. Kotaro Takamure (Akita University, Japan)
Topic	Others
Th-PP53	Impact of Snow Mass Passage Through an Open-Type Cross-Flow Turbine on Power Generation Presenter: Dr. Kotaro Takamure (Akita University, Japan) Corresponding author: Dr. Kotaro Takamure (Akita University, Japan)
Th-PP54	Effect of Screen Spacing in a Folding Screen-Type Mist Trap on Oil Mist Collection Efficiency Presenter: Mr. Tatsuya Nagai (Akita University, Japan) Corresponding author: Dr. Kotaro Takamure (Akita University, Japan)