

9:40	EX-1 (Satellite room) & EX-2										9:40																					
	9:40-10:00 Opening Address																															
	10:00-11:50 Plenary Lectures I																															
11:50	10:00-10:50 "Boundary Layer Control with Moving Surfaces" <i>Jonathan F. Morrison</i> Chair: Shigeru Obayashi										11:50																					
13:10	11:00-11:50 "Applications and modelling of dual-fuel combustion" <i>Epaminondas Mastorakos</i> Chair: Kaoru Maruta										13:10																					
	BREAK																															
14:40	CON-1										14:40																					
14:50	CON-2										14:50																					
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">OS23: The 20th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</td> <td style="width: 10%;">EX-Hall-1A</td> <td style="width: 10%;">EX-Hall-1B</td> <td style="width: 10%;">EX-1</td> <td style="width: 10%;">EX-2</td> <td style="width: 10%;">EX-3-A</td> <td style="width: 10%;">EX-3-B</td> <td style="width: 10%;">EX-4-A</td> <td style="width: 10%;">EX-4-B</td> <td style="width: 10%;">GS: General Session</td> <td style="width: 10%;">OS20: Multiphysics in Fluid Mechanics</td> </tr> <tr> <td>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</td> <td>Multistage reactions <i>Chair: Y. Morii</i></td> <td>OS1: The Second International Symposium on Integrated Flow Science I &amp; III <i>Chair: J. Ishimoto</i></td> <td>OS8: Advanced Physical Stimuli and Biological Responses <i>Chair: Y.-C. Cheng</i></td> <td>OS5: Advanced Applications of Multi-functional Fluids Plasma Chemistry <i>Chair: H. Takana</i></td> <td>OS12: Complex Thermofluid System Experimental Flow <i>Chair: Y.-H. Liu</i></td> <td>OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics <i>Chair: J. Okajima</i></td> <td>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition Hybrid Rocket Fuel Session <i>Chair: Y. Saito</i></td> <td><i>Chair: K. Ohtani</i></td> <td>Plasma, thermal, and multiphase flows 1 <i>Chairs: M. Shigeta, Y. Inada</i></td> </tr> </table>										OS23: The 20th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	GS: General Session	OS20: Multiphysics in Fluid Mechanics	OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	Multistage reactions <i>Chair: Y. Morii</i>	OS1: The Second International Symposium on Integrated Flow Science I & III <i>Chair: J. Ishimoto</i>	OS8: Advanced Physical Stimuli and Biological Responses <i>Chair: Y.-C. Cheng</i>	OS5: Advanced Applications of Multi-functional Fluids Plasma Chemistry <i>Chair: H. Takana</i>	OS12: Complex Thermofluid System Experimental Flow <i>Chair: Y.-H. Liu</i>	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics <i>Chair: J. Okajima</i>	OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition Hybrid Rocket Fuel Session <i>Chair: Y. Saito</i>	<i>Chair: K. Ohtani</i>	Plasma, thermal, and multiphase flows 1 <i>Chairs: M. Shigeta, Y. Inada</i>	
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14:50-15:08 OS2-5	14:50-15:10 OS1-5	14:50-15:20 OS5-5 <i>Invited</i>	14:50-15:10 OS12-5	14:50-15:30 OS19-4	14:50-15:05 GS1-6					14:50-15:20 OS20-6 <i>Invited</i>																						
Short Oral Presentation & Poster Presentation	On the Formation of Aromatics From Cyclic Hydrocarbon Fuels Under Cool Flame Conditions: From Methylcyclohexene to Terpenes. <i>P. Dagaout, Z. Dbouk, R. Benoit</i>	Metal-Doped Biomass Derived Carbon Material for Energy Storage Application <i>K. Fields, S. Erdman, J. Ahn</i>	A Novel Detection Method for Metal Contamination Within Microalgae Cells Using Dielectrophoresis <i>C.-J. Li, H.-Y. Wang</i>	Data Assimilation for Determination of EHD Force and Heating Fields Based on Velocity and Density Field Measurements <i>Y. Kaneko, A. Yamanaka, H. Nishida</i>	Numerical Computations of Complex Phenomena for Practical Industrial Applications by HPC <i>W.-H. Wang, H.-C. Chang, M.-Z. Li</i>				A Handheld-Type Combustion-Driven Needle-Free Liquid Jet Injector Design for Drug Delivery <i>J. Sadek, R. Portaro, H. D. Ng</i>	How Physics-Informed Neural Networks are Utilized for Accurate Calculations and Measurements of Electron Transport Properties in Gases <i>S. Kawaguchi, K. Takahashi, K. Satoh</i>																						
15:08-15:26 OS2-6	15:10-15:30 OS1-6	15:20-15:50 OS5-6 <i>Invited</i>	15:10-15:30 OS12-6	15:10-15:30 OS19-5	15:05-15:20 GS1-7				Efficient Method for Ablation State Identification of Charring Ablators <i>Y. Yin, H. Ji, C. Tao, C. Zhang, J. Qiu</i>	15:20-15:35 OS20-7 Modeling and Simulation of Transient Dynamics of Mooring Systems Influenced by Realistic Ocean Waves <i>U. Torres-Herrera, A. Keramat, H.-F. Duan</i>																						
Numerical Investigation on a Carbon Particle Burning in Different Atmospheric Conditions <i>H.-H. Tang, S.-Y. Hsu, P.-B. Liu, D.-Q. Vo</i>	The Effect of Wind Direction on the Smoldering Spread of Incense Sticks <i>P. Viriya-amornkit, K. Kuwana, Y. Qin, X. Huang</i>	20-year-old PVA-H biomodel <i>M. Ohta, R. Hasegawa, S. Sasaki, A. Omiya, H. Kosukegawa</i>	Conversion of Methane and Carbon Dioxide Using Triple Thermal Plasma <i>H. Ko, Y. Lee, J. Oh, S. Choi</i>	Investigation of Shark Nasal Cavity Flow in Motion with Computational Fluid Dynamics <i>Y.-H. Lin, W.-H. Wang</i>																												

16:20											16:20	
16:30	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	16:30	
OS23: The 20th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals Chair: O. L. Gildner Instabilities and dynamics	OS1: The Second International Symposium on Integrated Flow Science I & III Chair: J. Ishimoto	OS8: Advanced Physical Stimuli and Biological Responses Chair: T. Sato	OS5: Advanced Applications of Multi-functional Fluids MHD / Propulsion Chair: N. Takeuchi	OS12: Complex Thermofluid System Fluid Mechanics Application I Chair: K.-M. Lin	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics Chair: M. Shirota		OS14: Innovations in Oncology Chair: J.-P. Rieu	OS20: Multiphysics in Fluid Mechanics Lattice Boltzmann method simulation for thermal and multiphase flows Chairs: Y. Saito, H. Komen			
OS23-18 - OS23-34 Short Oral Presentation & Poster Presentation	16:30-17:00 OS2-10 <i>Invited</i> Critical Role of Local State Quantities in Determining Burning Velocity: Insights from Fuel Mass Fraction and Temperature Profiles Y. Morii, A. Tsunoda, K. Maruta	16:30-16:50 OS1-8 <i>Invited</i> Dehumidification in the Heat Exchanger of an EECS in Ground Parked Condition N. Tomiyama, K. Akinaga, T. Adachi	16:30-16:50 OS8-9 <i>Invited</i> Multiscale Molecular Simulations for Biomolecular Systems T. Mabuchi	16:30-17:00 OS5-9 <i>Invited</i> Numerical Investigation on Flow Loss of a Linear MHD Channel with Arc Electrodes L. Zhao, L. Li, X. Chen, F. Wang, R. Li, A. Peng	16:30-16:50 OS12-10 Measurement of Mechatronic Characteristics and Numerical Calculation of Hydrodynamic Parameters for Water-Wave Energy Harvesters Y.-C. Su, Z. Wang, K.-S. Chen, T.-S. Yang	16:30-16:50 OS19-8 Microdroplet Impact Phenomena on a Heated Surface under Inertial Force Dominance T. Tabata, M. Kawaguchi, Y. Tagawa			16:30-17:10 OS14-1 <i>Invited</i> Organoid Culture to Characterize Cancer M. Inoue, Y. Nashimoto, Y. Hirai	16:30-16:45 OS20-11 Numerical Simulation of Electrically Conductive Gas-Liquid Two-Phase Flow Using Phase-Field Lattice Boltzmann Method M. Sugimoto, M. Shigeta		
	17:00-17:18 OS2-11 On Studies of Flame Morphology based on Bifurcation Theory K. Matsue	16:50-17:10 OS1-9 Atomization Process of Planar Air-blast Atomizer I. Oshima, A. Sou	17:00-17:30 OS8-10 <i>Invited</i> Event-Based Camera for Aerodynamic Testing in High-Speed Flight Z. P. Tan	16:50-17:10 OS5-10 2D3V Particle-in-cell Plasma Simulation of Charge Separation and Particle Acceleration Dynamics in a Magnetic Nozzle H. Suzuki, M. Takahashi	16:50-17:10 OS12-11 A Study of the Thermoacoustic Phenomenon in the Traditional Piston Stirling Engines H.-S. Yang, M. A. Ali	16:50-17:10 OS19-9 Numerical Analysis of Liquid Film Formation in a Visco-Inertial Capillary Flow D. Tsumehara, J. Okajima			17:10-17:25 OS14-2 Challenge to Reconstruct an Engineered 3D Cancer Environment by Focusing on Tumor Cell Behavior in Tissue D. Yoshino	16:45-17:00 OS20-12 Generally Consistent Lattice Boltzmann Method for Reacting Flow M. F. Arira, P. S. Palar, L. R. Zuhal		
	17:18-17:36 OS2-12 Effect of Buoyancy on Thermoacoustic Instability in an Rijke Tube with Adjustable Pitch Angles B. Pang, J. Liu, K. Wu, L. Yang, J. Li			17:10-17:30 OS5-11 Effects of Channel Geometry on MHD Taylor-Couette Flow with End Walls T. Hasebe, T. Fujino, H. Takana, H. Kobayashi	17:10-17:30 OS12-12 Convective Heat Transfer in Plate Fin Heat Sink with Dimples A. K. Patil, M. Kumar	17:10-17:30 OS19-10 Hydrodynamic and Heat Transfer Characteristics of Oscillatory Gas-liquid Taylor Flow H. Tao, Z. Zheng, R. Gupta			17:25-17:40 OS14-3 Integrating 3D Tumor Models and Hydrogel-based Microfluidics for Metabolic Control E. Bastien, A. Diallo, J. Codelle, H. Delanoë Ayari, C. Rivière	17:00-17:15 OS20-13 Application of a Hybrid Lattice-Boltzmann Lagrangian Method to Predict Fibrous Particle Penetration Through Mesh Screens T.-P. Duong, Y.-H. Li, S.-Y. Chou, K. C. Lin		
	17:36-17:54 OS2-13 A Network-based Data-driven Technique for Diagnosing Thermoacoustic Combustion Instabilities M. Lee				17:30-17:45 OS12-13 Effects of Ceramic Coating on Additively Manufactured Porous Structures Y.-H. Lin, Z.-K. Tong, P.-W. Zhou, Y.-H. Liu							
18:00					17:45-18:00 OS12-14 OH Concentration Measurement with UV-LED Absorption Spectroscopy C. Fu, Y.-H. Liao						18:00	
18:10											18:10	
19:00											19:00	
20:00											20:00	

## 18:10-19:00 Plenary Lectures II

'Computational Fluid Dynamics Simulations of Plasma Reactor Design for Gas Conversion Applications"

Annelie Bogaerts  
Chair: Hidemasa Takana

Students / Young Birds Friendship Night @ EX-Hall-1A, Exhibition Bldg.

9:00	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	9:00
	<b>OS23: The 20th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b> Dynamics and engines <i>Chair: Z. Chen</i>	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> Optimal Runge-Kutta Projection Methods for Non-Linear Systems <i>S. Miyazaki, H. Moriyama, D. Nakao, T. Tezuka, Y. Morii, K. Maruta</i>	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> <i>Chair: Y. Abe</i>	<b>OS8: Advanced Physical Stimuli and Biological Responses</b> <i>Chair: T. Mabuchi</i>	<b>OS5: Advanced Applications of Multi-functional Fluids</b> Advanced Multiphase Flow 1 <i>Chair: M. Motozawa</i>	<b>OS12: Complex Thermofluid System</b> Computational Fluid Dynamics II <i>Chair: W.-H. Wang</i>	<b>OS6: Free Flight Experiment with MSBS and Ballistic Range</b> MSBS and Ballistic Range, 1 <i>Chair: S. Obayashi</i>	<b>OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics</b> <i>Chair: J. Okajima</i>	<b>OS11: Microfluidics and Microphysiological Modeling</b> <i>Chair: K. Funamoto &amp; Chair: E. Corvera Poiré</i>	<b>OS16: Vortex Motion</b> turbulence and vortex dynamics <i>Chair: Y. Hattori</i>	
9:00-9:18 OS2-14	9:00-9:20 OS7-1	9:00-9:30 OS8-11 <i>Invited</i>	9:20-9:50 OS5-12 <i>Invited</i>	9:00-9:15 OS12-15 <i>Invited</i>	9:00-9:30 OS6-1 <i>Invited</i>	9:00-9:40 OS19-11 <i>Invited</i>	9:00-9:45 OS11-1 <i>Invited</i>	9:00-9:20 OS16-1 Effect of Wall Transpiration on Görtler Vortices in High-speed Boundary Layers <i>A. Ahagach, A. Sescu, Z. Koshuriyan, Y. Hattori</i>			
Short Oral Presentation & Poster Presentation	Model Experiment on Knocking for PRF Using a Constant Volume Chamber <i>S. Miyazaki, H. Moriyama, D. Nakao, T. Tezuka, Y. Morii, K. Maruta</i>	Multiphase Flow Approach for Biological Reagentless Synthesis of Macroscopic Nanocellulose Filaments Decorated with Ag Nanoparticles <i>J. Ishimoto, A. B. Dichiara, W. Hira, H. Takana</i>	Reagentless Synthesis of Macroscopic Nanocellulose Filaments Decorated with Ag Nanoparticles <i>J. Ishimoto, A. B. Dichiara, W. Hira, H. Takana</i>	Evaluating the Efficiency of PINNs in Simulating NACA 4 Series Airfoils <i>M.-Y. Chang, H.-C. Chang, W.-H. Wang</i>	Comprehensive Static and Dynamic Modeling of a Magnetic Suspension and Balance System <i>C. P. Britcher, C. Hull, D. Cox, M. Schoenenberger</i>	Hot Liquid Marble <i>P. K. Roy, Y. Takai, R. Matsubara, M. Tenjibayashi, T. Mouterde, T.-Y. Tu</i>	A Tapered Micro-vessel for Modeling Disease Response <i>Y.-J. Wu, K. Sone, K. Funamoto, W. Polacheck, T.-Y. Tu</i>				
9:18-9:36 OS2-15	Numerical Study on Relationship between the Research Octane Number and "Explosive Transition of Deflagration" of Primary Reference Fuels <i>H. Moriyama, D. Nakao, A. Tsunoda, Y. Morii, K. Maruta</i>	Illustrating the Role of High-Fidelity Simulation and Machine Learning in Accelerating Development of Turbomachinery Technology <i>R. D. Sandberg</i>	9:30-10:00 OS8-12 <i>Invited</i>	9:50-10:10 OS5-13 <i>Invited</i>	9:15-9:30 OS12-16 <i>Physic-Informed Neural Networks (PINNs) for Steady State Laminar Flow over a Chip</i> <i>E. O. Teng, C.-G. Li, H.-C. Kan</i>	9:30-9:45 OS6-2 <i>Validation of Dynamic Stability Measurement of a Space Orbital Plane Model using Magnetic Suspension</i> <i>H. Sugiyama, N. Kobayashi, A. Tezuka</i>	9:40-10:00 OS19-12 <i>Modelling Secondary Atomization of Multiphase Droplets for Cryogenic Carbon Capture</i> <i>P.-H. Chen, A. Ceschin, F. E. Hernández-Pérez, H. G. Im</i>	9:45-10:00 OS11-2 3D Human Blood-Brain Barrier in Brain Diseases on a Chip <i>S. Mama, M. Inagaki, H. Nishihara, K. Matsuo, A. Hashimoto, K. Funamoto, M. Tachikawa</i>	9:20-9:40 OS16-2 Characterization of Vortices in the Transitional Boundary Layer on a Rotating Slender Cone <i>K. Yamada, K. Takahara, K. Kato, M. Matsubara</i>		
9:36-9:54 OS2-16	Emission Characteristics of Compression-Ignition Engines Fueled with Pure Methanol <i>Y. Wu, Z. Huang, X. Zhang, Z. Zhang, W. Wang, C. Jin, Z. Zhang, Z. Zheng, H. Liu, C. Wang, M. Yao</i>	10:00-10:30 OS8-13 <i>Invited</i>	10:10-10:30 OS5-14 <i>Invited</i>	10:00-10:30 OS12-17 <i>Comparison of Implicit Large Eddy Simulation with and without Wall Model at Low Reynolds Number</i> <i>P.-K. Lin, C.-G. Li</i>	9:45-10:00 OS6-3 <i>Aerodynamic Characteristics of a Space Orbital Plane Model Measured with 1-m Magnetic Suspension and Balance System</i> <i>N. So, I. Kida, R. Haga, M. Miyagi, H. Okuzumi, S. Obayashi</i>	9:45-10:00 OS19-13 <i>Experimental Investigation on Weber Number Effect on Heat Transfer of an Impacting Drop Containing Ice Particles</i> <i>Y. Kimura, H. Echigo, J. Okajima, M. Shirota, T. Okabe</i>	10:00-10:15 OS11-3 <i>Development of Perfusionable Vasculature Model in 3D Muscle Tissue</i> <i>L. Kim, J. Kim, J. S. Jeon</i>	9:40-10:00 OS16-3 An Asymmetric Vortical Flow Structure Based on Local Flow Geometry and Galilei Invariant Vortex Space <i>K. Nakayama</i>			
9:54-10:12 OS2-17	Analysis of Constant Thermodynamic Assumptions on Detonation Transition: New Perspective of Zel'dovich's Spontaneous Ignition Front <i>H. Okada, Y. Morii, A. Tsunoda, K. Akita, K. Maruta</i>	10:12-10:30 OS2-18 <i>Ignition Delay Time and Flame Speed Validation of a Reduced Mechanism of Toluene Reference Fuel with Multi-Alcohols- A CFD Approach</i> <i>A. Dahiya, Y. De Li, K. C. Lin</i>			10:00-10:15 OS12-18 <i>Vortex Induced Vibration of Tandem Cylinders in Turbulent Flow</i> <i>M.-J. Chern, J.-Y. Fan, Y. H. Irawan, S. A. Raza</i>	10:00-10:15 OS6-4 <i>Prospects for a New MSBS at Imperial College</i> <i>J. F. Morrison</i>	10:00-10:15 OS19-14 <i>Evaluation of Reactive Oxygen Species in Microvascular Network during Reoxygenation by Using Microfluidic Devices</i> <i>S. Yanagita, K. Funamoto</i>	10:00-10:20 OS16-4 Statistics of Vortices in Gross-Pitaevskii Quantum Turbulence Simulation <i>H. Miura, N. Sakaki, Y. Tsuji, K. Yoshida</i>			
10:12-10:30 OS2-19					10:15-10:30 OS12-20 <i>Using CFD Technology in Torque Analysis and Noise Performance Optimization of Dental High-Speed Air Turbine Handpieces</i> <i>Y.-Y. Liang, C.-G. Li</i>	10:15-10:30 OS6-5 <i>Three-Degree-of-Freedom Free-Motion Wind Tunnel Testing Using a Magnetic Suspension System</i> <i>K. Ueno, T. Sato, Y. Takeda, R. Nagasaka, M. Kikuchi</i>		10:20-10:40 OS16-5 <i>Prediction of Smoke-Inflow using Recursive Fourier Neural Operator</i> <i>K. Zakaria, A. N. Siniuka, P. S. Palar, L. R. Zuhal</i>			
10:30	BREAK										10:30
10:40	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	10:40
	<b>OS23: The 20th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b> NH3/H2/Sustainability <i>Chair: H. Zhao</i>	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> A Comprehensive Study of the Detailed Combustion Kinetic Mechanism of Organophosphorus Flame Retardants <i>F. N. O. Bruce, R. He, Z. Zhu, K. Kanayama, H. Nakamura, Y. Li</i>	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> <i>Chair: F. D. Witherden</i>	<b>OS8: Advanced Physical Stimuli and Biological Responses</b> <i>Chair: H. Anzai</i>	<b>OS5: Advanced Applications of Multi-functional Fluids</b> Advanced Multiphase Flow 2 <i>Chair: Y. Kaneko</i>	<b>OS12: Complex Thermofluid System</b> Viscous Fingering <i>Chair: C.-Y. Chen</i>	<b>OS6: Free Flight Experiment with MSBS and Ballistic Range</b> MSBS and Ballistic Range, 2 <i>Chair: K. Seo</i>	<b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition</b> Invited Session <i>Chair: Y. Saito</i>	<b>OS11: Microfluidics and Microphysiological Modeling</b> <i>Chair: T. Omori</i>	<b>OS16: Vortex Motion</b> compressible flow & stability <i>Chair: H. Miura</i>	
10:40-10:58 OS2-19	10:40-11:00 OS7-3 <i>Coherent Structures over Distributed Micro Roughness Related to Drag Reduction</i> <i>T. Ogawa, A. Yakeno</i>	10:40-11:10 OS8-14 <i>Invited</i>	10:40-11:00 OS5-15 <i>Invited</i>	10:40-11:00 OS12-21 <i>Phase Separation and Pattern Formation in Partially Miscible Fluids</i> <i>J. Yoshikawa, K. Itoh, H. Takana</i>	10:40-10:55 OS6-6 <i>A Decade of Progress in 1-m MSBS</i> <i>S. Obayashi, H. Okuzumi, H. Sawada, Y. Konishi, T. Nonomura, K. Asai</i>	10:40-10:55 OS4-6 <i>Invited</i>	10:40-10:55 OS11-5 <i>Development of a Lung-vascular Co-culture Model as an Antiviral Drug Screening Platform under Different Oxygen Concentrations</i> <i>J. Kwon, D. Kim, I. Kim, H. Nam, J. S. Jeon</i>	10:50-11:10 OS16-6 <i>Low Fidelity Model for Compressible Euler Equation based on Logarithmic Conformation Reformulation</i> <i>T. Nakazawa</i>			
Short Oral Presentation & Poster Presentation	A Comprehensive Study of the Detailed Combustion Kinetic Mechanism of Organophosphorus Flame Retardants <i>F. N. O. Bruce, R. He, Z. Zhu, K. Kanayama, H. Nakamura, Y. Li</i>	11:00-11:20 OS7-4 <i>The Effect of Compressibility and Pressure Gradient on the Drag Reduction Performance of the Riblet</i> <i>K. Kaneko, A. Oyama, A. Yakeno</i>	11:10-11:40 OS8-15 <i>Invited</i>	11:00-11:20 OS5-16 <i>Developing Green, Anti-Wear Additives for Lubricating Oils: Adsorption and Structure at Steel Surfaces from Molecular Dynamics Simulations</i> <i>T. Sato, S. Fujimura, S. Kanazawa, S. Liu, K. Tachibana, Y.-C. Cheng, J.-S. Lee, T. Okuma, K. Iwasawa, Y. Xiao, T. Nakajima</i>	11:00-11:15 OS12-22 <i>Pattern Formation of Viscous Fingering Coupled with Phase Separation</i> <i>C.-Y. Liao, C.-Y. Chen</i>	10:55-11:10 OS6-7 <i>Oxford 3-DoF Magnetic Suspension &amp; Balance System: Update on Recommissioning Efforts</i> <i>N. Anyamele, L. J. Doherty, P. Ireland</i>	11:25-12:10 OS4-7 <i>Invited</i>	11:10-11:30 OS16-7 <i>Isovortical Perturbations and Wave Energy on Steady Flows of a Compressible Baroclinic Fluid</i> <i>Y. Fukumoto, R. Zou</i>			
10:58-11:16 OS2-20	Experimental and Detailed Kinetics Modeling Study of Bis (2,2,2-trifluoroethyl) Carbonate, a Fire Suppressor for Lithium-Ion Batteries <i>M. Khan-Ghauri, C. M. Grégoire, K. Kanayama, P. Diévert, S. Takahashi, T. Tezuka, H. Nakamura, L. Catore, K. Maruta, E. L. Petersen, O. Mathieu</i>	11:20-11:40 OS7-5 <i>Discontinuity-capturing Numerical Scheme on Unstructured Grid for Single-phase and Liquid-gas Two-phase Compressible Flows with Phase Change</i> <i>H. Wakimura, T. Aoki, F. Xiao</i>	<b>Award Ceremony &amp; Closing</b> 11:40-12:00 <i>T. Sato, Y.-C. Cheng</i>	11:20-11:40 OS5-17 <i>Experimental Evaluation of Heat Transfer and Flow Resistance of Viscoelastic Drag-reduced Flow by Adding CNT or CNF</i> <i>Y. Hayashi, M. Motozawa, M. Fukuta, W. Rakpakdee</i>	11:15-11:30 OS12-23 <i>Viscous Fingering in Fluid Layers Of Non-monotonic Viscosity</i> <i>S.-W. Hung, Y.-A. Chen, C.-Y. Chen</i>	11:10-11:25 OS6-8 <i>Forced Displacement Technique for Measuring Blunt Body Aerodynamics in a Magnetic Suspension Wind Tunnel</i> <i>M. Schoenenberger, D. Cox, C. Britcher, C. Hull</i>	11:25-12:10 OS4-8 <i>Invited</i>	11:30-11:50 OS16-8 <i>Stability of a Lamb-Oseen Vortex in a Tri-polar Straining Field</i> <i>A. S. P. Ayapilla, Y. Hattori</i>			
				11:30-11:45 OS12-24 <i>Fluid Displacement in a Partially Miscible System with a 2-D Micromodel</i> <i>S. Kiuchi, R. X. Suzuki, M. Mishra, T. Ban, A. Patmonoaji, Y. Nagatsu</i>	11:25-11:40 OS6-9 <i>Comparisons of Supporting Methods for a Magnetic Suspension and Balance System</i> <i>Y. Isomura, N. Arima, K. Seo</i>						

	11:16-11:34 OS2-21 Premixed Flame Propagation and Oscillation of Hydrogen/Methane/Propane Mixtures in a Narrow-Gap Disk Burner <i>S. M. Lee, N. I. Kim</i>	11:40-12:00 OS7-6 Numerical Simulation of Asymmetric Vortices on Ogive-Cylinder at High Angle of Attack Using ILES <i>H. Yang, B. Park, H. Kang, J. Park, S. Lee, J. S. Park</i>		11:40-12:00 OS5-18 Efficient Thermal Management Through Heat Transfer Optimization in an Enclosure <i>S. Ahmad, H. Takana</i>	11:45-12:00 OS12-25 Experimental Study on Effect of Chemical Concentration on Confined Chemical Garden Patterns Using Interfacial Rheological Measurement <i>E. J. Kobayashi, R. X. Suzuki, M. Takano, Y. Nagatsu</i>	11:40-11:55 OS6-10 Free-motion Wind Tunnel Testing of a Lifting Atmospheric Entry Capsule <i>K. Onuma, K. Ueno, Y. Takeda, K. Asai, H. Nagai, T. Ikami, Y. Sasaki, M. Okawa</i>	11:55-12:10 OS6-11 Dynamic Instability Analysis of Free-Flying Objects in Transonic Regime Using Ballistic Range <i>J. Kim, E. D. Leon, J. Hur, T. Ikami, K. Takahashi, T. Ogawa, M. Ahn Furudate, B. J. Lee, H. Nagai</i>			11:10-11:25 OS11-7 Analysis of the Effect of Different Boundary Conditions on an Elastic Model of the Arterial System Considering the Rheology of Human Blood <i>A. Torres Rojas, D. Yáñez Guarneros, E. Corvera Poiré</i>	11:50-12:10 OS16-9 Nonlinear Dynamics of Helical Vortex Disturbed by Long-Wave Instability <i>Y. Hattori, I. Delbende, M. Rossi</i>
	11:34-11:52 OS2-22 Numerical Investigation On The Extinction Limits For PMMA Sphere Burning In Microgravity <i>C.-W. Huang, S.-Y. Hsu, J.-H. Huang, J. S. T'ien</i>									11:25-11:40 OS11-8 Microorganisms Co-encapsulation within Microfluidic Gel Beads and Their Analysis Using Flow Cytometry to Discover Antibiotic-Producing Strains <i>A. Ochoa, P. G. De la Luz-Ángeles, Y. Rodríguez-Hernández, J. H. Lara-Baños, L. F. Olguín</i>	
	11:52-12:10 OS2-23 Numerical Study of CO <sub>2</sub> Conversion to SAF in a Fixed Bed Catalytic Reactor <i>R. Shan, S. Ma, V. B. Nguyen, C. W. Kang, T.-B. A. Lim</i>										
	12:10-12:28 OS2-54 Acceleration of Chemically-reactive Flow Simulations by Local CSP-based Stiffness Reduction <i>A. Carinci, R. M. Galassi, M. Rafi Malik, F. E. Hernández-Pérez, M. Valorani, H. G. Im</i>										
12:10	OS23-1 - OS23-64 ※Please remove posters by 12:30.										12:10
12:10	<b>Group Photo</b> Luncheon Session Exhibitor Presentation										12:10
13:10	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	13:10
13:10	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b> <i>Chair: T. Ikami</i>	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> <i>NH3/H2/Sustainability Chair: A. Hayakawa</i>	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> <i>Chair: T. Haga</i>	<b>OS3: The Second International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation</b> <i>Chair: D. Ohori</i>		<b>OS12: Complex Thermofluid System</b> <i>Fluid Mechanics Application II Chair: K. C. Lin</i>	<b>OS10: Two-Phase Thermal Control Technology</b> <i>Chair: M. Nishikawara</i>	<b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition</b> <i>Invited Session / Chair: Y. Saito &amp; Analysis, and Developmental Techniques Session / Chair: K. Ozawa</i>	<b>OS11: Microfluidics and Micropysiological Modeling</b> <i>Chair: T. Fukui</i>	<b>OS17: Supercritical Fluid</b> <i>Chair: Y. Kanda</i>	
13:10	CRF-1 - CRF-25, CRF-32, CRF-42, CRF-72, CRF-76 Short Oral Presentation	13:10-13:28 OS2-24 Combustion and NOx Formation of Opposed-jet Diffusion Flames with Natural Gas/Hydrogen Blended Fuels <i>C.-Y. Huang, H.-Y. Shih</i>	13:10-13:30 OS7-7 Multi-scale Modeling Method for Structural Design of CFRP Aircraft <i>Y. Nakai, Y. Abe, K. Ryuzono, Y. Kawagoe, T. Okabe</i>	13:10-13:40 OS3-1 <i>Invited</i> High-efficiency GaN Micro-LEDs Fabricated by Neutral Beam Etching for VR/AR Applications <i>X. Wang, D. Ohori, S. Samukawa</i>		13:10-13:30 OS12-26 <i>Invited</i> Numerical Modeling of OH Radicals Generated in Atmospheric-pressure Air Dielectric Barrier Discharges <i>K.-M. Lin, T.-Y. Liao, G.-J. Lin, Y.-C. Chen</i>	13:10-13:50 OS10-1 <i>Invited</i> Thermal Management System for High-Heat-Flux Applications Using Two-phase Pumped Loop Systems <i>T. Hirokawa</i>	13:10-13:55 OS4-8 <i>Invited</i> Estimating Combustion States in Hybrid Rockets: An Extended Kalman Filter Approach <i>T. Shimada</i>	13:10-13:25 OS11-9 <i>Invited</i> Numerical Simulation of Microcapsules Filled with Ferrofluid under a Uniform Magnetic Field <i>R. Takeuchi, T. Omori, T. Ishikawa</i>	13:10-13:50 OS17-1 <i>Invited</i> Fluctuation Analysis and Thermal Conductivity Prediction of Supercritical Carbon Dioxide by Molecular Dynamics Simulation <i>C. Sun, C. Hou, W. Ge, L. Chen, Y. Zhang</i>	
13:10		13:28-13:46 OS2-25 Stabilization Mechanism for CH <sub>4</sub> /H <sub>2</sub> Jet Lifted Flames with Various Inert Gases in Laminar/Turbulent Transition <i>D. S. Jeon, N. I. Kim</i>	13:30-13:50 OS7-8 Numerical Investigation of a Vertical Axis Wind Turbine for Performance Improvement Using Plasma Actuator <i>T. Ito, K. Lee, S. Kikuchi</i>	13:40-14:10 OS3-2 <i>Invited</i> Atomic Layer Technology and Its Application for Advanced Heterogeneous Integrated Nano-device = Emerging	13:30-13:45 OS12-27 <i>Invited</i> Experimental Investigation and Numerical Modeling of Plasma Bullet Dynamics in an Atmospheric Pressure Plasma Jet <i>L. L. de la Cruz Jr., H.-P. Yang, K.-M. Lin</i>	13:50-14:10 OS10-2 <i>Effect of Orientation on the Performance of the Two-Phase Cold Plate</i> <i>K.-Y. Ho, S.-W. Lin, T.-W. Chang, C.-C. Wang</i>	13:55-14:10 OS4-9 <i>Development from Reconstruction Techniques to Nozzle Erosion Suppression Technology</i> <i>H. Nagata, L. Kamps, S. Hirai, G. Gallo</i>	13:25-13:40 OS11-10 <i>Development of a Biomechanical Erythrocyte Model that Reflects the Membrane Microstructure</i> <i>H. Nagata, L. Kamps, S. Hirai, G. Gallo</i>	13:25-13:40 OS17-2 <i>Analysis of Fluctuations of Supercritical Region CO<sub>2</sub> by Small Angle Neutron Scattering (SANS) Experiments and MD Simulations</i> <i>L. He, R. Zhang, Y. Feng, L. Chen</i>		
13:10		13:46-14:04 OS2-26 Development of a Reduced Chemical Kinetic Mechanism for the Combustion of Ammonia/Diethyl Ether (DEE) Flames <i>D. Sharma, J. Xing, A. L. Pillai, R. Kurose</i>	13:50-14:10 OS7-9 Image-based Data Compression of High-fidelity Turbulence Data <i>H. Nagata, H. Asada, S. Kawai, S. Kawai</i>	14:10-14:25 OS3-3 Estimation of Carrier Mobility in Si-Nanopillar/SiGe Composite Films by Laser Heterodyn Photothermal Displacement Measurements under Electric Field <i>Y. Uno, T. Harada, D. Ohori, K. Endo, S. Samukawa, T. Ikari, A. Fukuyama</i>	13:45-14:00 OS12-28 One-dimensional Discharge Simulation of Argon Excited Species Produced in Atmospheric-pressure Ar/O <sub>2</sub> Dielectric Barrier Discharges <i>W. H. Lai, J. W. Liu, K. M. Lin</i>	14:00-14:15 OS12-29 Numerical Study of Wet Cleaning Process for Wafer Surfaces with Trenches on a Rotating Disk <i>J.-W. Yeh, Y.-C. Tseng, Y.-H. Liu</i>	14:10-14:30 OS10-3 High-speed Visualization of Microscale Phase Change Behavior in a Porous Media Under Saturated Vapor Conditions <i>T. Kato, K. Odagiri, Y. Aizuki, H. Nagano, H. Ogawa</i>	14:10-14:25 OS4-10 Innovative R&D for Expanding the Use of Hybrid Rocket Systems in Aerospace <i>L. Kamps, S. Hirai, H. Nagata</i>	13:40-13:55 OS11-11 A Numerical Simulation of a Dense Suspension of Spermatozoa <i>R. Iwasawa, T. Omori, T. Ishikawa</i>	13:50-14:10 OS17-3 The Comparison of Visualization Experiment and Numerical Simulation on High-pressure CO <sub>2</sub> Converging-diverging Nozzle Flow Across the Critical Region <i>H. Wang, L. Chen</i>	
13:10		14:04-14:22 OS2-27 Development and Validation of Skeletal Mechanism of Ethylene/Ammonia in Plug Flow Reactor <i>W. Liu, W. Z. Jia, K. C. Lin</i>	14:10-14:30 OS7-10 Geometrically Nonlinear Analysis and Structural Sizing of Composite Aircraft Wings <i>Y. Liu, K. Nakamura, S. Date, T. Nagashima, Y. Abe</i>	14:25-14:40 OS3-4 Epitaxial Growth of High-quality Mg <sub>3</sub> Sb <sub>2</sub> -based Thin Films and Their Thermoelectric Properties <i>A. Ayukawa, N. Kiridoshi, T. Kuriyama, W. Yamamoto, A. Yasuhara, H. Udon, S. Sakane</i>	14:25-14:40 OS12-30 Application of DSMC to Simulate Interior Outgassing Phenomena in Satellites <i>H.-H. Hsu, M.-C. Lo</i>			14:25-14:40 OS4-11 Experimental Study on Internal Ballistics for ELS-R100 Hybrid Thruster <i>Y. Saito, S. Kameyama, K. Kida, H. Karuya, T. Kuwahara, K. Fujita, R. Kobayashi, H. Ikeda, T. Nagata</i>	13:55-14:10 OS11-12 Evaluation of Chaotic Structures as Passive Micromixers <i>A. Ochoa, L. F. Olguín, E. Corvera Poiré</i>		
14:40											14:40
14:40											

BREAK

14:50	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	14:50	
	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b> OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals NH3/H2/Sustainability Chair: N. Kim	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> Chair: J. S. Park	<b>OS3: The Second International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation</b> Chair: K. Endo	<b>OS18: Flow measurements using PSP/TSP Technique</b> Chair: C.-Y. Huang	<b>OS12: Complex Thermofluid System</b> Numerical Heat Transfer and Fluid Flow Chair: M.-C. Lo	<b>OS10: Two-Phase Thermal Control Technology</b> Chair: K. Odagiri	<b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition</b> Internal Ballistics Modeling Session Chair: L. Kampf	<b>OS14: Innovations in Oncology</b> Chair: N. Aznar	<b>OS17: Supercritical Fluid</b> Chair: Y. Hu			
14:50-15:35 CRF-1 - CRF-25, CRF-32, CRF-42, CRF-72, CRF-76 Poster Presentation	14:50-15:08 OS2-29 Characterizing Fuel-NO Interaction in NH <sub>3</sub> /DME Co-firing: Experimental and Kinetic Modeling Investigation <i>S. Liu, Q. Zhang, X. Shi, J. Fang, Q. Fang, W. Li, Y. Li</i>	14:50-15:10 OS7-11 Data-Driven Fluid-Structure Interaction Analysis for Vortex-Induced Vibration <i>C. Lee, T. Yamazaki, F. D. Witherden, Y. Kawano, Y. Abe</i>	14:50-15:20 OS3-5 <i>Invited</i> Volume of Fluid Modeling of a Rotating Disk Edge Wetting with Backside Dispense <i>A. Ceschin, M. Kihara, M. Sato, N. Belmiloud, K. Huet</i>	14:50-15:10 OS18-1 Development of Pressure-Sensitive Paint with Temperature Insensitivity <i>K.-T. Huang, H.-Z. Lin, C.-Y. Huang</i>	14:50-15:05 OS12-31 Rapid Thermal-Electrical Co-Simulation for Power Electronics System <i>C. C. Hsu, H. C. Tang, F. M. Tu, H. Y. Hsu</i>	14:50-15:10 OS10-4 Comparison of Porous Characteristics by Various Measurement Methods <i>M. Nishikawara</i>	14:50-15:10 OS4-12 Current Status on a New Time-Resolved Fuel Regression Measurement Applied to Cylindrical Hybrid Rocket Engine <i>K. Ozawa, Y. Jinnochi, K. Omiya, N. Tsuboi</i>	14:50-15:05 OS14-4 Patient-derived Tumour Organoids for the Identification of Tumour Cell-intrinsic and Tumour-immune Modulators <i>R. Wagner, M. Brisset, M. Grandin, C. Shembrey, S. Lee, T. Vu, A. Heriot, A. Serrano, F. Hollande</i>	14:50-15:10 OS17-4 Kinetics of Methanol/Ethanol Assisted Oxidation of Ammonia in Supercritical Water <i>S. Zhang, J. Yang, G. Li</i>			
	15:08-15:26 OS2-30 An Efficient Optimization Method for Chemical Mechanisms with Deep Reinforcement Learning <i>H. Hu, H. Zhang</i>	15:10-15:30 OS7-12 Study of Thermal Management System for eVTOL <i>H. Nakayama, D. Sasaki, Y. Inoue</i>	15:20-15:35 OS3-6 Evaluation of the Germination Process of the Haworthia cooperi var. TruncateUnder the Controllable Gas Plasma Radiation <i>A. Yoshikawa, N. Fujimatsu</i>	15:10-15:30 OS18-2 Pressure Distribution Measurement on NACA0012 Airfoil using Silica-based PSP in Low-Speed Flow <i>M. Okawa, Y. Yamagishi, T. Ikami, K. Watanabe, H. Nagai</i>	15:05-15:20 OS12-32 Numerical Simulation Analysis of the Heat Transfer Performance of Screw Pipe of the Water-Cooled Divertor in a Nuclear Fusion Reactor <i>A. Kawaguchi, Y. Sasaoka, M. Ando, A. Okamoto, T. Ikami, H. Nagai</i>	15:10-15:30 OS10-5 Numerical Study of Oscillating Heat Pipes with Different Diameter Channel <i>S. Yoshioka</i>	15:05-15:20 OS4-13 High Fidelity Numerical Simulations of Ablating Boundary Layers for Hybrid Rocket Motors <i>K. Budzinski, K. Reffaldi, E. K. Ismael, R. Zangeneh, P. Desjardin</i>	15:05-15:20 OS14-5 Investigation of a Predictive Therapeutic Response under Controlled Oxygen Condition in Cancer Patient-derived Organoids <i>M. Roinard, S. Aratake, K. Funamoto, N. Aznar, J.-P. Rieu</i>	15:10-15:30 OS17-5 Rayleigh-Bénard Convection Onset of Supercritical CO <sub>2</sub> inside a Closed Chamber: Experiments and Numerical Results <i>R. Zhang, L. Chen, Y. Kanda, A. Komiya</i>			
	15:26-15:44 OS2-31 Using CO Laser-Absorption Measurements To Assess C <sub>2</sub> H <sub>4</sub> Detailed Kinetics Mechanisms During Combustion: A Shock-Tube Study <i>O. Mathieu, C. M. Grégoire, E. L. Petersen</i>	15:30-15:50 OS7-13 Comparison of Genetic Algorithm and Reinforcement Learning in Airfoil Optimization <i>A. Yoshikawa, N. Fujimatsu</i>	15:30-15:50 OS18-3 An Experimental Study on the Two-Dimensional Flow Field of a Transonic Interface Design Concept of HfO <sub>2</sub> /Si Gate Stack for Nanosheet MOSFETs <i>C.-C. Wang, C.-Y. Huang, K.-M. Chung</i>	15:20-15:35 OS12-33 Numerical Investigation on R134a Flash Evaporation under Reduced Pressure <i>T. Yokouchi, X. Chang, K. Odagiri, H. Ogawa, H. Nagano, H. Nagai</i>	15:30-15:50 OS10-6 Parasitic Heating Effect on Operating Characteristics of CLHP <i>S. Nishii, T. Kanda, A. Kakami</i>	15:20-15:35 OS4-14 Fundamental Experiments on Metalized Fuel Hybrid Rockets for Spacecraft with Microwave Repetitive Ignition <i>K. Nishii, T. Kanda, A. Kakami</i>	15:30-15:50 OS14-6 Co-Culture with Microvascular Networks Attenuates Cancer Cell Proliferation under Hypoxia <i>S. Aratake, K. Funamoto</i>	15:30-15:50 OS17-6 Cancelled				
	15:44-16:02 OS2-32 The Flame Behaviors in Mesoscale Sudden-Expansion Tube at the Preliminary Stage after Ignition <i>T.-H. Chuang, J.-H. Huang, S.-Y. Hsu</i>	15:50-16:10 OS7-14 Multi-Objective Optimization for Aircraft Wing Shapes Using Advanced Composite Materials <i>R. Kano, Y. Abe, K. Ryuzono, T. Okabe</i>	15:50-16:05 OS3-8 Effect of Oxygen Vacancies at the AZO/ZnO Interface on ReRAM Characteristics <i>K. Hamada, T. Ohno, K. Minami, K. Endo</i>	15:50-16:10 OS18-4 Effect of Titanium Dioxide Surface Treatment on Fast-Responding PSP Characteristics <i>Y. Egami, N. Yoshii, K. Nagao</i>	15:35-15:50 OS12-34 A Numerical Investigation of Conjugate Heat Transfer Phenomena within Annular Finned Tube Heat Exchangers <i>F.-H. Tseng, H.-T. Chen, C.-G. Li</i>	15:35-16:05 OS12-35 Numerical Study of Flow and Heat Transfer in Heat Sink Arrays with Varied Fin Geometries <i>Z.-L. Lin, C.-G. Li</i>	15:35-16:05 OS4-15 H <sub>2</sub> O Droplet Ignition in a Deep-Pool of NaBH <sub>4</sub> Hypergolic Fuel – Part 1: Observation of Fluid Dynamics Phenomena <i>Z. Guo, Y. Hsia, K. Chang, C.-C. Chang, S.-S. Wei, J.-S. Wu, Z. P. Tan</i>	15:35-15:50 OS14-7 Role of Circulating snoRNA Snord in Breast Cancer Bone Metastatic Progression <i>C. Filossi, C. Moyret-Lalle, M. Puppo, P. Clézardin, V. Marcel</i>	15:50-16:10 OS17-7 Mass Transport Evaluation in Supercritical Fluids by Droplet Volume Change Measurement <i>Y. Kanda, L. Chen, A. Komiya</i>			
	16:02-16:20 OS2-33 Combustion Properties of CO-O <sub>2</sub> Mixtures Diluted with CO <sub>2</sub> at Elevated Pressures and Temperatures <i>M. Kuznetsov, E. Torres de Ritter, A. Veser, A. Lelyakin, T. Jordan</i>					16:05-16:20 OS12-36 A Numerical Study of Geometry Effect on Pressure Drop Instability Using VOF Method <i>C. W. Lin, K. H. Sun, S. S. Lo, H. Y. Hsu</i>	15:50-16:05 OS4-16 H <sub>2</sub> O Droplet Ignition in a Deep-Pool of NaBH <sub>4</sub> Hypergolic Fuel – Part 2: Ignition Trends and Hypothesis of Mechanisms <i>Y. Hsia, Z. Guo, K. Chang, C.-C. Chang, S.-S. Wei, J.-S. Wu, Z. P. Tan</i>	15:50-16:05 OS14-8 Treatment of Metastatic Lymph Node by Lymphatic Drug Delivery System Using Carboplatin <i>E. Tada, M. Miyatsu, A. Sukhbaatar, S. Mori, T. Suguri, T. Kodama</i>	16:05-16:20 OS14-9 Evaluation of Chemoimmunotherapy using Lymphatic Drug Delivery System <i>R. Suzuki, A. Sukhbaatar, H. Fuji, S. Mori, Y. Ito, T. Kodama</i>			
16:20	BREAK										16:20	
16:30	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	16:30	
	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b> OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals NH3/H2/Sustainability Chair: O. Mathieu	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> Chair: A. Yakeno	<b>OS24: Fluid Science Research Award Lecturers</b> Chair: K. Maruta	<b>OS18: Flow measurements using PSP/TSP Technique</b> Chair: Y. Egami			<b>OS10: Two-Phase Thermal Control Technology</b> Chair: H. Nagai	<b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 16th Edition</b> Hybrid Rocket Propulsion Systems Session Chair: Y. Saito	<b>OS14: Innovations in Oncology</b> Chair: C. Moyret-Lalle			
	16:30-16:48 OS2-34 High-pressure Oxidation of Hydrogen at 100 Atm in a Supercritical-pressure Jet-stirred Reactor <i>H. Zhao, C. Yan, G. Song, Z. Wang, A. W. Jasper, S. J. Klippenstein, Y. Ju</i>	16:30-16:50 OS7-15 Uncertainty Quantification of Aerostructural Properties on Composite Wing Design <i>K. Nakamura, Y. Abe, K. Shimoyama, S. Obayashi</i>	16:30-17:00 FRA-1 Research on Solid Material Flammability in Microgravity for Fire Safety in Space <i>O. Fujita</i>	16:30-16:50 OS18-5 Investigation of Supersonic Micronozzle with Secondary Injection and Different Divergent Sections <i>Y.-E. Tsai, Y.-J. Wu, P.-H. Huang, C.-Y. Huang</i>			16:30-16:50 OS10-7 Observation of Acoustic Streaming in Wet Thermoacoustic Engines Using PIV <i>S.-H. Hsu, W.-T. Lin</i>	16:30-16:48 OS4-18 Tethered Hovering Flight Demonstration of the HTTP-4 Hybrid Rocket with Vertical Takeoff Vertical Landing (VTVL) Capability <i>S.-C. Wang, Z.-R. Chen, C.-C. Chang, H.-Y. Tso, J.-C. Hsu, T.-C. Lee, Y.-T. Hou, S.-T. Kao, C.-H. Huang, Y.-C. Liang, J.-S. Shiang, J.-W. Huang, M.-T. Ho, S.-S. Wei, J.-S. Wu</i>	16:30-17:10 OS14-10 <i>Invited</i> Microfluidic Systems for Cancer Modeling and Drug Screening <i>S. Kim, J. Park, J. S. Jeon</i>			

	16:48-17:06 OS2-35 Study for Global Reaction Mechanism for Cracked Ammonia Gas <i>H. M. Yang, N. I. Kim</i>	16:50-17:10 OS7-16 Drag Polar Prediction of an Aircraft Using Inviscid and Various Viscous Models <i>Rashmikant, Y. Abe</i>	17:30-18:00 FRA-3 Advanced Flow Measurement and Control Based on Data Driven Mode Decomposition <i>T. Nonomura</i>	16:50-17:10 OS18-6 Visualization of the Laminar to Turbulent Transition Location Over Reusable Launch Vehicle Using Green Spectrum-Based Temperature-Sensitive Paint <i>K.-H. Chang, H.-Y. Tso, K. S. Chandrasekaran, C.-C. Chang, S.-C. Wang, S. Mariappan, D. Das, A. Singh, S. R</i>	16:45-17:00 OS4-19 Development the Shortened Tsuâ-Ing Hybrid Rocket Engine for the Asfaloth Drug Delivery System <i>R. Miyazaki, T. Shimano, A. Sukhbaatar, S. Mori, T. Kodama</i>	17:10-17:25 OS14-11 Pharmacokinetic Analysis in Lymphatic Drug Delivery System <i>R. Miyazaki, T. Shimano, A. Sukhbaatar, S. Mori, T. Kodama</i>
	17:06-17:24 OS2-36 On the Flammability Limits of Radiative Stretched NH <sub>3</sub> /H <sub>2</sub> /Air Premixed Flames at Elevated Pressures <i>S. Xie, H. Zhang</i>				17:25-17:40 OS14-12 Microfluidic Assessment Reveals Cell Deformability As A Prognostic Factor For AML Treatment Sensitivity <i>T.-Y. Lin, S.-S. Wei, Z. P. Tan, J.-S. Wu</i>	
	17:24-17:42 OS2-37 Premixing Effects of Cracked NH <sub>3</sub> and CH <sub>4</sub> on Flame Propagation and Length Scale Using a Radial-Stepwise-Gap-Burner (RSGB) <i>J. Han, N. I. Kim</i>			17:10-17:30 OS18-7 Bubble Formation Analysis of Boiling Two-Phase Flow of Magnetic Fluids Using Temperature-Sensitive Paint <i>Y.-C. Tan, Y.-J. Cheng, C.-Y. Huang</i>	17:00-17:15 OS4-20 Development of Hypergolic Solid Fuel for Hybrid Rocket Ignition <i>C. M. Cardozol, L. Barral, S. Jeanpierre, M.-C. Audry-Deschamps, H.-Y. Tso, K.-L. Chang, C.-C. Chang, T.-F. Lin, K.-H. Lee, Z.-P. Tan, S.-S. Wei, J.-S. Wu</i>	
	17:42-18:00 OS2-38 Flame Modelling of Premixed Ammonia Combustion in Swirl Burner using LES <i>Q. T. Le, V. B. Nguyen, S. Ma, B. S. Neo, A. Lim, C. W. Kang, H. Zhang</i>				17:40-17:55 OS14-13 A Hydrogel Based Microsystem to Uncouple Mechanical and Chemical Gradients in Dense Tissues <i>G. Jardiné, A. Diallo, G. Simon, H. Delanoë-Ayari, C. Rivière, S. Monnier</i>	
18:00						
19:00						
20:30						
					19:00- Banquet @ Hotel Metropolitan Sendai	

9:00	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	9:00
	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b> <i>Chair: Y. Kanda</i>	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> <i>NH3/H2/Sustainability Chair: Y. Li</i>	<b>OS15: Turbulence: from Fundamentals to Applications</b> <i>wall turbulence Chair: Y. Hattori</i>	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences and OS25: IFS Lyon Center Collaborative Research Forum JOINT SESSION</b>	<b>OS18: Flow measurements using PSP/TSP Technique</b> <i>Chair: H. Nagai</i>	<b>OS9: Biomedical Flow Dynamics</b> <i>Chairs: A. Qiao, C. Voniatis</i>	<b>OS21: Smart Fluids &amp; Soft Matters and Their Advanced Applications</b> <i>Chair: M. Nakano</i>	<b>OS13: Flow Realization, Measurement and Visualization</b> <i>Chair: T. Yamagata</i>	
	CRF-26 - CRF-51 except CRF-32 and CRF-42 Short Oral Presentation	9:00-9:18 OS2-39 Effect of Flame-wall Interaction on Flashback Propensity of Turbulent Premixed Hydrogen Flames <i>J. Park, D. Park, K. T. Kim</i>	9:00-9:20 OS15-1 Turbulent Channel Flow Response to Wavy Walls: a DNS Study <i>M. Brockhaus, A. Sescu, L. Chamorro</i>	9:10-9:50 OS7-17 / OS25-1 <i>Invited Numerical Methods for Solving Multimode Giesekus Viscoelastic Fluid Flows</i> <i>S. Xin, S. Abdollahzadeh, R. Knikker, D. Siginer, M. Botaous</i>	9:00-9:40 OS18-8 <i>Invited Fast Response Inorganic TSP Using a Ball Milling</i> <i>S. Someya, S. Saito, S. Baba, N. Takada</i>	9:00-9:30 OS9-1 <i>Invited Composite Electrospun Scaffolds for Biomedical Applications</i> <i>A. Jedlovszky-Hajdu, V. Pálos, S. Halmóczki, C. Voniatis, H. Saifurrahman, M. Ohta, X. Gong, W. Wang</i>	9:00-9:30 OS21-1 <i>Invited Advanced Applications of Flexible Soft Materials in Impact Protection: Shape Memory Semi-active Safeguarding and Triboelectric Nanogenerator Smart Sensing</i> <i>C.-C. Hung, P.-H. Hsu, Y.-T. Su, Y.-H. Lin, S.-W. Chen, H.-J. Lee</i>	9:00-9:15 OS13-1 Investigation of Heat Transfer Enhancement in Pool Condition under High-Frequency and Low-Frequency Ultrasonic Vibration <i>C.-C. Hung, P.-H. Hsu, Y.-T. Su, Y.-H. Lin, S.-W. Chen, H.-J. Lee</i>	
	9:18-9:36 OS2-40 Combustion Analysis of a Gas Turbine Combustor with Methane/Hydrogen Blended Fuels <i>C.-H. Tsai, H.-Y. Shih</i>	9:20-9:40 OS15-2 Determination of Reynolds Number at which Two Types of Large-scale Structures Alternate in Turbulent Channel Flow using Two-point Velocity Correlation. <i>R. Sasaki, R. Takai, K. Kato, M. Matsubara</i>	9:40-10:00 OS25-2 Identification of Dominant Modes of Flow Between Rotating Conical Cones by Linear Stability and DMD Analyses <i>H. Yata, K. Akinaga, A. Komiya, T. Adachi</i>	9:40-10:00 OS18-9 Development of Silica-based PSP for Unsteady Pressure Distribution Measurements in Low-Speed Flow <i>Y. Yamagishi, M. Okawa, T. Ikami, K. Watanabe, H. Nagai</i>	9:30-9:45 OS9-2 Simulation of Thrombosis Induced by Various Degrees of Stent Malapposition <i>H. Zhang, Z. Qu, S. Chen, A. Qiao, Q. Hou, H. Song, W. Fu, H. Anzai, M. Ohta</i>	9:30-10:00 OS21-2 <i>Invited The Vibration Bandgaps in Linkage Magnetorheological Elastomer Acoustic Metamaterial</i> <i>Z. Chen, G. Jing, W. Li</i>	9:15-9:30 OS13-2 Supervised Learning Applied to Flow Regime Identification of Two-Phase Flow in a Forced-Vibration Rectangular Tube <i>H.-J. Lee, H.-Y. Chen, S.-W. Chen, C.-C. Hung, Y.-H. Lin</i>		
	9:36-9:54 OS2-41 Reconstruction of Velocity and Pressure Field of Reactive Circular Jet Flow using Physics-informed Neural Network <i>R. Waluyo, M. Aziz</i>	9:40-10:00 OS15-3 Determination of Scales of the Large-Scale Structures in Sub-Critical Turbulent Channel Flow <i>R. Takai, K. Takahara, K. Sato, S. Yimprasert, K. Kato, M. Matsubara</i>	10:10-10:30 OS25-3 Coupled Computing of Fluid-Structure Interaction Problems for Multiphase Energy Systems <i>J. Ishimoto, T. Elguedj</i>	10:00-10:20 OS18-10 Evaluation of Pressure Sensitive Paint using PTFE powder and Ru(dpp) <sub>3</sub> <i>Y. Azeyanagi, N. Fujimatsu</i>	9:45-10:00 OS9-3 Development of Electrospun Nanocomposites <i>S. Halmóczki, V. Rizmajer, K. Osán, A. Jedlovszky-Hajdu, C. Voniatis, V. T. Pálos, M. Ohta, H. Saifurrahman</i>	10:00-10:30 OS21-3 <i>Invited Thermomechanical Properties of Natural Rubber: Application to Refrigeration</i> <i>G. Sebald, A. Komiya, M. Sion, S. Xin, G. Coativy</i>	9:30-9:45 OS13-3 Unsupervised Learning Applied to Flow Regime Identification of Gas-Liquid Two-Phase Flow in Vertical Narrow Rectangular Tube <i>Y.-H. Lin, C.-C. Hung, H.-J. Lee, S.-W. Chen</i>		
	9:54-10:12 OS2-42 Investigation on a Preheated Ammonia/Air Stagnation Flame on a Heated Metal Surface <i>K. Kanayama, M. Izumi, T. Tezuka, G. Miyamoto, H. Nakamura</i>	10:00-10:20 OS15-4 On the Breakdown of Görtler Vortices into Fully-Turbulent Boundary Layer Flows <i>M. Brockhaus, A. Sescu, O. Es-Sahli, Y. Hattori</i>	10:20-10:40 OS15-5 Scale of Disturbance Structures around The Second Peak of Velocity Fluctuations in a Turbulent Boundary Layer at very High Reynolds Numbers <i>M. Shimizu, R. Kaji, I. Watanabe, K. Matsui, S. Hara, K. Kato, Y. Naka, A. Inasawa, M. Matsubara</i>	10:00-10:15 OS9-4 Dynamics of Osteoarthritic Synovial Fluid <i>D. Acevedo, D. Grecov, E. Corvera Poiré</i>			9:45-10:00 OS13-4 Large Eddy Simulations of Transonic Diffuser Flows <i>M. Okajima, T. Yamashita, S. Nakao, Y. Miyazato</i>		
	10:12-10:30 OS2-43 Experimental and Numerical Investigation of the Effects of an Uncontrolled Primary Zone Dilution on Liquid Ammonia Spray Combustion <i>E. C. Okafor, O. Kurata, H. Yamashita, N. Iki, T. Inoue, H. Jo, M. Shimura, T. Tsujimura, A. Hayakawa, H. Kobayashi</i>						10:00-10:15 OS13-5 Quantitative Flow Visualization of Shock-Dominated Flows by MZI <i>T. Yamashita, M. Okajima, S. Nakao, Y. Miyazato</i>		
	10:12-10:30 OS2-43 Experimental and Numerical Investigation of the Effects of an Uncontrolled Primary Zone Dilution on Liquid Ammonia Spray Combustion <i>E. C. Okafor, O. Kurata, H. Yamashita, N. Iki, T. Inoue, H. Jo, M. Shimura, T. Tsujimura, A. Hayakawa, H. Kobayashi</i>						10:15-10:30 OS13-6 Three-Dimensional Structure of a High-Aspect-Ratio Elliptic Underexpanded Sonic Jet <i>T. Sakashita, T. Nagata, S. Nakao, Y. Miyazato</i>		
10:30	BREAK								10:30
10:40	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	10:40
	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b> <i>Chair: Y. Morii</i>	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> <i>NH3/H2/Sustainability Chair: H. Zhang</i>	<b>OS15: Turbulence: from Fundamentals to Applications</b> <i>turbulent shear flow Chair: Y. Hattori</i>	<b>OS25: IFS Lyon Center Collaborative Research Forum</b>	<b>OS18: Flow measurements using PSP/TSP Technique</b> <i>Chair: Y. Matsuda</i>	<b>OS9: Biomedical Flow Dynamics</b> <i>Chairs: H. Anzai, M.S.S. Hashuro</i>	<b>OS21: Smart Fluids &amp; Soft Matters and Their Advanced Applications</b> <i>Chair: W. Li</i>	<b>OS13: Flow Realization, Measurement and Visualization</b> <i>Chair: K. Funamoto</i>	
	CRF-52 - CRF-77 except CRF-72 and CRF-76 Short Oral Presentation	10:40-10:58 OS2-44 Numerical Investigation on The Design of Swirl Burner For NH3/CH4/Air Combustion <i>J.-Y. Lu, S.-Y. Hsu, C.-H. Tsai, K.-C. Lin, W.-X. Lin, C.-C. Chen</i>	10:50-11:10 OS15-6 An Attempt at Linear Response Extraction Method to Elucidate the Leading Edge Receptivity to Free Stream Disturbances <i>K. Taira, A. Yoshida, K. Kato, M. Matsubara</i>	10:40-11:00 OS25-4 Coarse-grained Lattice Simulations for Turing Patterns on Membranes <i>E. Bretin, C. Carvalho, R. Denis, F. Kato, H. Koibuchi, S. Masnou, M. Nakayama, S. Tasaki, T. Uchimoto</i>	10:40-11:00 OS18-11 Post Processing Method for Pressure-Sensitive-Paint Data Using Machine Learning <i>R. Kokubo, M. Takagi, T. Ikami, Y. Egami, H. Nagai, Y. Matsuda</i>	10:40-11:10 OS9-5 <i>Invited Evaluation of Vascular Function Focusing on Luminal Surface Topography</i> <i>M. Kobayashi, Y. Hashimoto, A. Kishida, T. Kimura, K. Murata, H. Masumoto, H. Anzai, Z. Wang, M. Ohta, M. Yamamoto</i>	10:40-11:10 OS21-4 <i>Invited Electro-Rheological Behavior of Suspensions Based on Titanium Dioxide Nano-Particles in Various Types of Modified Silicone Oil</i> <i>K. Tanaka, X. Lin, S. Yonezumi, M. Kawaguchi, H. Kobayashi, M. Nakano</i>	10:40-10:55 OS13-7 Investigation of Number of Blades with a Focus on Enhancing Cross-flow Turbine Manufacturing <i>S. Takeshima, K. Suzuno, G. Katagiri, T. Arai, S. Iio, T. Uchiyama, K. Takamure</i>	

	10:58-11:16 OS2-45 Stabilization and NOx of Non-Premixed Flames of Cracked NH <sub>3</sub> + H <sub>2</sub> with a Fuel-Tube Depth in a Coaxial Air <i>P. S. Kim, D. S. Jeon, N. I. Kim</i>	11:10-11:30 OS15-7 Experimental Study on the Effect of Microbubbles on Turbulent Structure in Pipe Flow <i>X. Wu, T. Masuda, Y. Hamana, Y. Tsuji</i>	11:00-11:20 OS25-5 Analysis of Frequency Spectrum of Ultrasonic Pulse-Echo Wave Reflected on Periodic Rough Surface <i>K. Fujii, H. Nakamoto, P. Guy, T. Uchimoto</i>	11:00-11:20 OS18-12 Experimental Study of Unsteady Flow around Oscillating Airfoil using cmtTSP <i>G. Y. Lim, T. Ikami, H. Nagai</i>	11:10-11:25 OS9-6 Fabrication of Composite Nanofibrous Covers for Coronary Stents <i>C. Voniatis, A. Jedlovszky-Hajdu</i>	11:10-11:30 OS21-5 Size-dependent Magnetomechanically Enhanced Photothermal Antibacterial Efficacy in Fe <sub>3</sub> O <sub>4</sub> @Au/polydopamine Magnetic Fluid <i>Y. Xu, K. Wang, S. Xuan, X. Gong</i>	10:55-11:10 OS13-8 Relationship between Performance of Propeller Turbine and Blade Solidity <i>F. Miura, T. Sei, S. Hashimoto, S. Iio, T. Uchiyama</i>		
	11:16-11:34 OS2-46 Effects of Flame Cooling on Gas and Liquid Ammonia Spray Combustion using a Swirling Burner <i>G. Reibel, Y.-R. Chen, K. Oku, H. Yamashita, A. Hayakawa, T. Kudo, H. Kobayashi</i>	11:30-11:50 OS15-8 The Modulating Effect of Coherent Structures on Inter-scale Energy Transfer in Turbulent Mixing Layer <i>M. Wang, Y. Ito, Y. Sakai</i>	11:20-11:40 OS25-6 Enhancement of Protein Mass Transfer using Ultrasound Induced Flow and Macro-pore Membrane <i>A. Komiya, R. Zhu, V. Botton, S. Miralles</i>	11:20-11:40 OS18-13 Unsteady Pressure Distribution Measurement of Hayabusa Capsule at Transonic Speeds <i>R. Hosaka, D. Yamashita, T. Ikami, Y. Egami, H. Nagai</i>	11:25-11:40 OS9-7 Polysuccinimide-Salt Electrospun Scaffold as a Potential Wound Dressing Material <i>V. Pálos, S. Halmóczki, C. Voniatis, H. Saifurrahman, M. Ohta, A. Jedlovszky-Hajdu</i>	11:30-11:50 OS21-6 A Smart Shear Thickening Fluid (STF)-based Warning-protection Sponge towards Sensing Performance and Impact Resistance with Excellent Flame Retardant <i>Y. Pan, M. Sang, X. Gong</i>	11:10-11:25 OS13-9 Effect of Guide Vane on the Performance of Waterfall Cross-Flow Hydro Turbines <i>K. Moriya, T. Yamagata, N. Fujisawa</i>		
	11:34-11:52 OS2-47 Measurements and Numerical Simulations of Axial Fuel-Air Staged Ammonia-Hydrogen Combustion <i>J. Lee, U. Jin, K. T. Kim</i>	11:50-12:10 OS15-9 Flutter Boundary Behaviors and Airfoil Thickness Effects in Transonic Flow Regimes <i>S. Selland, T. Miyake, H. Terashima</i>	11:40-12:00 OS25-7 Active yet Precise Control of Protein Mass Transfer by Membranes <i>A. Komiya, J. F. Torres, R. Zhu, S. Livi</i>	11:40-12:00 OS18-14 Investigation on Leading Edge Vortex on Low Reynolds Number Rotor Blade by cmtTSP Visualization <i>T. Ikami, R. Nishimura, H. Nagai</i>	11:40-11:55 OS9-8 Structural Modification of Catheter-Type Tactile Sensor Using Polyvinylidene Fluoride (PVDF) Film <i>S. Nagano, K. Takashima, M. Watanabe, K. Ishida</i>	11:50-12:10 OS21-7 Superior Yarns-Based Fabrics with Satisfied Mechanical and Thermal Properties towards Safeguarding <i>H. Chen, M. Sang, X. Gong</i>	11:25-11:40 OS13-10 Dynamic Response of Three-Dimensional Transient Flow in a Centrifugal Fan Using Dynamic Mode Decomposition with Control <i>S. Maruyama, I. Kambayashi, A. Kiyama, D. Kang</i>		
	11:52-12:10 OS2-48 Combustion Analysis of Gas Turbine Combustor with Methane/Ammonia Blended Fuels <i>W.-J. Chen, H.-Y. Shih</i>						11:40-11:55 OS13-11 Flow Characteristics of Charged Particles in a Swirling Flow Under the Influence of an Electric Field in a Circular Pipe <i>T. Haruki, K. Yoshimi, T. Yagi, H. Amano, Y. Iwatani, T. Uchiyama, K. Takamure</i>		
	12:10-12:28 OS2-55 Dynamics-Informed Stiffness Reduction for Reactive Simulations of Ammonia-Hydrogen Blends <i>M. Y. Baykan, V. Vijayarangan, D.-H. Shin, H. G. Im</i>						11:55-12:10 OS13-12 Experimental Study on Passive Control of Supersonic Jet Noise <i>S. Togoshi, S. Nakao, Y. Miyazato</i>		
12:10	Luncheon Session CRF-26 - CRF-77, except CRF-32, CRF-42, CRF-72, CRF-76 Poster Presentation			BREAK				12:10	
13:00	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	13:00
	<b>OS22: Liaison Office Session</b>	<b>OS15: Turbulence: from Fundamentals to Applications</b> bluff body Chair: M. Matsubara					<b>Ceremony Commemorating the 10th Anniversary of the Installation of the 1-m Magnetic Suspension and Balance System at the Institute of Fluid Science, Tohoku University</b>	<b>OS13: Flow Realization, Measurement and Visualization</b> Chair: S. Iio	
	13:00- History of Liaison office session <i>Makoto Ohta (IFS)</i>	13:10-13:30 OS15-10 Numerical Study on the Influence of Aerodynamic Effects on High-Rise Pantograph at Different Working Heights <i>A. Dwivedi, N. Oshima, Y. Cho, S. Kim</i>	13:30-13:50 OS15-11 Mechanisms of Aerodynamic Forces with Varying Aspect Ratio of Rectangular Cylinder <i>N. Yoshida, H. Asada, S. Kawai</i>	13:50-14:10 OS15-12 Aerodynamic Heat Dissipation and Aerodynamic Performance Simulation for FSAE Racing Car <i>G. Zhai, X. Fu, C. Lai</i>			13:00-13:10 Opening Remarks 13:10-13:25 Commemorative Video Screening 13:25-13:55 Guest Speeches 13:55-14:00 Closing Remarks	13:10-13:25 OS13-13 Experimental Study of Ninja-Star Underexpanded Sonic Jets <i>R. Uchida, S. Nakao, Y. Miyazato</i> 13:25-13:40 OS13-14 Fundamental Study on Effective Positions of a Feedback Force in Measurement-integrated simulation for Flow around a Circular Cylinder <i>K. Hirose, S. Miyauchi</i> 13:40-13:55 OS13-15 Visualization of The Wake Behind a NACA Blade with Truncated Rear End <i>S. Tsukamoto, K. Takamure, T. Uchiyama</i>	
	13:05- Global Strategy of Tohoku University as an International Research Excellence <i>Prof. Toshiya Ueki (Executive Vice President for General Affairs, International Affairs, and Academic Resources of Tohoku University)</i>								
	13:20- My academic journey of 10+ years in Boston <i>Prof. Jessie S Jeon (KAIST)</i>								
	13:35- Overseas Research Case Reports: 6 months in Taiwan <i>Kazuki Sone (PhD student, Funamoto Lab., IFS)</i>								

	13:45- Overseas Research Case Reports: 3 months in Lyon <i>Taisei Takagi</i> (Master student, Komiya Lab., IFS)	14:10-14:30 OS15-13 Design and Parametric Analysis of Propeller Boss Cap Fins with Hull Interaction Effects: A CFD-based Study <i>G. Rajaraman, P. Tomar, N. Kumbhakarna</i>						13:55-14:10 OS13-16 Effect of Deflector Angles on Drag of Ahmed Body <i>D. V. Pham, T. H. Tran, G. Sharma, J. Tanimoto</i>
	13:55- Joint research and education initiatives at IFS through network of liaison offices and joint laboratories <i>Tetsuya Uchimoto</i> (IFS)	14:30-14:50 OS15-14 Reynolds Number Effect on Drag Reduction of Axisymmetric Boattail Models with Longitudinal Groove Cavitation <i>O. D. Nguyen, T. H. Tran, D. T. Nguyen, G. Sharma, J. Tanimoto</i>						14:10-14:25 OS13-17 Experimental Study on Flow Visualization Technique in Low Aspect Ratio Thin Wing at Critical Reynolds Numbers <i>Y.-C. Liu</i>
	14:05- A liaison office: the first step towards lasting collaboration?: 20th anniversary, and HYCOMBS with the TU-CNRS-CREATE <i>Prof. Jean-Yves Cavaille</i> (CGO of IFS)							14:25-14:40 OS13-18 Flow Structures of Unsteady Supersonic Free Jets from a Round Laval Nozzle <i>H. Ueno, R. Fukuda, S. Nakao, Y. Miyazato</i>
	14:20- Hydrogen and Ammonia Combustion R&D in Singapore: Introduction of HYCOMBS (and LCER) <i>Prof. Huangwei Zhang</i> (NUS)							
	14:35- Research and Development on Large Scale Renewable Ammonia Production in Saudi Arabia <i>Prof. Mani Sarathy</i> (KAUST)							
	14:50- Closing							
14:40								14:40
					BREAK			
14:50	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B
	<b>OS24: IFS Collaborative Research Forum (AFI-2024)</b>	<b>OS26: JSPS Core to Core program workshop</b> <i>Chair: A. Hayakawa</i>	<b>OS15: Turbulence: from Fundamentals to Applications</b> <i>fundamental &amp; environmental Chair: T. Ishihara</i>	<b>OS25: IFS Lyon Center Collaborative Research Forum</b>	<b>GS: General Session</b> <i>Chair: Y. Kanda</i>	<b>OS9: Biomedical Flow Dynamics</b> <i>Chairs: M. Zhang, T. Nakayama</i>	<b>OS21: Smart Fluids &amp; Soft Matters and Their Advanced Applications</b> <i>Chair: X. Gong</i>	<b>OS13: Flow Realization, Measurement and Visualization</b> <i>Chair: S. Funatani</i>
	15:00-15:25 OS26-1 <i>Invited</i> Towards Clean and Efficient Ammonia Combustion for Gas Turbine Applications <i>Yuyang Li</i> (Shanghai Jiao Tong University, China)	15:00-15:20 OS15-15 Non-Equilibrium Turbulence Effects in Dynamos and Convections <i>N. Yokoi</i>	14:50-15:10 OS25-8 Investigation of Electric Field Induced Bending of Doped Epoxy-amine Elastomers with Ionic Liquids <i>D. Djoumoi, L. Seveyrat, V. Perrin, F. Dalmas, S. Livi, J. Courbon, H. Takana, J.-Y. Cavaillé, G. Coativy</i>	14:50-15:05 GS1-11 Effects of Phase Differences Between Oscillating Foil and Periodic Flow on Thrust and Lift Coefficients <i>M. Sagawa, Y. Isoda, Y. Tanaka</i>	14:50-15:05 OS9-9 Cancelled	15:00-15:30 OS21-8 <i>Invited</i> Visco-Elasto-Plastic Behaviour of Magnetorheological Elastomers under Shear Loading <i>K. Danas, G. Sebald, M. Nakano</i>	14:50-15:05 OS13-19 Influence of a Low-Pass Filtered Reconstructed Volume on the Measurement Accuracy of Holographic Particle Tracking Velocimetry <i>Y. Tanaka, M. Ishiyama, D. Nakai</i>	
	15:25-15:50 OS26-2 <i>Invited</i> Development of Low Carbon Ammonia-fuel Combustor for Power Generation <i>Sophie Colson</i> (IHI Corporation, Japan), Shintaro Ito, Masahiro Uchida, Takamasa Ito	15:20-15:40 OS15-16 Experimental Comparison of Turbulent Statistics in Superfluid <sup>4</sup> He Coflow and Counterflow <i>T. Hirayama, Y. Tsuji</i>	15:10-15:30 OS25-9 Parametric Study of Ion Flow Through Polymer Strip Submitted to a High Voltage <i>J. Courbon, H. Takana, G. Coativy, J.-Y. Cavaillé</i>	15:05-15:20 GS1-12 Flow Separation Control over Cetacean-inspired and Bird/Insect Wing-inspired Airfoils DU 06 W 200 <i>A. Xavier Andrade, O. Ali Zargar, S.-C. Hu, T. Lin</i>	15:05-15:20 OS9-10 Hemodynamic Effects on Aneurysm Endovascular Coil Porosity <i>N. S. b. Shafii, R. Yamaguchi, K. Osman, M. I. Kori, A. Z. M. Khudzari, M. Ohta</i>	15:30-16:00 OS21-9 <i>Invited</i> Rheological Properties of MR Elastomers under Normal Compression <i>T. Tian, P. Milosevski, M. Nakano</i>	15:05-15:20 OS13-20 Velocity Reconstruction of Three-dimensional Velocity Field Measured by Stereo PIV using Helmholtz Decomposition <i>A. Saito, Y. Tanaka</i>	
	15:50-16:15 OS26-3 <i>Invited</i> Ammonia in Marine Transport: Research Insights and Future Directions <i>Moez Ben Houidi</i> (King Abdullah University of Science and Technology (KAUST), Saudi Arabia), Fahad Almatrafi, Hao Wu, William L. Roberts	16:00-16:20 OS15-18 Intermittency Analysis of the Turbulence over Idealized Urban Areas Based on Empirical Mode Decomposition <i>R. Wang, C.-H. Liu</i>	15:30-15:50 OS25-10 Bending Strength of Density Gradient Designed Silicon Carbide Plate by the Direct Ink Writing <i>H. Kurita, T. Kudo, T. Kanno, Z. Wang, F. Narita</i>	15:20-15:35 GS1-13 Flow Separation Control over Shark Skin-inspired and Hybrid Blade Airfoils DU 06 W 200 <i>O. Ali Zargar, A. X. Andrade, S.-C. Hu, T. Lin</i>	15:20-15:35 OS9-11 Cancelled	15:35-15:50 OS9-12 Microfluidic Liquid Dispenser: Effects of Boundary Condition on Single Droplet Formation <i>P. D. W. Prasetya, Suprijanto, T. S. Wibowo, M. Ohta, H. Anzai, N. K. Putra</i>	16:00-16:20 OS21-10 Development of a Rotary Fluid Inertor with Variable Damping Characteristics <i>W. Xie, L. Deng, W. Li</i>	15:20-15:35 OS13-21 High-frequency Ultrasound Imaging Analysis of Intravascular Flow Dynamics in Metastatic Lymph Nodes <i>K. Maeda, D. Kuramoto, Y. Okada, R. Miyazaki, M. Omura, A. Sukhaatar, S. Mori, T. Kodama</i>
		16:20-16:40 OS15-19 Wake Motions after a Fractal Tree based on Empirical Mode Decomposition <i>S. Liu, C.-H. Liu</i>	15:50-16:10 OS25-11 Ultrasound Study of Hydrolytic Ageing of Polymers <i>S. Boucaud-Gauchet, J. Caritey, G. Jusserand, T. Devaux, S. Livi, F. Vander Meulen, T. Uchimoto, N. Mary</i>	15:35-15:50 GS1-14 Investigation of Ultrasonic-Driven Pulsating Supersonic Jet for High-Speed Flow Control <i>K. Adachi, H. Furukawa, K. Furutani, T. Handa</i>	15:50-16:05 OS9-13 Numerical Simulations in 3D Airway Models for Respiratory Droplet Generations Using DPM-EWF <i>N. Kobayashi, M. Ohta, H. Anzai</i>			15:35-15:50 OS13-22 Relationship Between Impact Forces and Erosion Initiation in Pulsed Jet Tests on Erosion of Wind Turbine Blades <i>G. Ikarashi, H. Furukawa, T. Yamagata, N. Fujisawa, K. Fujisawa, M. Tanaka</i>

				15:50-16:05 GS1-15 Flow Dynamics of Oscillatory Flow Across a Porous Structure: An Overview <i>F. A. Z. Mohd Saat, M. I. Fahmy Rosley, F. Shikh Anuar</i>			15:50-16:05 OS13-23 Numerical Analysis of Rain-induced Erosion in Wind Turbine Blades <i>K. Fujisawa, T. Yamagata, N. Fujisawa, M. Tanaka</i>	
16:20							16:05-16:20 OS13-24 Experimental Study of Transient Shock Wave Behavior in a Transonic Diffuser <i>H. Kodama, S. Nakao, Y. Miyazato</i>	
16:30	EX-Hall-1A	EX-Hall-1B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B
	<b>OS2: The Second International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b>  NH3/H2/Sustainability <i>Chair: H. Nakamura</i>	<b>OS15: Turbulence: from Fundamentals to Applications</b>  fundamental & environmental <i>Chair: T. Ishihara</i>	<b>OS25: IFS Lyon Center Collaborative Research Forum</b>	<b>GS: General Session</b>  <i>Chair: T. Ikami</i>	<b>OS9: Biomedical Flow Dynamics</b>  <i>Chairs: Y. Li, J. Liao</i>	<b>OS21: Smart Fluids &amp; Soft Matters and Their Advanced Applications</b>  <i>Chair: G. Sebald</i>		16:30
	16:30-16:48 OS2-49 Experimental and Chemical Kinetic Study of NO Addition Effect on Methane Oxidation Using Weak Flames in Micro-Flow Reactor with a Controlled Temperature Profile <i>A. S. Singh, K. Tamaoki, Y. Murakami, K. Kanayama, T. Tezuka, H. Nakamura</i>	16:40-17:00 OS15-20 Transport Efficiency of Different Positions over Idealized Urban Areas by Empirical Mode Decomposition <i>Y. Hou, K. Zhou, C.-H. Liu</i>	<b>16:20-16:40 OS25-12</b> Monitoring Eukaryotic Cell Functions under Various Hypoxic Conditions with Microfluidic Based Oxygenators <i>N. Ghazi, N. Kawahara, S. Hirose, S. Yanagita, K. Funamoto, C. Anjard, J.-P. Rieu</i>	16:30-16:45 GS1-16 Wake Structure Interactions in a Channel Flow of Shear-thinning Fluids around Porous Cylinders <i>S. Jamshed, N. Tiwari, A. Dhiman</i>	16:30-16:45 OS9-14 Numerical Modeling of Histotripsy Induced by High-Intensity Focused Ultrasounds <i>P. Guida, W. L. Roberts</i>	16:30-17:00 OS21-11 <i>Invited</i> Development and Implementation of MR Fluid Shaft Coupling for Driving Axial Pump <i>M. Nakano, O. Taguchi, K. Sugiyama, Y. Watanabe</i>		
	16:48-17:06 OS2-50 An Extension of Localized Thickened Flame Approach for Premixed Flames under Stretching Effects <i>T. Cui, H. Terashima, S. Kawai</i>	17:00-17:20 OS15-21 Analysis of Trailing Edge Noise from a Flat Plate and Effect of Finlets on the Noise using Direct Numerical Simulation <i>N. Hirao, M. Hirota, Y. Hattori</i>	16:40-17:00 OS25-13 Investigation of a Predictive Therapeutic Response Under Controlled Oxygen Condition in Cancer Patient-Derived Organoids <i>S. Aratake, M. Roinard, Z. Su, J.-P. Rieu, K. Funamoto, N. Aznar</i>	16:45-17:00 GS1-17 Dynamics of an Inverted Flag in an Oscillatory Flow <i>J. Zhang, T. Nakamura</i>	16:45-17:00 OS9-15 Validation of Fluid-Structure Interaction Analysis Using Particle Image Velocimetry in a Cerebral Aneurysm <i>S. Sato, G. Tanaka, M. Ohta, R. Yamaguchi</i>	17:00-17:20 OS21-12 Effects of Arbitrary Particle Morphology on Dynamic Performance of Magnetorheological Fluids <i>K. Wang, B. Liu, Y. Xu, H. Deng, X. Gong</i>		
	17:06-17:24 OS2-51 Kinetic Insights into Ammonia-hydrogen Doped Ignition and Emission Assisted by Nanosecond Pulsed Discharge <i>M. Zhang, Q. Chen, N. Liu, W. Qin, Y. Fu</i>	17:20-17:40 OS15-22 The Mechanism of Aeroacoustic Noise Generation in Jet-Wing Interaction under the Wing-in-Ground Effect <i>L. Tan, Y. Hattori</i>	17:00-17:20 OS25-14 Super-Resolution Reconstruction of Microdefects on Metal Spherical Surfaces using Eddy Current Pulsed Thermography <i>L. Guo, L. He, Z. Tong, S. Xie, Z. Chen, T. Uchimoto, T. Takagi</i>	17:00-17:15 GS1-18 Experimental Study on Active Control of Subsonic Compressible Boundary-Layer Flow Using High-Frequency Flapping Jet <i>K. Ikeuchi, A. Urita, T. Handa</i>	17:00-17:15 OS9-16 A Computational Fluid Dynamics-based Framework for Slip-Resistance Performance of Progressively Worn Common Outsole Designs: Implications on Slips and Falls <i>S. Gupta, A. Chanda</i>	17:20-17:40 OS21-13 Design, Modelling, and Experimental Evaluation of a Variable Inertance Bypass Fluid Inverter <i>K. T. Tran, L. Deng, W. Li</i>		
	17:24-17:42 OS2-52 High-Pressure Turbulent Burning Velocities of Stoichiometric (55%NH <sub>3</sub> +45%H <sub>2</sub> )/Air Spherical Flames in Near-Isotropic Turbulence <i>V. T. Mai, W.-C. Shen, H.-Y. Hsieh, S. Shy</i>	17:40-18:00 OS15-23 Investigation of Orthogonal Modes in High-speed Axisymmetric Jet Turbulence: Instantaneous vs. Statistical Data <i>S. Arabi, M. Z. A. Koshuriyan, A. Sesu</i>	17:20-17:40 OS25-15 Analysis of the Drift Velocity Variation of Carbon in Steel under Electric Field <i>R. Onozuka, P. Chantrenne, T. Tokumasu</i>	17:15-17:30 GS1-19 Analysis of the Atomization Process in a Swirl Injector Using VOF to Lagrangian Method <i>K.-L. Li, C.-C. Tseng, P.-Y. Tsai</i>	17:30-17:45 GS1-20 Computational Studies for Air Intake and Plasma Generation Process in Air-breathing Electric Propulsion System <i>K. Ito, M. Takahashi</i>	17:15-17:30 OS9-17 CFD Study on Relationship between Occurrence of Portal Vein Thrombosis and Wall Shear Stress after Hepatectomy <i>S. Nakajima, Y. Iijima, M. Takada, I. Hosokawa, M. Otsuka, G. Tanaka</i>		
	17:42-18:00 OS2-53 Species Measurements for NH <sub>3</sub> /CH <sub>4</sub> Mixtures at Intermediate Temperatures Using a Micro Flow Reactor with a Controlled Temperature Profile <i>Y. Ishida, K. Tamaoki, K. Kanayama, T. Tezuka, H. Nakamura</i>		17:40-18:00 OS25-16 Damage due to Water Jet Impacts on ZnS <i>P. Gantier, D. Nélias, N. Boisson, T. Chaise, C. Mauger, P. Dumont, P. Junique</i>					18:00

## OS23: The 20<sup>th</sup> International Students / Young Birds Seminar on Multi-scale Flow Dynamics

- OS23-1: Numerical Simulation of Triple Thermal Plasma Process for Synthesizing Silicon/Carbon Composite  
*S.-B. Yang, Y. H. Lee, J.-H. Oh, S. Choi*
- OS23-2: Thermal Plasma Synthesis of Boron Nitride Nanotubes Using a Reactant Gas of Ammonia  
*S. Kim, Y. H. Lee, J.-H. Oh, S. Choi*
- OS23-3: Synthesis of Graphene Nanoflakes by Methane Pyrolysis in Thermal Plasma  
*G. Yang, S. Kim, S. Yang, H. Ko, Y. H. Lee, J.-H. Oh, S. Choi*
- OS23-4: A Study on Droplet Breakup Behavior and its Electrical Characteristics  
*Y. Kurihara, R. Jin, M. Daikoku, T. Miyagawa, T. Okabe, M. Shirota, Y. Matsukawa, H. Aoki, Y. Saito, J. Fukuno*
- OS23-5: Thermal Emission Measurement in a Micro-Area of Two-Dimensional Materials  
*H. Tanaka, T. Kishi, K. Misaki, I. Bisignano, S. Ishii, A. Sakurai*
- OS23-6: Unsteadiness in a 2D Transonic Cavity Flow with a Deep Sub-cavity and Deployment of a Passive Control Technique  
*C. Mallavarapu, H. Ogawa, S. K. Karthick*
- OS23-7: Semi-Active Vibration Control Combining Various Disturbance Periods and Predictive Scheme  
*K. Mishima, X. Li, T. Tang, M. Zhou, Y. Hara, K. Makihara*
- OS23-8: Dynamic Analysis Method for High-Aspect-Ratio Wings Using Curvature Modes  
*Y. Shizuno, S. Dong, R. Kuzuno, T. Okada*
- OS23-9: Buffeting-Induced Vibration Energy Harvesting using Flexible Plates with Piezoelectric Film  
*K. Shimura, M. Ishigami, Y. Jia, Y. Shi, C. Soutis, H. Kurita, F. Narita, Y. Hara, K. Makihara, K. Otsuka*
- OS23-10: Conceptual Study on an Flying Wing Type Micro-sized Mars Airplane with Canard  
*R. Kimura, M. Okawa, T. Ikami, H. Nagai*
- OS23-11: Uncertainty Quantification of Spacecraft Thermal Analysis Using Transient Surrogate Model  
*D. Yamashita, T. Ikami, H. Nagai*
- OS23-12: Effect of Liquid Properties on Attitude of Flake Particles in a Drop Impacting using DEM-VOF Simulations  
*N. Hashiguchi, T. Miyagawa, T. Okabe, M. Shirota, Y. Matsukawa, H. Aoki, M. Daikoku, J. Fukuno, Y. Saito*

- OS23-13: **Thermal Load Estimation Using Machine Learning**  
*A. Okuyama, R. Kato, S. Eguchi, Y. Hara, K. Makihara, K. Otsuka*
- OS23-14: **Experimental Study on Heat Transport Characteristics of Single-Turn Pulsating Heat Pipe with Straight Channel**  
*K. Saito, T. Nozawa, M. Miura*
- OS23-15: **Liquid Film Formed with Liquid Column Oscillation in Capillary Tube**  
*I. Ito, Y. Ahara, H. Kikuchi, Y. Hitomi, M. Miura, H. Ito*
- OS23-16: **Heat Transport Characteristics of Pulsating Heat Pipes with Various Flow Path Shapes**  
*T. Sasagawa, R. Akiyama, M. Miura*
- OS23-17: **Performance Improvement of Gas Separator with Micro-Network Structure and Prototyping of the Device with a 3D printer**  
*R. Masuo, M. Osada, S. Nakanishi, M. Yamazaki, N. Ono*
- OS23-18: **Visualization of Surface and Internal Flows in Liquid Layer during Coating Material Processing**  
*K. Akase, R. Yabe, N. Ono*
- OS23-19: **Prototype Study of Particle Separator with 3D Printed Microstructures Utilizing Thermophoresis**  
*M. Osada, R. Masuo, S. Nakanishi, M. Yamazaki N. Ono*
- OS23-20: **Temperature Evaluation of Autonomous Spectral Switching Coatings under Solar Irradiation**  
*T. Takahashi, H. Tomori, H. Gonomo*
- OS23-21: **Insight into Latent Heat and Melting of Sugar Alcohol Phase Change Materials: A Molecular Dynamics Study**  
*S. Cheng, D. Surblys, T. Ohara*
- OS23-22: **Correlation between Deformation Behavior of Filament Wound CFRP and Eddy Current Testing Signals**  
*K. Nakajima, T. Uchimoto, H. Kosukegawa, T. Takagi, S. Takeda, T. Watanabe, Y. Tsuchiyama*
- OS23-23: **Clustering Method of Species Characteristics for Simplified Reaction Model of Methane**  
*K. Igusa, H. Nakamura*
- OS23-24: **Improvement of Solar Absorption Performance by Plasmonic Pickering Emulsions**  
*Y. Koizumi, S. Hirashima, T. Kimura, M. Ono, Y. Nonomura, A. Masuhara, H. Gonomo*
- OS23-25: **Thermal Photonics Power Generation System Based on Perovskite Materials**  
*K. Ono, S. Ito, R. Sugimoto, A. Sakurai*

- OS23-26: **Effect of Pre-strain on Unsteady Characteristics of Flexible-membrane Wing at Low Reynolds Number**  
*H. Kurahashi, T. Ikami, H. Nagai*
- OS23-27: **Uncertainty Quantification in Compressible Flow Fields with Different Initial Conditions**  
*N. Gima, S. Morizawa*
- OS23-28: **Design and Development of 7 kW Solar Simulator for Solar Thermal Applications**  
*A.Z. Rizal, M. Kambayashi, K. Matsubara, T. Kodama, S. Bellan*
- OS23-29: **Fluid-Structure Interaction Analysis of Flexible-membrane Wing at Low Reynolds Number**  
*K. Funada, H. Osaki, Y. Chikamoto, D. Sasaki, Y. Kawamoto, S. Takahashi, K. Fujita, H. Kurahashi, M. Okawa, T. Ikami, H. Nagai*
- OS23-30: **Basic Research on Dye-Painted AA-PSP Using Bathophenanthroline Ruthenium Chloride as the Pressure-Sensitive Dye**  
*H. Takata, Y. Kawamata, T. Kawashima, D. Numata*
- OS23-31: **Effect of Anodized Aluminum Layer Thickness on the Characteristics of Sulfuric Acid Type Dye-Painted AA-PSP**  
*K. Yonevama, Y. Kawamata, T. Kawashima, D. Numata*
- OS23-32: **Experimental Investigation of Optimized Arrangements of HEPA Air Purifiers in Indoor Ventilation**  
*H. Takaku, W. Yamazaki, H. Takahashi*
- OS23-33: **Advanced Optical Design for PIV Measurements on Curved Surfaces**  
*R. Mise, T. Ikami, H. Nagai*
- OS23-34: **Influence of Unsteadiness of Cavitating Flow on the Thermodynamic Self-Suppression Effect**  
*G. Nakamura, Y. Iga*
- OS23-35: **Numerical Simulation for Non-Newtonian Liquid Jet Breakup in a Gas Cross-flow with an Electric Field**  
*S. Nakashima, K. Hayashi, M. Shirota, S. Iwata, Y. Mawatari, M. Yamamura, Y. Saito*
- OS23-36: **Effect of Atomization Characteristics of Two-fluid Nozzle on Radiative Heat Transfer in Fire Accident**  
*M. Jono, T. Kogawa, K. Kawai, W. Xing, S. Moriya, J. Okajima, H. Gonome*
- OS23-37: **Towards to Extrapolation Prediction of Fluid Phenomena Using Physics-Informed Neural Networks (PINNs)**  
*S. Nakama, S. Morizawa*
- OS23-38: **Research on Installing Protuberance on a Flat Plate at Low Reynolds Numbers**  
*H. Osaki, D. Sasaki, Y. Kawamoto, M. Okamoto*

- OS23-39: **Towards Efficient Unsteady Aerodynamic Optimization of a Thin Angular Airfoil at Low Reynolds Number**  
*Y. Chikamoto, D. Sasaki, Y. Kawamoto*
- OS23-40: **Development of Temperature Sensitive Paint for Cryogenic Fluid Visualization**  
*S. Okuyama, T. Yokouchi, T. Ikami, H. Nagai*
- OS23-41: **Research on Advanced Aerodynamic Topology Optimization for Supersonic Airfoil**  
*Y. Inagaki, W. Yamazaki*
- OS23-42: **Airfoil Design Using Optimal Design Technology Integrating Experimental and Numerical Analysis Data**  
*S. Fujisaki, A.U. Batsukh, W. Yamazaki*
- OS23-43: **Dependence of the Probe Volume Direction in LITGS in Non-reacting Flow with Temperature Distribution**  
*H. Kondo, S. Hasegawa, K. Norimatsu, T. Kudo, A. Hayakawa*
- OS23-44: **Influence of Notch in Inducer Blade on Cavitation Instabilities for Rocket Turbopump**  
*T. Yoshino, N. Ishikawa, A. Kowata, S. Kawasaki, Y. Iga*
- OS23-45: **Numerical Simulation of Gas-Liquid Two-Phase Flow and Liquid Film Formation on a Rotating Disk with a Narrow Gap**  
*K. Kurosawa, M. Shimagaki, J. Okajima*
- OS23-46: **Passage Characteristics of Bundle of Vortical Axis Lines in Homogeneous Isotropic Turbulence**  
*K. Uchima, K. Nakayama*
- OS23-47: **Evaluation of Martensitic Transformation and Surface Microcracks of Hydrogen-Charged Austenitic Stainless Steels Using Eddy Current Testing**  
*Y. Kure, T. Uchimoto, S. Ajito, M. Koyama, E. Akiyama, S. Takeda*
- OS23-48: **Effect of Anodized Aluminum Layer Thickness on the Characteristics of Phosphoric Acid Type Dye-Painted AA-PSP**  
*T. Kawashima, D. Numata*
- OS23-49: **Development of Background Oriented Schlieren Measurement Technique for Cylindrical Combustion Flow**  
*Y. Hirayama, M. Kido, Y. Yabiku, S. Ogawa*
- OS23-50: **Temperature Measurement in a Micro-Area of Two-Dimensional Materials by Raman Spectroscopy**  
*T. Hasegawa, T. Sugano, A. Sakurai*
- OS23-51: **Experimental Study on Temperature Depression inside Cavitation in a Nozzle Flow**  
*R. Suzuki, J. Okajima*

- OS23-52: **Effect of Painting Parameters on the Characteristics of Dye-Painted AA-PSP Aimed at Visualizing Unsteady Shock Wave Phenomena**  
*Y. Kawamata, D. Numata*
- OS23-53: **Fabrication of PC-PSP Using Bathophenanthroline Ruthenium Chloride as the Pressure-Sensitive Dye**  
*T. Takizawa, D. Numata*
- OS23-54: **Study on the Basic Characteristics of Supersonic Airfoil for Mars Airplane**  
*T. Ninomiya, K. Shibata, T. Takizawa, D. Numata*
- OS23-55: **Evaluation of the Impact of Ablation Power and Heating Time Combinations on the Depth of Heat Penetration in Biological Tissue**  
*T. Tani, S. Xin, M. Ono, A. Komiya*
- OS23-56: **Evaluation of the Effect of Local Periodic Thermal Perturbations on Convective Heat Transfer Enhancement in a Vertically Heated Plate**  
*T. Takagi, T. Koizumi, T. Kogawa, A. Komiya*
- OS23-57: **Assessment of New Chemical-Kinetic Parameters in Two-Temperature Kinetic Model Using an Open-Source CFD Software Eilmer4**  
*J. Wu, M. Ahn Furudate*
- OS23-58: **Investigating the Thermomechanical Properties of Phosphorus-Enhanced Flame-Retardant Epoxy Resins Through Reactive DPD/MD Simulations**  
*K. Li, A. Ito, G. Kikugawa*
- OS23-59: **Numerical Simulation on Bubble Growth and Wall Heat Transfer During Saturated Flow Boiling of Water in Microchannel**  
*Y. Lyu, J. Okajima*
- OS23-60: **Simulation of Adhesion and Fracture at the Interface between Thermosets and Metals using Quantum Chemical and Molecular Dynamics Calculations**  
*H. Xue, Y. Xi, N. Kishimoto, G. Kikugawa, K. Li, T. Ishiyama*
- OS23-61: **Physical Property Measurement of Liquids Using an Event-Based Camera Falling with a Drop**  
*T. Kishi, T. Kosugi, R. Yamamoto, T. Miyagawa, M. Shirota*
- OS23-62: **Numerical and Experimental Study of Ice Particle Melting During Drop Impact onto a Heated Surface**  
*H. Echigo, Y. Kimura, J. Okajima, T. Okabe*
- OS23-63: **Evaluation of Thermoelectric Effect on EMFs at a Water-Graphene Interface**  
*N. Iwamoto, T. Okada, A. Komiya*
- OS23-64: **Study on the Amount of Heat Loss in the Cooling System Using Elastocaloric Effects**  
*S. Ishii, G. Sebald, S. Moriya, A. Komiya*

**OS24: The 24th International Symposium on Advanced Fluid Information  
(AFI-2024)**  
**IFS Collaborative Research Forum**

- CRF-1: Plan to Study the Surface Flow of a Small Rotor Blade with a Vortex Generator  
H. Otsuka, H. Sasaki, H. Tokutake, T. Ikami, H. Nagai, H. Osaki, D. Sasaki, Y. Kawamoto
- CRF-2: Smoke-Visualized Wake of Quadrotor in Ground Effect  
H. Otsuka, Y. Kobayashi, S. Akaba, H. Tokutake, M. Okawa, T. Ikami, H. Nagai
- CRF-3: Conceptual Study on a Conventional Micro-sized Mars Airplane with Stowable and Deployable Membrane Wings  
S. Kudo, T. Takagi, H. Kono, T. Masaki, S. Oshima, M. Kanazaki, T. Ikami, H. Nagai
- CRF-4: Measurement of Three-Dimensional Density Field around Hayabusa Capsule Model Using Monochrome Random Dot Pattern at Two Different Moments  
M. Yamagishi, S. Nogi, N. Kosaka, M. Ota, T. Inage, Y. Takikawa, K. Ohtani, H. Nagai
- CRF-5: Numerical Simulation for High-speed and Low-temperature Plasma Flows in a Space Transport System  
M. Takahashi, S. Suzuki, H. Suzuki, K. Ito, H. Nagai
- CRF-6: Whole Field Prediction from Sparse Sensors Using Neural Networks  
M. Takagi, T. Ikami, Y. Egami, H. Nagai, T. Kashikawa, K. Kimura, Y. Matsuda
- CRF-7: A Study on the Flow Characteristics near the Surface of Highly Acoustically Transparent Porous Materials  
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Y. Hu, Y. Xu, Y. Kanda, A. Komiya
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Y. Mukuhira, X. Ma, S. Zhang, T. Ito
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Y. Inoue, A. Yamada, T. Yurimoto, F. Seki, Y. Takewa, J. Okajima
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*T. Shimabuku, S. Miyauchi, K. Funamoto*
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*J. Lee, Y. Cheng, S. Liu, T. Nakajima, T. Sato*
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*T. Sato, S. Kanazawa, K. Tachibana, S. Liu, T. Nakajima*
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S. Morizawa, N. Gima, A. Yakeno
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H. Ogawa, K. Omiya, A. Shibakita, C. Fujio, K. Ohtani, S. Mölder, E. Timofeev, B. Shoesmith, R. Tahir, T. Handa, Y. Watanabe, J. K. J. Hew, R. W. Boswell, T. Muruganandam, V. Vijayakrishnan, A. Marade

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CRF-76: Study on Heat Flux Prediction Method for Cartesian-Mesh CFD under Supersonic Flows

*D. Sasaki, M. Yukimitsu, S. Ogawa, S. Yoshinaga, H. Moriai, S. Takahashi, A. Yakeno, S. Obayashi*

CRF-77: Transition Physics and Turbulence Modeling to Reproduce It

*A. Yakeno, J. Fransson*