

EX-1 (Satellite room) & EX-2										
<p>9:40-10:00 <b>Opening Address</b></p> <p>10:00-12:40 <b>Plenary Lectures</b></p> <p>10:00-10:50 "Specific Challenges for Ammonia Engines" <i>Christine Mounaim-Rousselle</i> Chair: Akihiro Hayakawa</p> <p>10:55-11:45 "Development of HondaJet - From Fundamental Research to Commercialization -" <i>Michimasa Fujino</i> Chair: Shigeru Obayashi</p> <p>11:50-12:40 "Detonation Cell Cycles and Autonomously Propagating Energy Centers (APEX)" <i>Hai Wang</i> Chair: Kaoru Maruta</p>										
BREAK										
EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA	CON-HAGI
<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p> <p>Chair: <i>H. Nakamura</i></p>	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Chair: <i>H. Nakamura</i></p>	<p><b>OS8:Advanced Physical Stimuli and Biological Responses</b></p> <p>Chair: <i>Y.-C. Cheng</i></p>	<p><b>OS9: Biomedical Flow Dynamics</b></p> <p>Chairs: <i>M. Ohta, &amp; A. Qiao</i></p>	<p><b>OS18Flow measurements using PSP/TSP Technique</b></p> <p>Chair: <i>C.-Y. Huang</i></p>	<p><b>OS12Complex Thermo-fluid System</b></p> <p>Numerical and Experimental Fluid Dynamics 1</p> <p>Chair: <i>Z. P. Tan</i></p>		<p><b>GS: General Session</b></p> <p>Heat transfer</p> <p>Chair: <i>S. Donatus</i></p>	<p><b>OS1:The First International Symposium on Integrated Flow Science I &amp; III</b></p> <p>Chair: <i>J. Ishimoto</i></p>	<p><b>OS21: The 19th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>
<p>14:10-14:28 OS2-1 Propene Oxidation in a Supercritical Jet-Stirred Reactor up to 100 atm <i>B. Mei, Z. Wang, A. D. Lele, P. Dievart, Y. Ju</i></p> <p>14:28-14:46 OS2-2 Unraveling the Complex Oxidation Processes Occurring Under Cool Flame Conditions. <i>P. Dagaut, Z. Dbouk, N. Belhadj, R. Benoit, M. Lailliau</i></p> <p>14:46-15:04 OS2-3 Ammonia Oxidation by N<sub>2</sub>O: a Shock-Tube Study <i>Q. Mathieu, C. M. Grégoire, E. L. Petersen</i></p> <p>15:04-15:22 OS2-4 Short-Lived Intermediates Detection in Trimethyl Phosphate Pyrolysis using Vacuum Ultraviolet Synchrotron Radiation <i>K. Kanavama, H. Nakamura, K. Maruta, A. Bodi, P. Hemberger</i></p> <p>15:22-15:40 OS2-5 Investigation on Ammonia Oxidation at Elevated Pressures Using a Micro Flow Reactor with a Controlled Temperature Profile <i>K. Tamaoki, T. Tezuka, M. Izumi, H. Nakamura</i></p>	<p>14:10-14:28 OS2-1 Propene Oxidation in a Supercritical Jet-Stirred Reactor up to 100 atm <i>B. Mei, Z. Wang, A. D. Lele, P. Dievart, Y. 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Chiang</i></p> <p>14:40-15:10 OS8-2 Invited Non-thermal Plasma Generated by High-voltage Pulses and Its Applications for Improving the Growth and Preserving the Freshness of Fruits and Vegetables <i>K. Takahashi, K. Takaki</i></p> <p>15:10-15:25 OS8-3 High-Permittivity Substrates for Enhancing APPJ-Assisted Bonding on Microfluidic Chip <i>C.-C. Ni, C.-H. D. Tsai</i></p> <p>15:25-15:40 OS8-4 Base Material Property of Cancellous Bone <i>Y.-C. Lu, C.-G. Xu, K.-M. Chan, T. Wu, W.-Y. Jang</i></p>	<p>14:10-14:50 OS9-1 Invited Developing Nanofibrous Coatings For Cardiovascular Stent Wires <i>C. Tomiatos, A. Jedlovszky-Hajdu</i></p> <p>14:50-15:10 OS9-2 Numerical Simulation of Vascular Remodeling under Multiple Mechanical Stimuli <i>H. Zhang, Y. Yang, S. Chen, A. Qiao, H. Song, W. Fu, H. Anzai, M. Ohta</i></p> <p>15:10-15:25 OS9-3 The Effect of Oscillatory Shear Index (OSI) on Endothelial Cell Behavior Observed in a Flow Chamber <i>H. Saifurrahman, Z. Wang, H. Anzai, M. Ohta</i></p> <p>15:25-15:40 OS9-4 Low Surface Tension Biphasic Separation in Aspirin Continuous Manufacturing <i>W.-C. Chen, C.-H. Ni, Y.-Y. Chiang</i></p>	<p>14:10-14:50 OS18-1 Invited Recent Developments of Pressure-Sensitive Paint Technique in JAXA Test Facilities <i>Y. Sugioaka, K. Nakakita</i></p> <p>14:50-15:10 OS18-2 Development of Low-Photodegradable AA-PSP with Pyrene Derivatives <i>Y. Egami, H. Horie, Y. Okamoto, E. Matsushita</i></p> <p>15:10-15:30 OS18-3 Study on the Method for Extracting Pressure Fluctuations Created by Flapping-Jet Device from PSP Data <i>K. Ogasawara, T. Handa</i></p>	<p>14:10-14:40 OS12-1 Invited Calculation of the Thermo-fluid Fields and Process Progress in the Kiln for MLCC Manufacturing <i>Y.-H. Cheng, D. Chou, C.-C. Tseng, T.-S. Yang</i></p> <p>14:40-15:00 OS12-2 The Numerical Approach of Rayleigh-Bénard Convection by Physics Informed Neural Network <i>H.-C. Chang, M.-Y. Chang, W.-H. Wang</i></p> <p>15:00-15:20 OS12-3 Application of CFD for Pressure and Velocity Simulation and Aerodynamic Noise Prediction in Dental Air-Turbine Handpieces <i>C.-G. Li, C.-C. Lu, T. Yamada, K. Nozaki</i></p> <p>15:20-15:40 OS12-4 High-Resolution Reynolds Stress Measurement using Single-Pixel Ensemble-Averaged PIV <i>T. F. Chang, K. B. Lua</i></p>		<p>14:10-14:30 GSI-1 Investigation of Thermal Performance of a Double Pipe Heat Exchanger with Wavy Inner Pipe <i>H.-S. Peng, P.-J. Chen</i></p> <p>14:30-14:50 GSI-2 Preliminary Research in Fiber Optic Laser Therapy for Treatment of Breast, Head and Neck Tumors <i>A. Obonai, T. Kogawa, Y. Kanda, T. Kodama, A. Komiya</i></p> <p>14:50-15:10 GSI-3 Performance Investigation of Spectral Beam Splitting Photovoltaic Thermal System <i>A. Ustaoglu, S. B. Sungur, H. Buyukpatpat, J. Okajima</i></p> <p>15:10-15:30 GSI-4 Heat Transfer Control for Uniform Cooling of Elongated Device <i>M. Yamamoto, Y. Nakano, K. Komata, Y. Oda, K. Matsuo, A. Komiya</i></p>	<p>14:10-14:50 OS1-1 Invited Mathematical Modeling of the Sensible Regions of Leaked Hydrogen Around a Flying Quad-Rotor Drone <i>K. Matsuura, A. Slabbinck Matsumoto</i></p> <p>14:50-15:10 OS1-2 A Comparison of Solid Oxide Fuel Cell Performance on Ammonia Versus Hydrogen <i>C. Wilhelm, J. Ahn</i></p> <p>15:10-15:30 OS1-3 Metal-Doped Fungi Biomass for Battery Electrode Material <i>K. Fields, C. Wilhelm, J. Ahn, S. Erdman</i></p>	<p><b>OS21-1 - OS21-24</b> 14:10-15:10 (preparation time)</p> <p>15:10-15:40 <i>Short Oral Presentation</i></p>	<p><b>CRF-1 to 26</b> 14:10-15:40 <i>Short Oral Presentation</i></p>
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	<p>15:50-16:08 OS2-6 Pyrolysis and Soot Formation of Liquid Fuels in a Micro Flow Reactor <i>M. R. Razavi, Q. L. Gülder</i></p> <p>16:08-16:26 OS2-7 Numerical Investigation of Soot Formation in Pressurized, Highly Turbulent Jet Flames <i>E. Ouadarella, J. Guo, H. G. Im</i></p> <p>16:26-16:44 OS2-8 Characterization of Particulate Morphology Generated from Lithium-Ion Battery Combustion Processes <i>S. L. Manzella, S. Suzuki, K. Maruta</i></p> <p>16:44-17:02 OS2-9 A Study on the Effect of the Discharge Frequency of Dielectric Barrier Discharge on the Ignition Characteristics in RCEM <i>S. Agrawal, N. Horibe, J. Hayashi, H. Kawanabe</i></p> <p>17:02-17:20 OS2-10 Study on the Ignition-to-Flame Propagation Transition of Spherically Propagating Flame Initiated by Spark Discharge and Low-Temperature Heat Source <i>T. Kakizawa, K. Akita, T. Tezuka, Y. Morii, H. Nakamura, K. Maruta</i></p>	<p>15:50-16:08 OS2-6 Pyrolysis and Soot Formation of Liquid Fuels in a Micro Flow Reactor <i>M. R. 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Kaneko</i></p> <p>16:20-16:50 OS8-6 <i>Invited</i> Investigate the Effects of Gold Nanoparticles on the Electrohydrodynamic Behavior of Cells <i>C.-J. Lee, H.-Y. Wang</i></p> <p>16:50-17:05 OS8-7 Miniature Plasma Microbubble System For Dental Applications <i>Y.-W. Huang, C.-W. Feng, A.-S. Chen, Y.-C. Cheng</i></p> <p>17:05-17:20 OS8-8 Improving Puncture Accuracy Using Vibrating Devices for Flexible Organs <i>Y. Iwata, K. Kikuchi, K. Takase, T. Ishikawa</i></p>	<p>15:50-16:10 OS9-5 Heart Rate in Mammals <i>R. D. M. Travasso, C. A. Penick, R. R. Dunn, E. Corvera Poiré</i></p> <p>16:10-16:30 OS9-6 Multiscale Model Study on the Impact of Circle of Willis Structure Integration with Cerebral Artery Stenosis on Postoperative Cerebral Hyperperfusion in Superficial Temporal Artery-Middle Cerebral Artery Bypass Surgery <i>S. Huang, B. Li, L. Zhang, J. Liu, Y. Liu</i></p> <p>16:30-16:50 OS9-7 Numerical Modelling of Ultrasonically Induced Cavitation in Biological Systems <i>P. Guida, W. L. Roberts</i></p> <p>16:50-17:05 OS9-8 Effect of Directional Deviation of the Endotracheal Tube Tip on Lung Volume Distribution <i>H. Kobayashi, G. Tanaka</i></p> <p>17:05-17:20 OS9-9 Numerical Simulation of the Effects of Geometric Parameters on Airway Resistance in Tracheal Bronchus <i>M. Koga, T. Fukui</i></p>	<p>15:50-16:10 OS18-4 An Experimental Study of Film Cooling and Heat Transfer using Dual-luminophore Pressure-Sensitive Paint <i>W.-T. Cheng, C.-Y. Huang, Y.-H. Liu</i></p> <p>16:10-16:30 OS18-5 Investigation of The Correlation Between Wafer Temperature Distribution and Process Performances in Chemical Mechanical Planarization Process by Flow and Temperature Visualization Methods <i>Y.-C. Chang, H.-H. Hsu, W.-H. Tien</i></p> <p>16:30-16:50 OS18-6 Numerical and Experimental Analysis of Conjugate Heat Transfer in Glass Microchannel Flow with Sidewall Heating <i>P.-C. Wang, Y.-W. Wu, T.-M. Liou, C.-Y. Huang</i></p> <p>16:50-17:10 OS18-7 Proposal of Noise Reduction Method for PSP Data Using Multivariate Singular Spectrum Analysis <i>M. Takagi, K. Kubota, R. Shigehara, T. Ikami, Y. Egami, H. Nagai, Y. Matsuda</i></p>	<p>15:50-16:15 OS12-5 A Numerical Investigation Of Microtube Length Effect On Convective Boiling <i>Y. Wang, C.-E. Li, Z.-Y. Chen, S.-H. Pai, C.-W. Lin, H.-Y. Hsu, Y.-C. Lin</i></p> <p>16:15-16:30 OS12-6 An Artificial Neural Network Model for Predicting Hydraulic Diameters in Pillow-Plate Heat Exchangers <i>A. Sabourshirazi, M. Ghodrati, J.-L. Liow</i></p> <p>16:30-16:45 OS12-7 Helical Wires for Enhancing Pool Boiling Heat Transfer <i>C.-K. Wang, Y.-D. Ren, C.-W. Lo</i></p> <p>16:45-17:00 OS12-8 Numerical Simulation of Magneto-hydrodynamic Thermal Convection within a Rotating Spherical Shell under the Influence of Axial Gravitational Field. <i>H. Satake, T. Tagawa</i></p> <p>17:00-17:15 OS12-9 Impact of Random 3D Roughness on Natural Convection along a Vertical Plate in Unsteady Flow <i>T.-Y. Chen, C.-G. Li</i></p>		<p>15:50-16:10 GSI-5 Analysis of Emission Control Technology in Varied Temperatures for Automotive Applications <i>A. M. Willsey, T. S. Welles, J. Ahn</i></p> <p>16:10-16:30 GSI-6 Modeling and Analysis of the Flue Gas Recirculation System for Iron Ore Sintering Process <i>H.-X. Chen, S.-Y. Hsu, Y.-S. Huang</i></p> <p>16:30-16:50 GSI-7 Performance Investigation of Encapsulated PCM Battery Thermal Management System <i>B. Karsuncu, A. Ustaoglu, J. Okajima, E. Demirkol, C.-W. Lo</i></p> <p>16:50-17:10 GSI-8 The Effect of Tap Locations on the Temperature Distribution of Lithium-Ion Battery Cell during Discharging <i>Y.-L. Zheng, S.-Y. Hsu, N.-H. Yeh</i></p>	<p>15:50-16:10 OS1-4 Optimal Operating Conditions for an Electric ECS in Ground Parking Status <i>Y. Amano, H. Saito, T. Adachi</i></p> <p>16:10-16:30 OS1-5 Study on Flow Characteristics of a Control Valve in a Perforated Cage by CFD Analysis <i>Y. Kurossawa, C. Youn</i></p> <p>16:30-16:50 OS1-6 Blowoff Limits of the Smoldering Processes <i>P. Viriya-amornkij, K. Kuwana</i></p> <p>16:50-17:10 OS1-7 Detection of Severe Fire Events by Image Processing <i>N. Thinnakornsutibutr, K. Kuwana, M. Mizuno</i></p>	<p><b>OS21-1 - OS21-24</b> 15:50-17:20 <i>Poster Presentation</i></p>	<p><b>CRF-1 to 26</b> 15:50-17:20 <i>Poster Presentation</i></p>	
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	<p>17:30-17:48 OS2-11 Theoretical Studies of Supercritical Real-Fluid Oxidations of Universal Fuels by Using the Virial Equation of State <i>J. Bai, H. Zhao</i></p>	<p>17:30-17:48 OS2-11 Theoretical Studies of Supercritical Real-Fluid Oxidations of Universal Fuels by Using the Virial Equation of State <i>J. Bai, H. Zhao</i></p>	<p>17:30-18:00 OS8-9 <i>Invited</i> Dielectric Breakdown of Cell Membrane and ROS Generation by Pulsed Electric Field <i>Y. Minamitani, T. Kowase, M. Ichikawa, T. Mizuno, H. Sato, Y. Kobayashi, J. Hiyama, R. Kageyama, K. Tamura, Y. Kuramochi, K. Saito</i></p>	<p>17:30-17:50 OS9-10 Physics-driven 0D/3D Model Using Fluid-structure Interaction Method for Calculating Fractional Flow Reserve <i>B. Li, G. Li, L. Zhang, H. Sun, J. Liu, A. Qiao, Y. Liu</i></p>	<p>17:30-17:50 OS18-8 Aerodynamic Coefficients Study of the Application of Pressure-sensitive Paint on NACA 0012 Airfoil in Low-Speed Wind Tunnel <i>S.-J. Fu, K.-T. Huang, C.-Y. Huang, K.-M. Chung</i></p>	<p>17:30-17:50 OS12-10 Formation of Crosslinked Microparticles from Coaxial Capillary with Different Gas Flowrates <i>Z.-K. Yu, J.-J. Hu, C.-H. D. Tsai</i></p>	<p>17:30-18:10 OS7-1 <i>Invited</i> Application of PyFR to Design of Rotor Blades for Martian Helicopters <i>L. C. Roca, O. Buxton, P. Vincent</i></p>	<p>17:30-17:55 OS14-1 <i>Invited</i> Fluid Flow and Coupled Hydromechanical Processes in Fractured Rocks with Application to Geoenery and Geoenegineering <i>Q. Lei</i></p>	<p>17:30-17:50 OS1-8 <i>Invited</i> Visualization of Longitudinal Vortex Structure in the Wake of a Flat Plate Airfoil at Low Reynolds Number <i>A. Wakabayashi, K. Hamaguchi, T. Uchida, K. Sugitani, A. Takada, K. Hirata</i></p>		<p>Poster</p>	

17:48-18:06 OS2-12 Stabilities of Reaction Wave Structures in Low- to High-speed Reactive Inflow Conditions <i>Y. Morii, K. Maruta</i>	17:48-18:06 OS2-12 Stabilities of Reaction Wave Structures in Low- to High-speed Reactive Inflow Conditions <i>Y. Morii, K. Maruta</i>	18:00-18:30 OS8-10 <i>Invited</i> A Grooved Petri Dish used with a Commercial Orbital Shaker for Tissue-Engineered Vascular Growth Culture <i>J.-W. Yeh, J.-J. Hu, Y.-H. Liu</i>	17:50-18:10 OS9-11 Real-time Model-based Cerebral Perfusion Calculation for Ischemic Stroke <i>H. Sun, B. Li, L. Zhang, G. Li, J. Liu, Y. Liu</i>	17:50-18:10 OS18-9 Development of Pressure Distribution Measurement Technique Using AA-PSP at Transonic Free-Flight <i>Y. Takikawa, K. Takahashi, T. Ogawa, T. Ikami, H. Nagai, D. Kurihara, J. P. Gonzales, H. Sakaue</i>	17:50-18:05 OS12-11 The Aerodynamic Effects of Phase Angle on the Tandem Flapping Wings of Damselfly <i>Y. H. Wu, K. B. Lua</i>	18:10-18:30 OS7-2 Comparison of ILES and RANS Computation for Turbulent Base Flow an Axisymmetric Body <i>J. Park, D. Kim, S. Lee, J. S. Park</i>	17:55-18:10 OS14-2 Numerical Investigation of Compressible Monodisperse Gas-Solid Flows in a Supersonic Under-expanded Jet: Effect of Particle Diameter and Concentration <i>D. Talukdar, Y. Suzuki</i>	17:50-18:10 OS1-9 Effects on the Aerodynamics of a Spinning Hollow Cylinder in Flight <i>D. Tanaka, T. Wada, Y. Naito, M. Nakano, J. Ishimoto, H. Tamigawa, K. Hirata</i>		
18:06-18:24 OS2-13 Multiscale Modeling on Shock-Cool Flame Interaction with DME/Air Mixture <i>E. Fan, T. Zhang</i>	18:06-18:24 OS2-13 Multiscale Modeling on Shock-Cool Flame Interaction with DME/Air Mixture <i>E. Fan, T. Zhang</i>	18:30-18:45 OS8-11 Influence of Pulse Rise and Fall Time on Plasma Intensity and Electron Temperature <i>A. Sung, Y.-C. Cheng</i>	18:10-18:25 OS9-12 Hemodynamic Changes in the Left Ventricle by Bicuspid Aortic Valve Geometries <i>S. Tsuda, S. Miyauchi, K. Funamoto</i>	18:10-18:30 OS18-10 Visualization of Leading Edge Vortex in Low Reynolds Number Rotor by cniTSP <i>R. Nishimura, T. Ikami, H. Nagai</i>	18:05-18:20 OS12-12 Continuous Separation of Glutathione in Microfluidic System <i>Y.-R. Tseng, Y.-Y. Chiang</i>	18:30-18:50 OS7-3 Stable and Non-Dissipative Flux Reconstruction Schemes in Split Forms: Preservation of Kinetic Energy and Entropy <i>I. Homma, H. Asada, S. Kawai</i>	18:10-18:25 OS14-3 Accuracy Considerations Concerning 3D Printed Fracture Models <i>M. Kröhn, A. Suzuki</i>	18:10-18:30 OS1-10 Flow around a Cylinder Moving near the Ground <i>K. Matsuno, R. Kobayashi, K. Hirata</i>		
18:24-18:42 OS2-14 Unconfined Hydrogen Detonation: Experiments, Scaling, Modeling <i>M. Kuznetsov, A. Lelyakin</i>	18:24-18:42 OS2-14 Unconfined Hydrogen Detonation: Experiments, Scaling, Modeling <i>M. Kuznetsov, A. Lelyakin</i>		18:25-18:40 OS9-13 Evaluation of Therapeutic Efficacy of Cancer Immunotherapy Using Lymphatic Network Compared with Hematogenous Administration <i>K. Takagi, A. Sukhbaatar, S. Mori, T. Sugiura, T. Kodama</i>	18:30-18:50 OS18-11 Sonic Boom Distribution Measurement of Supersonic Projectile in Ballistic Range <i>J. Abe, T. Ogawa, T. Ikami, H. Nagai, S. Takahashi</i>	18:20-18:35 OS12-13 Experimental Study of Azimuthal Magnetic Field Stability of Confined Immiscible Ferrofluid <i>A. Kumar, S.-W. Hung, C.-Y. Chen</i>		18:25-18:40 OS14-4 3D Printed Fracture Networks for Investigation of Fracture Deformation under Stress <i>A. Patsoukis Dimou, Q. Lei, N. Watanabe, A. Suzuki</i>			
18:42-19:00 OS2-15 Flame Propagation and Transition to Detonation of Dimethyl Ether Mixture in a Microscale Channel <i>A. Thawka, Y. Cao, M. S. Vorenkamp, Y. Ju</i>	18:42-19:00 OS2-15 Flame Propagation and Transition to Detonation of Dimethyl Ether Mixture in a Microscale Channel <i>A. Thawka, Y. Cao, M. S. Vorenkamp, Y. Ju</i>		18:40-18:55 OS9-14 Investigation of Therapeutic efficacy of Intranodally Administered Hyperosmotic, High-viscosity Formulation of Carboplatin for the Treatment of Metastatic Lymph Node <i>M. Miyatsu, R. Mishra, A. Sukhbaatar, S. Mori, T. Kodama</i>	18:50-19:10 OS18-12 Surface Pressure Measurement of Elliptical Cavities with Variable Eccentricity in Compressible Flow <i>Y.-X. Huang, P.-H. Chung, K.-M. Chung, K.-C. Chang</i>	18:35-18:55 OS12-14 Determination of Ozone Density in Surface Micro-discharge in the Presence of Water Vapor <i>S.-R. Zou, Y.-H. Liao</i>		18:40-18:55 OS14-5 Toward Estimation of Aperture of Complex Fracture Network from Tracer Responses <i>J. Miyanaga, K. Goto, A. Suzuki, A. Patsoukis Dimou, J. M. Minto</i>			
19:00										19:00
Students / Young Birds Friendship Night @ CON-SAKURA2, Conference Bldg.										
20:00										20:00

9:00	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA	CON-HAGI	9:00
	<p><b>OS15: Turbulence: from Fundamentals to Applications</b></p> <p>Turbulence &amp; Control Chair: Y. Hattori</p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Machine Learning Chair: H. G. Im</p>	<p><b>OS8: Advanced Physical Stimuli and Biological Responses</b></p> <p>Chair: S. Liu</p>	<p><b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 15th Edition</b></p> <p>Invited talk Session Chair: Y. Saito</p>	<p><b>OS6: Free Flight Experiment with MSBS and Ballistic Range</b></p> <p>Chair: S. Obayashi</p>	<p><b>OS12: Complex Thermo-fluid System</b></p> <p>Thermal and Flow II Chair: Y.-H. Liao</p>	<p><b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b></p> <p>Chair: T. Hoga</p>	<p><b>GS: General Session</b></p> <p>Multiphase flow Chair: X. Chang</p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p>	<p><b>OS21: The 19th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>	
9:10-9:30	OS15-1 Turbulence Generator for Studying the Vertical Migration of Red Tide Microalgae <i>W. Niu, K. Kikuchi, T. Ishikawa</i>	9:00-9:18 OS2-16 <i>Invited</i> Machine Learning Tools for Accelerating Simulation-driven Engine Design and Optimization <i>P. Pal</i>	9:30-10:00 OS8-12 <i>Invited</i> Portable Biosensor System with Microfluidics Embedded Optical Sensor <i>C.-C. Chiang, C.-S. Huang</i>	9:00-9:45 OS4-1 <i>Invited</i> Advancing Internal Ballistics of Hybrid Rockets: Challenges, Parameter Estimation, and Future Perspectives <i>T. Shimada</i>	9:00-9:30 OS6-1 <i>Invited</i> Increasing the Dynamic Pressure Capability of the NASA Langley/ODU 6-inch MSBS <i>M. Schoenenberger, D. Cox, E. Shellabarger, H. Shehata, C. Britcher, B. McGovern</i>	9:00-9:20 OS12-15 Development of Conjugate Heat Transfer Immersed Boundary Method based on Low Mach Number Compressible Flow Solver <i>C. G. Li, R. Bale, M. Tsubokura</i>	9:00-9:20 OS7-4 Solution-Acceleration of High-Order Methods via Hybridized Implicit-Explicit Time Integration <i>C. A. Pereira, B. C. Vermeire</i>	9:00-9:20 GS1-9 Experimental Observation of Erosion Structure from Incubation Stage to the Accumulation Stage in Liquid Impingement Erosion <i>K. Fujisawa</i>	9:00-9:18 OS2-16 <i>Invited</i> Machine Learning Tools for Accelerating Simulation-driven Engine Design and Optimization <i>P. Pal</i>	<p><b>OS21-25 - OS21-48</b></p> <p>9:00-10:00 (preparation time)</p> <p>10:00-10:30 <i>Short Oral Presentation</i></p>	Poster	
9:30-9:50	OS15-2 Relation between Turbulence in Swirling Flow in a Cylindrical Pipe and the Ranque-Hilsch Effect <i>T. Yamamoto, Y. Hattori</i>	9:18-9:36 OS2-17 <i>Invited</i> Unlocking the Hidden Details: New Approaches for ML-Based Super-Resolution of Turbulent Flows <i>M. Ihme, W. T. Chung, B. Akoush, P. Sharma</i>	10:00-10:30 OS8-13 <i>Invited</i> Effects of Superimposed Electric Field on Structure and Permeability of Biological Membrane Investigated by Molecular Dynamics Simulation <i>K. Tachibana, K. Takami, R. Ninomiya, I. Yagi, A. Oda, S. Uchida</i>	9:45-10:30 OS4-2 <i>Invited</i> Combustion of Metallized Fuels for Hybrid Rocket Applications <i>J. C. Thomas</i>	9:30-9:50 OS6-2 Analysis of Unsteady Wake Structure behind Magnetically Levitated Circular Cylinder with Pitch Angles in 0.3-m MSBS <i>S. Yokota, T. Nagata, Y. Oka, M. Kasai, T. Nonomura</i>	9:20-9:35 OS12-16 Thermo-Fluid Analysis of Internally Cooled Tubes for Improve Cutting Speed for Difficult-to-Cut Materials <i>T. Hasegawa, K. Suzuki, E. Shamoto, T. Nakamura, T. Watanabe, K. Nagata, Y. Hatano</i>	9:20-9:40 OS7-5 A Fully Coupled Block Implicit Solver for the Incompressible Navier-Stokes Equations on Collocated Grids <i>M. A. George, N. Williamson, S. W. Armfield</i>	9:20-9:40 GS1-10 Analysis of the Wind Flow and Fuel Heat Release Rate on Dynamics of Wildfire <i>M. Ghodrati, A. Adalati-Nejad</i>	9:18-9:36 OS2-17 <i>Invited</i> Unlocking the Hidden Details: New Approaches for ML-Based Super-Resolution of Turbulent Flows <i>M. Ihme, W. T. Chung, B. Akoush, P. Sharma</i>			
9:50-10:10	OS15-3 Wall Turbulence Response to Distributed Dynamic Roughness: a DNS Study <i>A. Sescu, M. Brockhaus, J. Morrison</i>	9:36-9:54 OS2-18 <i>Invited</i> Neural Network Approach to Detailed Reaction Model Optimization, Uncertainty Minimization, and Model Reduction <i>Y. Zhang, K. Dong, L. A. Vandewalle, R. Xu, G. P. Smith, H. Wang</i>	9:54-10:12 OS2-19 <i>Invited</i> Artificial Intelligence (AI) Based Fuel Design <i>S. Mani Sarathy, N. Kuzhgaliyeva</i>	9:50-10:10 OS6-3 Comparisons of Static and Dynamic Aerodynamic Studies of Fineness-Ratio One Cylinders <i>F. Miller, C. P. Britcer</i>	9:50-10:05 OS12-17 A Novel Method in Predicting Heat Transfer Coefficient and Pressure Drop in Pillow-Plate Heat Exchangers <i>A. Sabourishirazi, M. Ghodrati, J.-L. Liow</i>	9:35-9:50 OS12-17 Heat Transfer Coefficient and Pressure Drop in Pillow-Plate Heat Exchangers <i>B. Shoesmith, E. Timofeev, H. Ogawa</i>	9:40-10:00 OS7-6 Shock Reflection from an Axial Cylinder in Axisymmetric Flow <i>B. Shoesmith, E. Timofeev, H. Ogawa</i>	9:40-10:00 GS1-12 Numerical Investigation of Droplet Collision Using the Lattice-Boltzmann Model <i>J. Restrepo-Cano, F. E. Hernández-Pérez, H. G. Im</i>	9:36-9:54 OS2-18 <i>Invited</i> Neural Network Approach to Detailed Reaction Model Optimization, Uncertainty Minimization, and Model Reduction <i>Y. Zhang, K. Dong, L. A. Vandewalle, R. Xu, G. P. Smith, H. Wang</i>			
10:10-10:30	OS15-4 Study of Drag Reduction Effect of Polymer Solution based on Measurement of Velocity and Wall Shear Stress <i>Y. Wang, Y. Yamamoto, Y. Tsuji</i>	10:12-10:30 OS2-20 <i>Invited</i> Theory and Analysis of Linear and Nonlinear Autoencoders for Stiff Chemical Systems <i>V. Vijayarangan, H. A. Uvanakara, H. G. Im</i>	10:10-10:30 OS6-4 The Differences of Aerodynamic Forces Between The Static Javelin and The Vibrating Javelin <i>R. Ishiai, K. Seo, H. Okuzumi, Y. Konishi, S. Obayashi, S. Ito, M. Hiratsuka</i>	10:05-10:20 OS12-19 Study on the Permeability and Wettability of Additively Manufactured Porous Ti6Al4V for Transpiration Cooling <i>Z.-K. Tong, K.-H. Lin, Y.-H. Liu</i>	10:05-10:20 OS12-18 Simulations of Natural Convection with Heated Moving Sphere by CFD <i>M.-Z. Li, J. Lewis, H.-C. Chang, W.-H. Wang</i>	10:00-10:20 OS7-7 Positivity-Preserving Entropy-Based Adaptive Filtering for Discontinuous Spectral Element Methods <i>F. D. Witherden</i>	10:00-10:20 OS7-7 Positivity-Preserving Entropy-Based Adaptive Filtering for Discontinuous Spectral Element Methods <i>F. D. Witherden</i>	*GS1-11 Cancelled	9:54-10:12 OS2-19 <i>Invited</i> Artificial Intelligence (AI) Based Fuel Design <i>S. Mani Sarathy, N. Kuzhgaliyeva</i>	10:12-10:30 OS2-20 <i>Invited</i> Theory and Analysis of Linear and Nonlinear Autoencoders for Stiff Chemical Systems <i>V. Vijayarangan, H. A. Uvanakara, H. G. Im</i>		
10:30	BREAK											10:30
10:40	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA	CON-HAGI	10:40
	<p><b>OS15: Turbulence: from Fundamentals to Applications</b></p> <p>Turbulent Shear Flow Chair: Y. Tsuji</p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Machine Learning Chair: H. G. Im</p>	<p><b>OS8: Advanced Physical Stimuli and Biological Responses</b></p> <p>Chair: C.-H. D. Tsai</p>	<p><b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 15th Edition</b></p> <p>Reactive Flow Using Metallic Fuel in Hybrid Rockets Chair: Y. Saito</p>	<p><b>OS11: Microfluidics and Microphysiological Modeling</b></p> <p>Chairs: K. Funamoto &amp; E. Corveira Poiré</p>	<p><b>OS12: Complex Thermo-fluid System</b></p> <p>General I Chair: C.-G. Li</p>	<p><b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b></p> <p>Chair: F. Witherden</p>	<p><b>OS17: Supercritical Fluid</b></p> <p>Chair: Y. Kanda</p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p>	<p><b>OS21: The 19th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>	
10:40-11:20	OS15-5 <i>Invited</i> Fluctuations and the Law-of-the-Wall in Turbulent Flows <i>K. R. Sreenivasan</i>	10:40-10:58 OS2-21 <i>Invited</i> Advancing Flame Surface Density Modelling with Machine Learning <i>J. Z. Ho, M. Talei, W. T. Chung, D.J.E. Brouzet, P. Sharma, B. Akoush, M. Ihme</i>	10:40-11:10 OS8-14 <i>Invited</i> The Effect of Low Temperature Plasma Treatment on Rat Adipose-Derived Stem Cells <i>K.-J. Xie, C.-K. Su, C.-H. Lin, Y. H. Liao</i>	10:40-11:10 OS4-3 Experimental Study on Magnesium Wire Combustion in Water-Vapor Flow <i>M. Akiyama, H. Koizumi, K. Komurasaki</i>	10:40-11:10 OS11-1 <i>Invited</i> 1D Elastic Model of the Hepatic Blood Circulation <i>A. M. Torres Rojas, S. Lorente</i>	10:40-11:00 OS12-20 Airfoil Optimization by Adjoint Operator <i>S.-Y. Lin, J.-H. Luo, C.-C. Liu, M.-Y. Lin</i>	10:40-11:00 OS7-8 High-order Nonlinear Limiter for the Discontinuous Galerkin Method on Unstructured Meshes <i>Y. Lu, J. Zhu, Z. Wang, L. Tian, N. Zhao</i>	10:40-11:20 OS17-1 <i>Invited</i> Fundamentals and Applications in Transcritical CO <sub>2</sub> Thermodynamical Cycles <i>Y. Nie, X.-R. Zhang</i>	10:40-10:58 OS2-21 <i>Invited</i> Advancing Flame Surface Density Modelling with Machine Learning <i>J. Z. Ho, M. Talei, W. T. Chung, D.J.E. Brouzet, P. Sharma, B. Akoush, M. Ihme</i>	<p><b>OS21-25 - OS21-48</b></p> <p>10:40-12:10 <i>Poster Presentation</i></p>	<p><b>CRF-27 to 52 (except CRF-31 to 34 and CRF-46)</b></p> <p>10:40-12:10 <i>Short Oral Presentation</i></p>	

<p>11:20-11:40 OS15-6 Convection Velocity Measurement in High Reynolds Number Pipe Flow <i>N. Furuichi, M. Ono, Y. Tsuji</i></p> <p>11:40-12:00 OS15-7 Experiments on Structures of Secondary Instability of Streaks in Wall-Bounded Turbulent Shear Flows <i>I. Watanabe, K. Matsui, M. Shimizu, K. Morita, K. Kato, M. Matsubara</i></p>	<p>10:58-11:16 OS2-22 <i>Invited</i> Global Multiscale Sampling (GMS) Method Empowering Deep Neural Networks To Solve High-dimensional Stiff ODEs In Combustion Simulation <i>Z.-Q. J. Xu, J. Yao, Y. Yi, T. Zhang</i></p> <p>11:16-11:34 OS2-23 Artificial Intelligent Temperature Prediction of a Porous Radiant Burner System Based on Deep Learning Analyses of Thermal Infrared Images Calibrated by Thermocouples <i>H. Y. Hsieh, S. Shy, V. T. Mai, P.-C. Tung</i></p> <p>11:34-11:52 OS2-24 Artificial Intelligence Technology to Control Combustion Stability <i>S. Yang, J. Huang</i></p> <p>11:52-12:10 OS2-25 Stiffness Suppression in Generating a Simplified Reaction Model for Methane using Genetic Algorithms <i>K. Hirose, Y. Morii, K. Shimoyama, H. Nakamura</i></p>	<p>11:10-11:40 OS8-15 <i>Invited</i> Observation of Laser-Induced Optical Breakdown and Its Application in Biomedicine <i>S. Liu, K. Iwasawa, A. Nakayama, T. Nakajima, T. Sato</i></p> <p>11:40-12:00 Award Ceremony &amp; Closing <i>T. Sato &amp; Y.-C. Cheng</i></p>	<p>11:10-11:40 OS4-4 Study on the Effect of MG-AL Powder on Combustion Completeness of Boron Powder in Solid Fuels for Hybrid Rockets <i>H. Maeda, K. Takahashi</i></p> <p>11:40-12:10 OS4-5 Enhancing Hypergolic Reactivity: Metal Hydride-Fueled Fuel Grain with Solid Oxidant Doping <i>C. C. Chang, S.-S. Wei, Z. P. Tan, Y. X. Chang, J.-S. Wu</i></p>	<p>11:10-11:25 OS11-2 Simulation Of Sea Urchin Sperm Rheotaxis <i>R. Takagi, T. Omori, T. Ishikawa</i></p> <p>11:25-11:40 OS11-3 Effective Viscosity Estimation Using Resultant Wave of Wall Shear Stress Distribution in Plane Poiseuille Suspension Flow <i>M. Kawaguchi, T. Fukui, K. Funamoto</i></p> <p>11:40-11:55 OS11-4 Numerical Simulation of Swimming Microorganisms in a Maxwellian Fluid <i>K. Koitabashi, T. Omori, T. Ishikawa</i></p> <p>11:55-12:10 OS11-5 Twisted Fiber Microfluidics: A Cutting-Edge Approach to 3D Spiral Devices <i>S. Kato, D. W. Carlson, A. Q. Shen, Y. Guo</i></p>	<p>11:00-11:15 OS12-21 Permeability Field Prediction Using A Machine Learning Algorithm <i>A. Singh, C.-Y. Chen</i></p> <p>11:15-11:30 OS12-22 The Analysis of Thermal Flow Field in the Anode Cell <i>C.-J. Weng, C.-C. Ho, S.-Y. Hsu, C.-H. Tsai</i></p> <p>11:30-11:45 OS12-23 Energy Generation and Flow Field of a Finite Length Oscillating Cylinder in a Freestream <i>H.-W. Huang, J.-R. Lin, K.-B. Lua</i></p> <p>11:45-12:00 OS12-24 The Response of Ion Current in Lifted Non-Premixed Jet Flames under DC Electric Field <i>Y.-R. Chien, Y.-H. Liao</i></p>	<p>11:00-11:20 OS7-9 Very-high-order BVD Schemes Using <math>\beta</math>-variable THINC Method <i>H. Wakimura, T. Aoki, F. Xiao</i></p> <p>11:20-11:40 OS7-10 Simulation Framework for Wake-Induced Aeroelastic Phenomena <i>K. Otsuka, T. Yamazaki, Y. Abe, T. Haga</i></p> <p>11:40-12:00 OS7-11 Multiple Flow Fields Gathering in a Reduced Order Model <i>Y. Nakamura, S. Sato, N. Ohmishi</i></p>	<p>11:20-11:40 OS17-2 Heat and Mass Transfer of Aggregate Contaminants in Porous Media Structures of a Soil Sample under Supercritical CO<sub>2</sub> Injection <i>K. Ragui, L. Chen, Y. Kanda, A. Komiya</i></p> <p>11:40-12:00 OS17-3 Numerical Study of Rayleigh-Bénard-Type Convection of CO<sub>2</sub> Fluid in Porous Media under Supercritical Pressures <i>Y. Feng, L. Chen</i></p>	<p>10:58-11:16 OS2-22 <i>Invited</i> Global Multiscale Sampling (GMS) Method Empowering Deep Neural Networks To Solve High-dimensional Stiff ODEs In Combustion Simulation <i>Z.-Q. J. Xu, J. Yao, Y. Yi, T. Zhang</i></p> <p>11:16-11:34 OS2-23 Artificial Intelligent Temperature Prediction of a Porous Radiant Burner System Based on Deep Learning Analyses of Thermal Infrared Images Calibrated by Thermocouples <i>H. Y. Hsieh, S. Shy, V. T. Mai, P.-C. Tung</i></p> <p>11:34-11:52 OS2-24 Artificial Intelligence Technology to Control Combustion Stability <i>S. Yang, J. Huang</i></p> <p>11:52-12:10 OS2-25 Stiffness Suppression in Generating a Simplified Reaction Model for Methane using Genetic Algorithms <i>K. Hirose, Y. Morii, K. Shimoyama, H. Nakamura</i></p>	<p style="text-align: center;"><b>12:10- BREAK</b></p> <p style="text-align: center;">(Luncheon Seminar) <b>12:25-12:35</b> Exhibitor Presentation I</p> <p style="text-align: center;"><b>12:35-12:45</b> Exhibitor Presentation II</p> <p style="text-align: center;"><b>12:45-12:55</b> Exhibitor Presentation III</p> <p style="text-align: center;"><b>CRF-27 to 52 (except CRF-31 to 34 and CRF-46)</b> <b>12:55-14:40</b> Poster Presentation</p>		
BREAK											
13:10	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA	13:10
<p><b>OS15: Turbulence: from Fundamentals to Applications</b></p> <p>LES <i>Chair: T. Ishihara</i></p>	<p><b>OS20 Liaison Office Session</b></p>	<p><b>OS3: The First International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation</b></p> <p><i>Chair: K. Endo</i></p>	<p><b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 15th Edition</b></p> <p>Internal Ballistic Flow in Hybrid Rockets <i>Chair: L. Kamps</i></p>	<p><b>OS11 Microfluidics and Microphysiological Modeling</b></p> <p><i>Chairs: T. Fukui &amp; T. Omori</i></p>	<p><b>OS12 Complex Thermo-fluid System</b></p> <p>Fluid Flow II <i>Chair: K. B. Lua</i></p>	<p><b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b></p> <p><i>Chair: K. Otsuka</i></p>	<p><b>OS17: Supercritical Fluid</b></p> <p><i>Chair: Y. Hu</i></p>		<p><b>OS21: The 19th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>	
<p>13:20-13:40 OS15-8 Investigating a Non-local Data-Driven Approach for Wall Modeling in Large Eddy Simulation <i>G. Tabe Jamaat, Y. Hattori</i></p> <p>13:40-14:00 OS15-9 Machine-Learning-Based Sub-Grid Scale Modeling for Coarse-Grid Large-Eddy Simulation <i>S. Maejima, S. Kawai</i></p> <p>14:00-14:20 OS15-10 Wall-modeled LES of Transonic Flow at High Reynolds Number Around a Pitching Airfoil <i>H. Sashida, T. Aoyama, S. Kawai, S. Kawai</i></p>	<p>13:10-13:25 <i>Invited Talk</i> Universities of International Research Excellence for Students (going abroad) <i>M. Yamaguchi</i></p> <p>13:25-13:35 Overseas Support in IFS <i>T. Tokumasu</i></p> <p>13:35-13:53 Students' Going Abroad <i>W. Taiva, K. Kanayama</i></p> <p>13:53-14:38 Panel Discussion <i>Y. Ju (Princeton Univ.)</i></p> <p>14:38-14:40 Closing Remarks <i>T. Uchimoto</i></p>	<p>13:10-13:40 OS3-1 <i>Invited</i> The Digital Transformation in Health Care and Education <i>G. Hong, N. Yoda, H. Egusa, K. Osaka</i></p> <p>13:40-14:10 OS3-2 <i>Invited</i> Exploring the Boundary Layer Dynamics on Rotating Substrates for Enhanced Wet Cleaning Efficiency <i>N. Belmiloud, M. Kihara, M. Sato, Y. Okuno</i></p> <p>14:10-14:40 OS3-3 <i>Invited</i> Silicon Technologies for Quantum Computing <i>T. Mori</i></p>	<p>13:10-13:40 OS4-6 Enhancing Performance of Hybrid Rocket Propulsion System Through Nitrox: A Comparative Study <i>J.-C. Hsu, H.-Y. Tso, S.-S. Wei, J.-S. Wu</i></p> <p>13:40-14:10 OS4-7 Progress on HTTP-3A Hybrid Rocket Propulsion Technology Development <i>S.-S. Wei, Z.-R. Chen, A. Lai, T. H. Chou, Y. Lu, S.-T. Kao, A. Wang, M.-C. Lee, C.-H. Huang, Y.-T. Chang, Y.-K. Wang, H.-Y. Tso, C.-C. Chang, J.-C. Hsu, J. S. Wu</i></p>	<p>13:10-13:25 OS11-6 A Microfluidic Device to Mimic Hypoxic Tumor Angiogenesis toward Breast Cancer Spheroid <i>Y. Iijima, G. Hayase, K. Funamoto, D. Yoshino</i></p> <p>13:25-13:40 OS11-7 Usefulness of the Human Blood-Brain Barrier on a Chip for Brain-Targeting Drug Development <i>M. Tachikawa, M. Hidaka, Y. Sakamaki, K. Funamoto, M. Inagaki</i></p> <p>13:40-13:55 OS11-8 Spatial Gradient of Fluid Shear Stress Prolongs Nuclear Translocation of Nuclear Factor-kappa B <i>M. Sasaki, K. Funamoto, D. Yoshino</i></p>	<p>13:10-13:30 OS12-25 Digital Defocusing Micro-Particle Streak Velocimetry for Measuring Three-Dimensional Flow Velocity in Single-Spine Microchannel <i>Z.-L. Lin, W.-H. Tien</i></p> <p>13:30-13:50 OS12-26 Performance Evaluation of Pin Fins with Wings <i>A. K. Patil, V. Choudhary, M. Kumar</i></p> <p>13:50-14:05 OS12-27 The Motion of Ferrofluid Drop Under Three-Dimensional Dynamic Magnetic Field <i>K.-Y. Huang, Y.-Y. Peng, C.-Y. Chen</i></p>	<p>13:10-13:30 OS7-12 Optimal Flapping Manoeuvres of 2D Flexible Wings <i>Y. Wang, J. Li</i></p> <p>13:30-13:50 OS7-13 Structural Sizing of a Wing-Fuselage Model Using One-way Coupling Analysis <i>Rashmikant, T. Yamazaki, Y. Abe</i></p> <p>13:50-14:10 OS7-14 Fully-partitioned Method for Static Aeroelasticity and Deep Dynamical Modeling for Unsteady Fluid-structure Interaction <i>T. Yamazaki, Y. Abe, F. D. Witherden, T. Okabe</i></p>	<p>13:10-13:30 OS17-4 Numerical Analysis of CO<sub>2</sub> Flows across Critical Region in Porous Media on a Microchip <i>M. Chen, L. Chen, Y. Kanda, A. Komiya</i></p> <p>13:30-13:50 OS17-5 System Analysis and Preliminary Results of Chromium Extraction from Soil Samples by Supercritical CO<sub>2</sub> <i>W. Wu, L. Chen, D. Mei</i></p> <p>13:50-14:10 OS17-6 Summary and Analysis of Complex Phase-Transitions in Critical Fluid by Phase Field Method <i>H. Liu, L. Chen</i></p>		<p><b>OS21-49 - OS21-72</b> 12:25-13:25 (preparation time)</p> <p>13:25-13:55 <i>Short Oral Presentation</i></p> <p>13:55-14:40 &amp; 14:50-15:35 <i>Poster Presentation</i></p>	<p><b>CRF-27 to 52 (except CRF-31 to 34 and CRF-46)</b> <b>12:55-14:40</b> <i>Poster Presentation</i></p>	

14:20-14:40 OS15-11 Studies on Unsteady turbulence characteristics Associated with the Effect of Vortex Generators on Jet in Cross Flow Using a High Order LES Turbulence Model <i>D. Biswas, T. Jimbo</i>			14:10-14:40 OS4-8 Reconstruction Technique for Hybrid Rocket Fuel Regression towards Overcoming Multiple Solutions <i>A. T. Padilla Torres, Y. Saito, T. Kuwahara</i>	13:55-14:10 OS11-9 A Numerical Study on the Effects of Mechanical Stimulation and Endothelium Recovery Rate on Vascular Remodeling after Percutaneous Coronary Intervention <i>B. Guo, S. Chen, Y. Zhang, Y. Yang, A. Qiao</i>  14:10-14:25 OS11-10 Adhesion Modulates Cell Migration and Endothelial Cell Dynamics <i>R. D. M. Travasso, M. Gouveia, M. Palmeira, Á. Calhau, J. Curty, S. Cunha, J. Carvalho, M. Moreira-Soares, J. Rafael Bordin, C. S. Lopes, F.A. Carvalho, A. Hernández-Machado, K. Kinoshita, N. C. Santos</i>  14:25-14:40 OS11-11 Experimental Study on Electrohydrodynamic Instability of Three Immiscible Liquids Flowing in a Microchannel <i>E. N. Soysal, K. Uguz</i>	14:05-14:20 OS12-28 Influence of Different Magnetic Field Effects on Bubble Rotation on Electrode Surface <i>Y.-J. Chen, Y.-H. Li, C.-Y. Chen</i>  14:20-14:35 OS12-29 Two-Phase Flow Separator for High Viscosity Liquid <i>B.-C. Hsueh, Y.-C. Chen, Y.-Y. Chiang</i>	14:10-14:30 OS7-15 Optimal Design of Composite Plate Wings for Aeroelastic Characteristics based on Complex Modulus Approach <i>M. Kameyama, K. Kawakami</i>	14:10-14:30 OS17-7 Evaluation of Organic Solvent Diffusion in Pressurized CO <sub>2</sub> Gas Utilizing Dynamic Pendant Drop Volume Analysis <i>R. Mukai, Y. Kanda, Y. Hu, L. Chen, A. Komiya</i>			
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BREAK

EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA	CON-HAGI
<b>OS15: Turbulence: from Fundamentals to Applications</b> Turbulent Shear Flow <i>Chair: T. Ishihara</i>	<b>OS24: JSPS Core to Core program workshop &amp; OS2: Combustion &amp; OS23: Lyon</b>	<b>OS3: The First International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation</b> <i>Chair: K. Endo</i>	<b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 15th Edition</b> Hybrid Rocket Performance Enhancement Through Innovative Flow Techniques <i>Chair: L. Kamps</i>	<b>OS10: Two-Phase Thermal Control for Spacecraft</b> <i>Chair: H. Nagai</i>	<b>OS12: Complex Thermofluid System</b> Numerical and Experimental Fluid Dynamics II <i>Chair: Y.-H. Liu</i>	<b>OS7: Advances in Simulation Techniques for the Computational Aerosciences</b> <i>Chair: Y. Abe</i>	<b>OS17: Supercritical Fluid</b> <i>Chair: K. Ragni</i>		<b>OS21: The 19th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</b>	<b>OS22: IFS Collaborative Research Forum (AFI-2023)</b>
14:50-15:10 OS15-12 On the Identification of the Viscous Superlayer in Free-shear Flows <i>Y. Xie, W. Yin, Y. Zhou</i>	14:50-15:00 OS24-1 Introction of core to core program <i>T. Tokumasu</i>  15:00-15:15 OS24-2 / OS23-1 <i>Invited</i> MATEIS: Material Science in Turbulent Mixing Layer <i>M. Wang, T. Okawa, K. Ivano, Y. Sakai, Y. Ito</i>	14:50-15:10 OS3-4 Significant Device Performance Enhancement of 1L MoS <sub>2</sub> nMOSFETs through the vdW Interface Formation of Sb <sub>2</sub> Te <sub>3</sub> /MoS <sub>2</sub> <i>W. H. Chang, S. Hatayama, Y. Saito, N. Okada, T. Endo, Y. Miyata, T. Irisawa</i>	14:50-15:20 OS4-9 Experimental Investigation of Regenerative Cooling in Hybrid Rocket Engines for the Nozzle Erosion Suppression <i>G. Gallo, H. Kojima, L. Kamps, H. Nagata</i>  15:20-15:50 OS4-10 Fuel Regression Characteristics of Axial-Injection End-Burning Hybrid Rocket with Liquid Oxygen <i>K. Ri, S. Suzuki, M. Fukada, H. Nagata</i>	14:50-15:30 OS10-1 <i>Invited</i> Current Research and Future Prospects of Oscillating Heat Pipes <i>M. Ando, K. Tanaka, A. Okamoto</i>  15:30-15:50 OS10-2 Numerical Analysis on the Heat Transport Performance of Oscillating Heat Pipe with Difficult Heating Section Arrangement <i>A. Kawaguchi, T. Yokouchi, M. Ando, T. Ikami, H. Nagai</i>	14:50-15:10 OS12-30 Scaling Laws and Investigations of the Laser Direct Energy Deposition by CFD model <i>C.-C. Tseng, Y.-C. Wang, M.-I. Ho</i>  15:10-15:30 OS12-31 Development of Raw-Image Ray-Bundling for Focused-Planoptic 3D-PTV <i>Y. S. Chen, C.-C. Chen, Z. P. Tan</i>  15:30-15:45 OS12-32 Unsteady flow and Heat Transfer Past a Wall-mounted Prism at Low Reynold Number <i>W.-H. Shih, C.-G. Li</i>	14:50-15:10 OS7-16 Influence of Ground Clearance on Aerodynamic Characteristics of Aero-Train <i>J. He, C. Lai, J. Song, S. Obayashi</i>  15:10-15:30 OS7-17 Investigation on Vortex Structure and Flow Characteristics of Open-wheel Racing Car <i>Z. Zhen, C. Lai, S. Feng</i>  15:30-15:50 OS7-18 Advances in High-Order Weighted Essentially Non-Oscillatory Schemes with Arbitrary Linear Weights for Compressible Flow Problems <i>N. Zhao, J. Zhu, L. Tian, Z. Wang</i>	14:50-15:10 OS17-8 A Comparative Kinetic Study of Ethanol Oxidation in Gas Phase and Supercritical Water <i>G. Li, C. Yang</i>  15:10-15:30 OS17-9 Topology Optimization of TPMS-based Porous Structure in Fluid Heat Dissipation <i>T. Si, Z. Cheng, Q. Wang</i>  15:30-15:50 OS17-10 Pore-scale Simulation of Two-phase Displacement and Mass Transfer in Porous Media <i>Y. Hu, Y. Kanda, R. Mukai, J. Su, A. Komiya</i>		<b>OS21-49 - OS21-72</b> 13:55-14:40 & 14:50-15:35 <i>Poster Presentation</i>	Poster
14:50-15:30 OS15-13 Inter-scale Transfer of Energy in Turbulent Mixing Layer <i>M. Wang, T. Okawa, K. Ivano, Y. Sakai, Y. Ito</i>	15:15-15:30 OS24-3 <i>Invited</i> Collaborative research on sustainable energy at UW <i>A. Dichiaro</i>	15:10-15:30 OS3-5 Formation of <i>In-situ</i> Al Doped SiC Thin Film. <i>Y. Tsuchizu, K. Ono, K. Uehara, S. Yasuhara, W. Takeuchi</i>	15:50-16:20 OS4-11 Development of a Throttling Valve for Blow-down Hybrid Rocket Engine <i>S.-C. Wang, Z.-R. Chen, S.-S. Wei, J.-S. Wu</i>	15:50-16:10 OS10-3 Dielectrophoretically-Enhanced Microchannel Evaporator with Diverging Electric Field <i>M. Nishikawara, N. J. O'Connor, J. S. Yagoobi</i>						
15:30-15:50 OS15-14 Turbulence Structure in the Atmospheric Surface Layer over Urban Areas: Wavelet Analysis <i>C.-H. Liu, Y. Liu</i>	15:30-15:45 OS24-4 <i>Invited</i> Fundamental developments in ammonia combustion for practical applications <i>M. Sarathy</i>	15:30-15:50 OS3-6 Suppression of Charges in Al <sub>2</sub> O <sub>3</sub> Gate Dielectric and Improvement of MOSFET Performance by Plasma Nitridation <i>K. Manabe</i>								

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<p>15:50-16:10 OS15-15 Turbulence Structure in the Atmospheric Surface Layer over Urban Areas: Empirical Model Decomposition of Hot-Wire Anemometry Data <i>C.-H. Liu, F. Li, R. Wang, G. Chen, Z. Mo</i></p>	<p>15:45-16:00 OS24-5 <i>Invited</i> Recent Activities in Emerging Semiconductor Technologies and Synthetic Ammonia for Hydrogen Energy System <i>Y. Li, C. Lan</i></p> <p>16:00-16:20 OS24-6 / OS2-56 Ammonia Combustion with Biomass Gaseous Fuels and Hydrogen: from Fundamental Properties towards Engine Use <i>P. Brequigny, R. Rabello de Castro, A. Soule, F. Halter, G. Dayma, C. Mounaim-Rousselle</i></p>				<p>15:45-16:00 OS12-33 An Experimental Study of Tandem Flapping Wings: Comparative Analysis of Unsteady Aerodynamics in Damselfly and Dragonfly Hovering <i>Y.-H. Wang, C.-H. Chen, Y.-H. Wu, K. B. Lua</i></p>	<p>15:50-16:10 OS7-19 CFD Prediction Accuracy Study Based on Physical Wind Tunnel Model <i>M. Duan, J. Feng, S. Huang, Y. Chen, Q. Wang, L. Xu</i></p>				
BREAK										
16:20	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-1	CON-2	CON-SHIRAKASHI 2	CON-SAKURA
16:30	<p><b>OS15: Turbulence: from Fundamentals to Applications</b> Noise &amp; Fundamental Aspects <i>Chair: Y. Hattori</i></p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> <i>Chair: Ö. L. Gülder</i></p>	<p><b>OS22: Fluids Science Research Award Lecturers (AFI-2023)</b> <i>Chair: K. Maruta</i></p>	<p><b>OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 15th Edition</b> Implementation of Complex Flow in Hybrid Rocket Systems <i>Chair: Y. Saito</i></p>	<p><b>OS10: Two-Phase Thermal Control for Spacecraft</b> <i>Chair: K. Odagiri</i></p>	<p><b>OS12: Complex Thermofluid System</b> General II <i>Chair: C.-H. D. Tsai</i></p>	<p><b>GS: General Session</b> Electromagnetics flow <i>Chair: S. Takeda</i></p>	<p><b>OS2: The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b> <b>&lt;Satellite&gt;</b></p>		<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>
<p>16:30-16:50 OS15-16 Examination of the Acoustic Spectrum in the Generalized Acoustic Analogy for Heated Flows - Temperature Coupling Effects vs Direct Enthalpy Flux Generated Noise <i>S. Stirrat, M. Z. A. Koshuriyan, A. Sescu</i></p> <p>16:50-17:10 OS15-17 Evaluation of Noise Generated from Turbulent Boundary Layer on a Flat Plate Using Direct Numerical Simulation <i>N. Hirao, M. Hirota, Y. Hattori</i></p> <p>17:10-17:30 OS15-18 Combination of Active and Passive Techniques Applied on NACA0015 for Aerospace Applications Regarding Anti-icing Issues <i>H. K. Pazarlıoğlu, K. Arslan, A. Ü. Tepe</i></p> <p>17:30-17:50 OS15-19 Taylor's Hypothesis in High-order Turbulence Correlations <i>M. Z. A. Koshuriyan, S. Stirrat, A. Sescu</i></p>	<p>16:30-16:48 OS2-26 Combustion Analysis of Novel Miniature Swiss-roll Combustors with Non-premixed CH<sub>4</sub>/air Flames <i>C.-C. Lien, H.-Y. Shih</i></p> <p>16:48-17:06 OS2-27 Experimental Study on Weak Intensity Turbulent Combustion Generated by Grids <i>W. Kong, Z. Yuan, R. Zhao</i></p> <p>17:06-17:24 OS2-28 The Effect of Lewis Number on the Flame Behavior in a Sudden Expansion Channel <i>J.-H. Huang, S.-Y. Hsu</i></p> <p>17:24-17:42 OS2-29 Auto-ignition of Pressurized Syngas Leakage <i>G. Lyu, X. Gou</i></p> <p>17:42-18:00 OS2-30 Numerical Investigation on the Concurrent-flow Flame Spread over a Thin Solid-fuel in Narrow Channels <i>K. Hsueh, Y.-X. Zhang, S.-Y. Hsu</i></p>	<p>16:30-17:15 FRA-1 Numerical Study of Combustion Phenomena in Compressible Flow <i>A. Matsuo</i></p>	<p>16:30-17:00 OS4-12 Feasibility Study of A-SOFT Hybrid Rocket Thrust-O/F Control System for Ground Test <i>T. Siricharoensathaporn, K. Matsui, K. Kitagawa</i></p>	<p>16:30-16:50 OS10-4 Visualization Study of Hysteresis Phenomena in a Multi-evaporator Loop Heat Pipe <i>X. Chang, N. Watanabe, H. Nagai, H. Nagano</i></p> <p>16:50-17:10 OS10-5 Experimental Testing and Numerical Investigation of an Anti-Gravity LHP <i>S. Somers-Neal, T. Maeda, A. Mitani, R. Kobayashi, H. Nagano</i></p> <p>17:10-17:30 OS10-6 Heat Transfer Limit Evaluation of Cryogenic Loop Heat Pipe <i>T. Yokouchi, X. Chang, K. Odagiri, H. Ogawa, H. Nagano, H. Nagai</i></p> <p>17:30-17:50 OS10-7 Visualization of Low Mass Flux Nitrogen Condensate Flow Inside a Cryogenic Loop Heat Pipe. <i>A. Gomi, K. Odagiri, Y. Sakamoto, S. Okazaki, H. Nagai, H. Ogawa</i></p>	<p>16:30-16:50 OS12-34 3-D Acoustic Streaming Flow Patterns Induced by Parallel Longitudinal Spines in Microchannels <i>O. C. Tarigan, C.-C. Li, W.-H. Tien</i></p> <p>16:50-17:05 OS12-35 Enhancing the Performance of Distributed Electric Propulsion <i>P. W. Chiang, K. B. Lua</i></p> <p>17:05-17:20 OS12-36 Flow Fields Of Multiple Finite Length Oscillating Cylinders In Side-By-Side Configuration Normal To The Free Stream <i>K.-X. Shih, K.-B. Lua</i></p> <p>17:20-17:35 OS12-37 Numerical Simulation of Aerodynamics and Aeroacoustics in True Wireless Stereo Headphone Noise Isolating Designs <i>T.-Y. Cheng, Y.-C. Chen, W.-H. Wang</i></p>	<p>16:30-16:50 GS1-13 Analysis of Exploding Bridge Foil and Flyer Launch in Slapper Detonator <i>K. Kim</i></p> <p>16:50-17:10 GS1-14 Two-dimensional Particle-in-cell Simulation of Plasma Flow in Diverging Magnetic Nozzle <i>J. Lee, M. Takahashi</i></p> <p>17:10-17:30 GS1-15 Effect of DC Magnetic Field Strength on Volumetric Entropy Generation in Sudden Expansion Tube with Dimpled Fin <i>E. Gürsoy, H. K. Pazarlıoğlu, M. Gürdal, E. Gredik, K. Arslan</i></p> <p>17:30-17:50 GS1-16 Evaluating the Effect of Hot Electrons on the Plasma Dynamics in a Magnetic Nozzle using a Multifluid-FDTD Model <i>S. Shrivastava, N. Ohnishi, M. Takahashi</i></p>	<p>16:30-16:48 OS2-26 Combustion Analysis of Novel Miniature Swiss-roll Combustors with Non-premixed CH<sub>4</sub>/air Flames <i>C.-C. Lien, H.-Y. Shih</i></p> <p>16:48-17:06 OS2-27 Experimental Study on Weak Intensity Turbulent Combustion Generated by Grids <i>W. Kong, Z. Yuan, R. Zhao</i></p> <p>17:06-17:24 OS2-28 The Effect of Lewis Number on the Flame Behavior in a Sudden Expansion Channel <i>J.-H. Huang, S.-Y. Hsu</i></p> <p>17:24-17:42 OS2-29 Auto-ignition of Pressurized Syngas Leakage <i>G. Lyu, X. Gou</i></p> <p>17:42-18:00 OS2-30 Numerical Investigation on the Concurrent-flow Flame Spread over a Thin Solid-fuel in Narrow Channels <i>K. Hsueh, Y.-X. Zhang, S.-Y. Hsu</i></p>			<p>Poster</p>

					17:35-17:55 OS12-38 Investigating The Application Of Tesla Valve Annular Structure Ethanol Steam Reforming Combined With In Water Gas Shift Reaction <i>M.-H. Zhong, C.-G. Li, W.-H. Chen</i>						
18:00	19:00- Banquet @ CON-SAKURA, Conference Bldg.										18:00
20:30											20:30



9:00	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-2	CON-HAGI	9:00
	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p>	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Chair: <i>Y. Morii</i></p>	<p><b>OS16Vortex Motion</b></p> <p>Curved vortices &amp; Sound</p> <p>Chair: <i>M. Hirota</i></p>	<p><b>OS23IFS Lyon Center Collaborative Research Forum</b></p> <p>Chair: <i>J.-Y. Cavaille</i></p>	<p><b>OS13Flow Realization, Measurement and Visualization</b></p> <p>Chair: <i>T. Yamagata</i></p>	<p><b>OS5Advanced Applications of Multi-functional Fluids</b></p> <p>Advanced multiphase flow 1</p> <p>Chair: <i>T. Kishimoto</i></p>	<p><b>GS: General Session</b></p> <p>Space application I</p> <p>Chair: <i>Y. Saito</i></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>	
9:00-9:18	OS2-31 Repetitive Autoignition and Extinction Instability of Non-premixed N-dodecane Spray Cool Flames Using Digital Inline Holography <i>W. Xu, Z. Wang, B. Mei, M. A. Erinin, L. Deike, Y. Ju</i>	9:00-9:18 OS2-31 Repetitive Autoignition and Extinction Instability of Non-premixed N-dodecane Spray Cool Flames Using Digital Inline Holography <i>W. Xu, Z. Wang, B. Mei, M. A. Erinin, L. Deike, Y. Ju</i>	9:10-9:30 OS16-1 Streamwise Pressure Gradient Effect on Görtler Vortices: a Numerical Study in the Compressible Regime <i>O. Es-Sahli, A. Sescu, Z. Koshuriyan, Y. Hattori</i>	9:40-10:00 OS23-2 Nondestructive Evaluation of Water Uptake in Epoxy-Ionic Liquid Composite Polymer for Corrosion Protection by Coplanar Capacitor Sensor <i>L. Ollivier-Lamarque, T. Uchimoto, N. Mary, S. Livi</i>	9:00-9:15 OS13-1 Unsupervised Flow Regime Analysis of 3x3 Rod Bundle Two-phase Flow and Calibration Experiment of Full Section <i>W.-C. Tsai, S.-W. Chen, L.-H. Huang, P.-S. Ruan, M.-S. Lin</i>	9:30-9:50 OS5-16 Dynamic Assembly of Strong and Conductive Carbon Electrolyte Applications for the Enhancement of Transpiration Driven Electrokinetic Generators <i>D. Edmondson, A. Dichiaro, H. Takana</i>	9:00-9:20 GS1-17 Particle-in-cell Simulation of the Cross-field Transport in a Plasma Thruster employing a Time-varying Magnetic Field <i>H. Suzuki, M. Takahashi</i>	<p><b>CRF-53 to 68</b></p> <p><b>CRF-46</b></p> <p><b>CRF-31 to CRF-34</b></p> <p>9:30-10:30</p> <p><i>Short Oral Presentation</i></p>	
9:18-9:36	OS2-32 Ignition of Premixed Cool Flame in a Counterflow <i>Y. Wang, Y. Wang, Z. Chen</i>	9:18-9:36 OS2-32 Ignition of Premixed Cool Flame in a Counterflow <i>Y. Wang, Y. Wang, Z. Chen</i>	9:30-9:50 OS16-2 Flow Visualization and Analysis of Internal Fluids using Different Helix Structures <i>P.-Y. Svu, G.-Y. Lu, F. Maqbool, W.-H. Wang, W.-H. Tien, Y.-Y. Chiang</i>	10:00-10:20 OS23-3 Effect of Flaw Parameters on Ultrasonic Attenuation <i>H. Nakamoto, K. Terada, P. Guy, T. Uchimoto</i>	9:15-9:30 OS13-2 Feasibility Study on Identifying Bubbly Flow Boundary in Narrow Rectangular Tube Using Probability Density Plots <i>Y.-H. Lin, S.-W. Chen, H.-Y. Chen</i>	9:50-10:10 OS5-2 Fiber-Morphology-Dependence of Rotational Diffusion Constant of Cellulose Nanofiber Suspension by Brownian Dynamics Simulation <i>Y. Ishimoto, R. Koinuma, H. Takana</i>	9:20-9:40 GS1-18 Fundamental Design of Directional Radiation Metamaterials for Asteroid Probe Radiator <i>A. Sudo, R. Moriya, S. Tachikawa, A. Sakurai</i>		
9:36-9:54	OS2-33 An Updated Simplified Reaction Rate Model to Consider Chemical Reaction in Preheat Zone <i>A. Tsunoda, Y. Morii, K. Maruta</i>	9:36-9:54 OS2-33 An Updated Simplified Reaction Rate Model to Consider Chemical Reaction in Preheat Zone <i>A. Tsunoda, Y. Morii, K. Maruta</i>	9:50-10:10 OS16-3 Numerical Study on Sound Generation Process of an Oboe Reeds with DNS <i>Y. Nakahara, R. Sumita, R. Tabata, S. Iwagami, T. Nanri, T. Kobayashi, Y. Hattori, K. Takahashi</i>	9:45-10:00 OS13-4 Flow Visualization and Characterization of Capillary Waves using a Novel Optical Method <i>Y. Y. Mukim, R. W. Time, A. H. Roberjafimanantsoa</i>	9:30-9:45 OS13-3 Visualization of Temperature Distribution of Cavitation Collapse Bubbles in Automotive Transmission Oil <i>R. Shiozawa, S. Funatani</i>	10:10-10:30 OS5-3 Experimental Investigation on the Flow State of Shear Thickening Fluid in a Circular Channel <i>R. Zhang, Y. Mukuhira, S. Ishihara, T. Tian, Y. Arai, M. Uno, V. Sokolovskii, T. Tomai, T. Ito</i>	9:40-10:00 GS1-19 Compressibility Effects around Propeller on Propeller-Wing Aerodynamic Interaction for Mars Airplane <i>Y. Furusawa, K. Kitamura, T. Ikami, M. Okawa, H. Nagai</i>		
9:54-10:12	OS2-34 Experimental Investigation on Laminar Flame Propagation and Two Stage auto Ignition Phenomena of n-C <sub>2</sub> H <sub>4</sub> /air Premixture under High Temperature / Pressure Conditions <i>T. Tateishi, R. Tanabe, M. Kawano, Y. Honda, T. Hara, M. Nakahara, A. Miyoshi, H. Terashima, D. Shimokuri</i>	9:54-10:12 OS2-34 Experimental Investigation on Laminar Flame Propagation and Two Stage auto Ignition Phenomena of n-C <sub>2</sub> H <sub>4</sub> /air Premixture under High Temperature / Pressure Conditions <i>T. Tateishi, R. Tanabe, M. Kawano, Y. Honda, T. Hara, M. Nakahara, A. Miyoshi, H. Terashima, D. Shimokuri</i>	10:10-10:30 OS16-4 Numerical Study on Fundamental Process of a Thermoacoustic Engine <i>Y. Tashima, T. Ohno, T. Nanri, T. Kobayashi, Y. Hattori, K. Takahashi</i>	10:00-10:15 OS13-5 PIV Measurement of the Wake of Sphere with a Uniaxial Through-hole <i>D. Kobayashi, S. Tsukamoto, T. Uchiyama, K. Takamura</i>	10:15-10:30 OS13-6 Particle Collection Characteristics of a Prismatic Two-stage Electrostatic Precipitator <i>T. Haruki, S. Ando, T. Yagi, H. Amano, Y. Iwatani, K. Takamura, T. Uchiyama</i>	10:00-10:20 GS1-20 Pulsed Jet Impingement On Regolith Simulants Under Lunar Conditions Using PIV <i>S. Subramanian, A. Wilson, C. White, K. Kontis, D. Evans, J. Van den Eynde</i>			
10:12-10:30	OS2-35 TOF-MS Measurement of Intermediate Species in Wall-stabilized Premixed Cool Flames <i>M. Zhou, Y. Suzuki, M. Lee</i>	10:12-10:30 OS2-35 TOF-MS Measurement of Intermediate Species in Wall-stabilized Premixed Cool Flames <i>M. Zhou, Y. Suzuki, M. Lee</i>		BREAK					
10:40	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-2	CON-HAGI	10:40
	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p>	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Chair: <i>Y. Suzuki</i></p>	<p><b>OS16Vortex Motion</b></p> <p>Instability</p> <p>Chair: <i>Y. Hattori</i></p>	<p><b>OS23IFS Lyon Center Collaborative Research Forum</b></p> <p>Chairs: <i>K. Funamoto &amp; G. Sebald</i></p>	<p><b>OS13Flow Realization, Measurement and Visualization</b></p> <p>Chair: <i>S. Funatani</i></p>	<p><b>OS5Advanced Applications of Multi-functional Fluids</b></p> <p>MHD energy conversion</p> <p>Chair: <i>N. Takeuchi</i></p>	<p><b>GS: General Session</b></p> <p>Space application II</p> <p>Chair: <i>T. Ikami</i></p>	<p><b>OS22: IFS Collaborative Research Forum (AFI-2023)</b></p>	
10:40-10:58	OS2-36 Reactivity and Extinction of n-dodecane Non-premixed Cool Flame at High Pressure <i>Z. Wang, A. Thawko, B. Mei, W. Xu, C. K. Law, Y. Ju</i>	10:40-10:58 OS2-36 Reactivity and Extinction of n-dodecane Non-premixed Cool Flame at High Pressure <i>Z. Wang, A. Thawko, B. Mei, W. Xu, C. K. Law, Y. Ju</i>	10:40-11:00 OS16-5 Compressibility Effect on Kelvin-Helmholtz and Rayleigh-Taylor Instabilities <i>Y. Fukumoto, R. Zou, K. Matsuura, N. Taniguchi</i>	10:40-11:00 OS23-4 Mass Transfer Enhancement and Control by using Ultrasound Induced Flow <i>A. Komiya, V. Botton, S. Miralles, R. Zhu</i>	10:40-10:55 OS13-7 Influence of the Edge Curvature Connecting Between the Cavity and Guide Wall on Cross-Flow Turbine <i>Y. Kuroda, H. Tatsumi, T. Sakai, S. Iio, T. Kitahara, Y.-D. Choi, M. Inagaki</i>	10:40-11:00 OS5-4 Study on Streaky Structure in the Vicinity of Rotating Inner Cylinder in Co-axial MHD Energy Conversion Device <i>T. Hasebe, T. Fujino, H. Takana, H. Kobayashi</i>	10:40-11:00 GS1-21 Numerical Simulation on Thermal Decomposition of a Hydrocarbon Fuel under Supercritical State using CFD with Reaction Model <i>T. Isono, T. Miyaaura, Y. Daimon, T. Onodera, S. Tomioka</i>	<p><b>CRF-53 to 68</b></p> <p><b>CRF-46</b></p> <p><b>CRF-31 to CRF-34</b></p> <p>10:40-12:10</p> <p><i>Poster Presentation</i></p>	

10:58-11:16 OS2-37 Unburnt Reaction Progress Effects on Spherical Flame Dynamics under Elevated Temperature Conditions <i>K. Akita, P. Zhao, Y. Morii, K. Maruta</i>	10:58-11:16 OS2-37 Unburnt Reaction Progress Effects on Spherical Flame Dynamics under Elevated Temperature Conditions <i>K. Akita, P. Zhao, Y. Morii, K. Maruta</i>	11:00-11:20 OS16-6 Stability Boundary of Inviscid Nonmonotonic Shear Flow <i>M. Hirota, K. Deguchi</i>	11:00-11:20 OS23-5 Numerical Study on Electrical Drift and Diffusion of Ions in Polymer Strips <i>J. Courbon, H. Takana, J.-Y. Cavaillé, G. Coativy, G. Diguët</i>	10:55-11:10 OS13-8 Relationship between Inlet Flow Conditions and Cross-flow Turbine Performance <i>K. Suzuno, M. Fujimori, K. Aiba, A. Yamaguchi, S. Iio</i>	11:00-11:20 OS5-5 Fundamental Characteristics of Rotating-Detonation-Driven Disk-Shaped MHD Generator Fueled by Hydrogen <i>R. Masuda, M. Matsumoto, A. Kawasaki, Y. Okamoto</i>	11:00-11:20 GS1-22 Evaluation of Flight Performance of a Laser-blast Rider Driven by Repetitive Pulses <i>Y. Muto, M. Takahashi</i>	
11:16-11:34 OS2-38 Secondary Injector Configurations Impact on Combustion Instability of Axially-Staged Lean-Premixed Flames <i>G. Han, Y. Choi, K. T. Kim</i>	11:16-11:34 OS2-38 Secondary Injector Configurations Impact on Combustion Instability of Axially-Staged Lean-Premixed Flames <i>G. Han, Y. Choi, K. T. Kim</i>	11:20-11:40 OS16-7 Linear Short-Wave Instability in Helical Vortices <i>I. Delbende, Y. Hattori, M. Rossi, Y. Xu</i>	11:20-11:40 OS23-6 Active Control of Protein Mass Transfer by Membranes with Various Pore Patterns <i>R. Zhu, J. F. Torres, S. Livi, A. Komiya</i>	11:10-11:25 OS13-9 Analyzing the Impact of Operating Conditions on Energy Loss in a Cross-flow Turbine <i>A. Yamaguchi, M. Fujimori, K. Aiba, K. Suzuno, S. Iio</i>	11:20-11:40 OS5-6 Numerical Simulation of Alkali Metal Seed Mixing Process Based on MHD Generator <i>P. Zhu, A. Peng</i>	11:20-11:40 GS1-23 Design and Numerical Study of an Intake for Electrostatic Ramjet Engine <i>K. Ito, M. Takahashi</i>	
11:34-11:52 OS2-39 Numerical Study of Alcohol-to-jet Fuel Pyrolysis and Oxidation <i>Y.-J. Wu, K. C. Lin</i>	11:34-11:52 OS2-39 Numerical Study of Alcohol-to-jet Fuel Pyrolysis and Oxidation <i>Y.-J. Wu, K. C. Lin</i>	11:40-12:00 OS16-8 Nonlinear Development of Instability of Two-Dimensional Taylor-Green Vortices in Rotating Fluid <i>N. Ueno, M. Hirota, Y. Hattori</i>	11:40-12:00 OS23-7 Study of the Electroactuation of Doped Epoxy-amine Elastomers with Ionic Liquids under High Electric Fields <i>A. Blain, G. Coativy, F. Dalmás, S. Livi, G. Perli, V. Perrin, L. Seveyrat, G. Diguët, J. Courbon, H. Takana, J.-Y. Cavaillé</i>	11:25-11:40 OS13-10 Effect of Number of Blades on the Performance of a Waterfall Cross-Flow Hydro-Turbine <i>K. Moriya, T. Yamagata, N. Fujisawa</i>	11:40-12:10 OS5-7 Cancelled	11:40-12:00 GS1-24 Visualization Study on the Ultrasonic-Driven Rectangular Synthetic Jet <i>H. Furukawa, K. Adachi, K. Furutani, T. Handa</i>	
11:52-12:10 OS2-40 Experimental Study on the Dynamic Response of Axially-Staged Lean-Premixed Combustion System <i>Y. Choi, K. T. Kim</i>	11:52-12:10 OS2-40 Experimental Study on the Dynamic Response of Axially-Staged Lean-Premixed Combustion System <i>Y. Choi, K. T. Kim</i>			11:40-11:55 OS13-11 Development of a Micro-Pelton Turbine for Off-grid Power Generation <i>R. Shirai, S. Iio, T. Arai</i>			
BREAK							
12:10	12:10	12:10	12:10	12:10	12:10	12:10	
13:10	13:10	13:10	13:10	13:10	13:10	13:10	
EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-2	CON-HAGI
<b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b>  <Satellite>	<b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b>  <i>Chair: O. Mathieu</i>	<b>OS16Vortex Motion</b>  Vortical Structures <i>Chair: Y. Hattori</i>	<b>OS23IFS Lyon Center Collaborative Research Forum</b>  <i>Chairs: A. Komiya &amp; J. Courbon</i>	<b>OS13Flow Realization, Measurement and Visualization</b>  <i>Chair: S. Iio</i>	<b>OS5Advanced Applications of Multi-functional Fluids</b>  Thermal Plasma / Plasma Chemistry <i>Chair: T. Fujino</i>	<b>GS: General Session</b>  Fluid mechanics I <i>Chair: A. Takeno</i>	<b>OS22: IFS Collaborative Research Forum (AFI-2023)</b>
13:10-13:28 OS2-41 Turbulent Partially Cracked Ammonia/air Flames in Spherical Vessel <i>S.-E. Zitouni, P. Brequigny, C. Mounaïm-Rousselle</i>	13:10-13:28 OS2-41 Turbulent Partially Cracked Ammonia/air Flames in Spherical Vessel <i>S.-E. Zitouni, P. Brequigny, C. Mounaïm-Rousselle</i>	13:20-13:40 OS16-9 Vortical Flow Derived from Local Flow Geometry and its Relationships to Flow Structure of Finite-Scale Vortex in Homogeneous Isotropic Turbulence <i>K. Nakayama</i>	13:10-13:30 OS23-8 Coupled Computing of Fluid-Structure Interaction Problems for Multiphase Energy Systems <i>J. Ishimoto, T. Elguedj</i>	13:10-13:25 OS13-12 Cancelled	13:20-13:40 OS5-8 A Double-Jacketed Enthalpy Probe for Measurement of Supersonic Plasma <i>J.-H. Seo, D.-U. Kim, N.-G. Lee, D.-H. Lee</i>	13:10-13:30 GS1-25 Research on Improving the Performance of the Vertical Axis Wind Turbine using J-type Airfoil <i>R. Pena Valdes, G. Ohmori, S. Imai, W. Yamazaki</i>	Poster
13:28-13:46 OS2-42 Experimental Study on Emission Characteristics of Ammonia Jet Diffusion Flames under Oxygen Enrichment Condition <i>Y. Xia, Y. Shen, K. Sakai, S. Colson, T. Kudo, A. Hayakawa, H. Kobayashi</i>	13:28-13:46 OS2-42 Experimental Study on Emission Characteristics of Ammonia Jet Diffusion Flames under Oxygen Enrichment Condition <i>Y. Xia, Y. Shen, K. Sakai, S. Colson, T. Kudo, A. Hayakawa, H. Kobayashi</i>	13:40-14:00 OS16-10 Quasi-Steady State of a Hub Vortex Under Multi-Polar Strain Induced by Satellite Vortices <i>A. S. P. Ayapilla, Y. Hattori</i>	13:30-13:50 OS23-9 Clarification of Flow Structures Related to Jet Noise Generation Using Mode Analysis and High-Precision Jet Flow Simulation <i>S. Morita, A. Yakeno, C. Bogey, S. Obayashi</i>	13:25-13:40 OS13-13 Numerical Simulation of Hydrodynamic Interactions between Fish Body and Pectoral Fins <i>K. Morifusa, T. Fukui</i>	13:40-14:00 OS5-9 Evaluation of the Thermal Plasma Pyrolysis of Methane by Using Computational Works <i>Y. H. Lee, J.-H. Oh, S. Choi</i>	13:30-13:50 GS1-26 Research and Development of Automatic Flight of Small Bird-Like Innovative Air Vehicle <i>U. Kagawa, M. Hirano, H. Izumi, T. Ishide, S. Obayashi</i>	
13:46-14:04 OS2-43 The Temperature Characteristics of Liquid Ammonia Spray at High Pressures <i>K.D.K. A. Somaratne, H. Yamashita, K. Oku, K. Honda, T. Kudo, A. Hayakawa, H. Kobayashi</i>	13:46-14:04 OS2-43 The Temperature Characteristics of Liquid Ammonia Spray at High Pressures <i>K.D.K. A. Somaratne, H. Yamashita, K. Oku, K. Honda, T. Kudo, A. Hayakawa, H. Kobayashi</i>	14:00-14:20 OS16-11 Steady Translation of a Weakly Compressible Hollow Vortex Pair <i>V. Krishnamurthy, S. Llewellyn Smith</i>	13:50-14:10 OS23-10 Nonlinear Bifurcation and Dynamic Mode Decomposition for Taylor Vortex in Gap between Rotating Two Cylinders/Cones <i>H. Yata, K. Akinaga, V. Botton, A. Komiya, T. Adachi</i>	13:40-13:55 OS13-14 Numerical Simulation of the Effects of the Figure-eight Flapping Motion of an Insect on the Aerodynamics <i>M. Yoshida, T. Fukui</i>	14:00-14:20 OS5-10 Application of Cavitation to Plasma Process for Synthesis of Carbon Catalysts for Oxygen Reduction Reaction <i>R. Harakawa, N. Takeuchi, H. Takana, O. L. Li</i>	13:50-14:10 GS1-27 Design of UAV Propeller and Performing CFD Analysis <i>H. M. Canbaz, Y. K. Karaçomak, V. Çelik, K. Arslan</i>	
14:04-14:22 OS2-44 Unsteady Emission Characteristics of Premixed Ammonia/Hydrogen/Air Flames in a Stagnation Flow <i>T. Tomidokoro, H. G. Im</i>	14:04-14:22 OS2-44 Unsteady Emission Characteristics of Premixed Ammonia/Hydrogen/Air Flames in a Stagnation Flow <i>T. Tomidokoro, H. G. Im</i>	14:10-14:20 OS16-11 Steady Translation of a Weakly Compressible Hollow Vortex Pair <i>V. Krishnamurthy, S. Llewellyn Smith</i>	14:10-14:30 OS23-11 Which Mechanisms Govern Polymer Deposition By Cold Spray Process? <i>C. Bernard, H. Takana, O. Lame, K. Ogawa</i>	13:55-14:10 OS13-15 Numerical Simulation of the Effects of External Oscillatory Flow on the Performance of Small Swimming Object. <i>K. Nakagawa, T. Fukui</i>	14:20-14:40 OS5-11 Carbon Sulfonation by Atmospheric Pressure Plasma <i>N. Takeuchi, S. Deng, K. Takahashi, K. Tachibana, J. Hieda, O. L. Li</i>	14:10-14:30 GS1-28 Effect of Pitching Airfoil Aspect Ratio and Pitch Amplitude on Lift and Drag Forces in a Periodic Flow <i>H. Tanaka, Y. Tanaka, Y. Isoda</i>	
14:22-14:40 OS2-45 Numerical Investigation on the Flame and Stability Characteristics of Partially Cracked Ammonia/Air Premixtures <i>S. Xie, H. Zhang</i>	14:22-14:40 OS2-45 Numerical Investigation on the Flame and Stability Characteristics of Partially Cracked Ammonia/Air Premixtures <i>S. Xie, H. Zhang</i>			14:10-14:25 OS13-16 The Effect of a Crater on the Velocity of Regolith Ejecta During Plume-Regolith Interactions <i>B. Craig, A. Wilson, T. Ukai, K. Kontis</i>			

				14:25-14:40 OS13-17 A Novel AI-Based Noise Removal Approach for Particle Streak Velocimetry Images <i>A. Qadir, T.-T. Vo, M.-K. Liu, W.-H. Tien</i>				
14:40	BREAK							14:40
14:50	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-2	CON-HAGI
	<b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b>  <Satellite>	<b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b>  <i>Chair: E. C. Okafor</i>	<b>OS16Vortex Motion</b>  Point Vortex & Relevant Topics <i>Chair: Y. Fukumoto</i>	<b>OS23IFS Lyon Center Collaborative Research Forum</b>  <i>Chair: M. Ohta &amp; N. Mary</i>		<b>OS5Advanced Applications of Multi-functional Fluids</b>  Plasma Chemistry / Plasma Flow Control <i>Chair: Q. Li</i>	<b>GS: General Session</b>  Fluid mechanics II <i>Chair: A. Hayakawa</i>	
14:50-15:08 OS2-46	14:50-15:08 OS2-46	14:50-15:10 OS16-12	14:50-15:10 OS23-12	14:50-15:10 OS5-12	14:50-15:10 GS1-29			
Comparative Experimental and Theoretical Study of Combustion Instability between Ammonia and Methane Downward Propagating Flames in Tubes <i>J.R. Delfin, F. Guo, N. Hashimoto, O. Fujita</i>	Comparative Experimental and Theoretical Study of Combustion Instability between Ammonia and Methane Downward Propagating Flames in Tubes <i>J.R. Delfin, F. Guo, N. Hashimoto, O. Fujita</i>	Unsteady Motion and Wake of a Thin Aerofoil Using Discrete Vortex Method <i>C. Chang, P.-Y. Tseng</i>	Investigation of a Predictive Therapeutic Response Under Controlled Oxygen Condition in Cancer Patient-Derived Organoids <i>S. Aratake, Z. Su, J.-P. Rieu, K. Funamoto, N. Aznar</i>	Observation of Ultrasonically Enhanced Electrohydraulic Discharge for Wastewater Treatment <i>T. Kuraki, Y. Kumazawa, H. Yamazaki, M. Okubo</i>	Applying the Finite Element Method to Solve the Two-Dimensional Flow Passing Through an Obstacle <i>C.-H. Yang, T.-L. Li, D. Chou</i>			
15:08-15:26 OS2-47	15:08-15:26 OS2-47	15:10-15:30 OS16-13	15:10-15:30 OS23-13	15:10-15:30 OS5-13	15:10-15:30 GS1-30			
Structure and Combustion Characteristics of Turbulent Hydrogen Bluff-Body Flames at Different Reynolds Numbers <i>S. Abdelwahid, L. Angelilli, F. E. Hernández-Pérez, H. Tang, A. Alfazazi, G. Magnotti, B. Dally, H. G. Im</i>	Structure and Combustion Characteristics of Turbulent Hydrogen Bluff-Body Flames at Different Reynolds Numbers <i>S. Abdelwahid, L. Angelilli, F. E. Hernández-Pérez, H. Tang, A. Alfazazi, G. Magnotti, B. Dally, H. G. Im</i>	Numerical Study of Point-vortex Motions on Filtered-Euler Flows <i>T. Gotoda</i>	Hypoxia Triggers Collective Aerotactic Spreading of Eukaryotic Cells <i>N. Ghazi, M. Demircigil, S. Hirose, A. Chauviat, V. Calvez, K. Funamoto, C. Anjard, J.-P. Rieu</i>	Control Between Two Types of Plasma-induced Liquid Flows <i>T. Kawasaki, K. Shen</i>	Numerical Investigation of Effects of Ring Curvature on Starting Characteristics of Supersonic Ring Intakes <i>A. Shibakita, M. Matsunaga, H. Ogawa, R. Tahir, J. K. J. Hew, R. W. Boswell</i>			
15:26-15:44 OS2-48	15:26-15:44 OS2-48	15:30-15:50 OS16-14	15:30-15:50 OS23-14	15:30-15:50 OS5-14	15:30-15:50 GS1-31			
Simulation of Ethylene/Ammonia Laminar Opposed Diffusion Flame: Two-Dimensional and Curtain Flow Effect <i>W. Z. Jia, A. Dahiya, K. C. Lin</i>	Simulation of Ethylene/Ammonia Laminar Opposed Diffusion Flame: Two-Dimensional and Curtain Flow Effect <i>W. Z. Jia, A. Dahiya, K. C. Lin</i>	Quasi-Geostrophic Vortex Vertical Alignment in Near Collapse Interactions <i>J. N. Reinaud, X. Carton</i>	Finsler Geometry Modeling and Monte Carlo Study on Geometrically Confined skyrmions in Nanodots <i>G. Diquet, B. Ducharne, S. E. Hog, F. Kato, H. Koibuchi, T. Uchimoto, H. T. Diep</i>	Effect of Plasma Actuation Control on a Field Rotor of HAWT <i>R. Suzuki, Y. Kamada, T. Maeda, K. Iwahashi, M. Tanaka, N. Kubo, N. Watanabe</i>	Analytical and Numerical Studies of Shock Wave Reflection in Axisymmetric Internal Flows <i>J. K. J. Hew, M. Matsunaga, H. Ogawa, R. W. Boswell, S. Milder</i>			
15:44-16:02 OS2-49	15:44-16:02 OS2-49	15:50-16:10 OS16-15	15:50-16:10 OS23-15	15:50-16:10 OS5-15	15:50-16:10 GS1-32			
Ammonia and Ethanol Blend as Fuel for ICE: from the Liquid Injection to the Combustion and Pollutant Emissions <i>R. Pelé, P. Brequigny, J. Bellettre, C. Hespel, G. Dayma, F. Halter, C. Mounaïm-Rousselle</i>	Ammonia and Ethanol Blend as Fuel for ICE: from the Liquid Injection to the Combustion and Pollutant Emissions <i>R. Pelé, P. Brequigny, J. Bellettre, C. Hespel, G. Dayma, F. Halter, C. Mounaïm-Rousselle</i>	A Monte Carlo Approach to the N-vortex Problem on the Unit Sphere <i>K. Takeda, T. Sakajo</i>	Atomic Scale Investigation of the Electric Field Dependence of Carbon Diffusion in Fe <i>R. Onozuka, T. Mabuchi, P. Chantrenne, T. Tokumasu</i>	The Ac-DBD Plasma Flow Control inside the S-duct at Low Speed <i>F. Jiang, K. Kontis, C. White</i>	Experiments on Aerodynamic Sound Radiated from a Row of Protuberance in Boundary Layers <i>M. Sakai, A. Inasawa</i>			
16:02-16:20 OS2-50	16:02-16:20 OS2-50							
Global Quench Conditions of Downwardly-Propagating versus Centrally-Ignited Premixed Ammonia/Air Flames by Intensive Near-Isotropic Turbulence <i>Y.-R. Chen, S. Shyh, H. Y. Hsieh, V. T. Mai</i>	Global Quench Conditions of Downwardly-Propagating versus Centrally-Ignited Premixed Ammonia/Air Flames by Intensive Near-Isotropic Turbulence <i>Y.-R. Chen, S. Shyh, H. Y. Hsieh, V. T. Mai</i>							
16:20	BREAK							16:20

16:30	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	CON-2	CON-HAGI	16:30	
	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>&lt;Satellite&gt;</p>	<p><b>OS2:The First International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals</b></p> <p>Chair: <i>A. Hayakawa</i></p>				<p><b>OSS:Advanced Applications of Multi-functional Fluids</b></p> <p>Advanced multiphase flow 2 Chair: <i>H. Takana</i></p>				
	<p>16:30-16:48 OS2-51 Experimental Investigation of Flame Behavior and NOx Emission Characteristics of NH<sub>3</sub>/CH<sub>4</sub> Combustion with Highly Preheated Air in a Bench-scale Furnace <i>A. Sharma, Y. Qiao, Y. Wakata, V. K. Subramani, T. Miyake, T. Kishimura, T. Sonoda, A. Miyoshi, D. Shimokuri</i></p> <p>16:48-17:06 OS2-52 Analytical Study of Parametric Instability in Premixed Ammonia/Methane Flames <i>A. K. Ahirwar, A. K. Dubey</i></p> <p>17:06-17:24 OS2-53 Evaluation During Hydrogen Co-firing by Transient Quasi-DNS for a Coaxial Burner with Mixing Tube <i>K. Abe, Y. Morii, K. Maruta</i></p> <p>17:24-17:42 OS2-54 Computational Study of NH<sub>3</sub> Addition Effects on NO<sub>x</sub> Formation of Opposed-jet CH<sub>4</sub>/air and H<sub>2</sub>/air Diffusion Flames <i>Y.-Y. Zhuang, H.-Y. Shih</i></p> <p>17:42-18:00 OS2-55 Fundamental Combustion Characteristics of Laminar Ultra-Lean Hydrogen/Air Flames <i>N. Villenave, S. Zitouni, P. Brequigny, F. Foucher</i></p>	<p>16:30-16:48 OS2-51 Experimental Investigation of Flame Behavior and NOx Emission Characteristics of NH<sub>3</sub>/CH<sub>4</sub> Combustion with Highly Preheated Air in a Bench-scale Furnace <i>A. Sharma, Y. Qiao, Y. Wakata, V. K. Subramani, T. Miyake, T. Kishimura, T. Sonoda, A. Miyoshi, D. Shimokuri</i></p> <p>16:48-17:06 OS2-52 Analytical Study of Parametric Instability in Premixed Ammonia/Methane Flames <i>A. K. Ahirwar, A. K. Dubey</i></p> <p>17:06-17:24 OS2-53 Evaluation During Hydrogen Co-firing by Transient Quasi-DNS for a Coaxial Burner with Mixing Tube <i>K. Abe, Y. Morii, K. Maruta</i></p> <p>17:24-17:42 OS2-54 Computational Study of NH<sub>3</sub> Addition Effects on NO<sub>x</sub> Formation of Opposed-jet CH<sub>4</sub>/air and H<sub>2</sub>/air Diffusion Flames <i>Y.-Y. Zhuang, H.-Y. Shih</i></p> <p>17:42-18:00 OS2-55 Fundamental Combustion Characteristics of Laminar Ultra-Lean Hydrogen/Air Flames <i>N. Villenave, S. Zitouni, P. Brequigny, F. Foucher</i></p>				<p>16:30-16:50 OS5-1 Dynamic Assembly of Strong and Conductive Carbon Nanotube/Nanocellulose Composite Filaments <i>A. B. Dichiaro, H. G. Wise, H. Takana</i></p> <p>16:50-17:10 OS5-17 Local Electric Field Measurement of Temperature Dependence of Electrical Conductivity and Viscosity <i>T. Kishimoto, T. Ando, K. Doi</i></p> <p>17:10-17:30 OS5-18 Chirality-Activated Vortex Flow and Its Reversal Mode in Liquid Crystals <i>S. Takano, T. Nakanishi, K. Nakagawa, T. Asahi</i></p> <p>17:30-17:50 OS5-19 Explosive Growth of Particulate Matters in Smoke Plumes Emitted from Industrial Plants <i>Q. Li, X. Ding, D. Wu, J. Chen</i></p>				
18:00									18:00	

## OS21: The 19<sup>th</sup> International Students / Young Birds Seminar on Multi-scale Flow Dynamics

- OS21-1: **Structural Optimization of Flexible Multibody Systems with Deployment Mechanism**  
*S. Watanabe, S. Dong, K. Otsuka, K. Makihara*
- OS21-2: **Optical Absorption Characteristics of Perovskite Photovoltaic Cells by Fluctuational Electromagnetics**  
*R. Sugimoto, S. Ito, K. Ono, A. Sakurai*
- OS21-3: **Temperature Measurement of Carbon Materials under applied Voltage by Raman Spectroscopy**  
*T. Sugano, T. Hasegawa, A. Sakurai*
- OS21-4: **Effective Semi-Active Energy Harvesting from Structural Vibration Using Magnetostrictive Transducer**  
*Y. Kobayashi, A. Li, K. Otsuka, K. Makihara*
- OS21-5: **Numerical Study and Process Improvement of Micro-structured Gas Separator Utilizing the Soret Effect**  
*S. Nobe, R. Masuo, M. Osada, N. Ono*
- OS21-6: **Heat Transfer Enhancement of Flow Boiling with Copper Heated Surface Having Microstructures and Relationship between Heat Flux and Bubble Point Density**  
*S. Sasaki, S. Hayashi, K. Onodera, T. Aizawa, N. Ono*
- OS21-7: **Study on Pressure Profile for Various Fuel Flow Rates in a Scramjet Combustor with Dual-cavity Flameholder**  
*K. Norimatsu, S. Nishiura, T. Kudo, A. Hayakawa*
- OS21-8: **Study on Evaporation Behavior and Diffusion Coefficient of Water Inside Coated Layer in Drying Process**  
*D. Negishi, K. Akase, N. Ono*
- OS21-9: **Visualization of Marangoni Liquid Flow in a Rotating System During Wafer Drying**  
*H. Nakagami, A. Sakai, T. Ishibashi, N. Ono*
- OS21-10: **Meso-microscale Coupled Simulation of Wind under Varying Atmospheric Stabilities over Complex Terrain**  
*Y. Song, G. Ma, L. Tian, P. Xiao, X. Lu, N. Zhao, C. Zhu*
- OS21-11: **State Estimation of Multibody Model Using State Observer Based on Differential Algebraic Equation**  
*T. Okada, S. Dong, R. Kuzuno, Y. Takahashi, Y. Shizuno, K. Otsuka, K. Makihara*
- OS21-12: **Remaining Life Assessment in Fiber Ropes by System Invariant Analysis Technology (SIAT) with Acoustic Testing**  
*K. Sasada, S. Takeda, T. Uchimoto, T. Soma, M. Kimura*

- OS21-13: **Marangoni Convection with Supplying Pure Water in a Rotating System during Wafer Drying**  
*A. Sakai, H. Nakagami, T. Ishibashi, N. Ono*
- OS21-14: **Application of Aerodynamic Topology Optimization Design to Multi Element Airfoil**  
*T. Kobara, W. Yamazaki*
- OS21-15: **Flutter Harvester Using Flexible Plates with Piezoelectric Film**  
*T. Mukogawa, S. Dong, Y. Jia, Y. Shi, C. Soutis, H. Kurita, F. Narita, K. Otsuka, K. Makihara*
- OS21-16: **Molecular Dynamics Study of Li-ion Transport Properties in Solid Electrolyte  $\text{Li}_6\text{PS}_5\text{Cl}$**   
*T. Wang, S. Huang, T. Tokumasu*
- OS21-17: **Time-resolved Multi-scale Droplet Shape Measurement of Superspreading Wetting of Nanofluid**  
*A. Hoshino, E. Shoji, T. Biwa, M. Kubo, T. Tsukada, T. Tomai, T. Adschiri*
- OS21-18: **Evaluation of Uniform and Surface Compressive Residual Stress in Carbon Steel by Eddy Current Magnetic Signature Method**  
*K. Takigami, S. Takeda, T. Uchimoto*
- OS21-19: **Effects of Propeller Rotation Speed on Aerodynamic Performance of Wing in Tractor-Configuration**  
*M. Okawa, R. Nishimura, H. Kurahashi, T. Ikami, H. Nagai*
- OS21-20: **Arc Interruption Performances for Various Gases with Same Mass Flow Rates**  
*T. Suzuki, H. Miyagi, K. Maeshima, T. Yoshino, T. Mori, T. Fujino*
- OS21-21: **Arbitrary Lagrangian-Eulerian Non-linear Finite Element Analysis of Tethered Structure with Large Deformation**  
*Y. Takahashi, R. Kuzuno, S. Dong, T. Okada, Y. Shizuno, K. Otsuka, K. Makihara*
- OS21-22: **Dynamic of Vertically Clamped Flexible Filament in Wavy Flow**  
*J. Zhang, T. Nakamura*
- OS21-23: **Investigation of Efficient/Inefficient Arrangement of HEPA Air Purifiers in Indoor Ventilation**  
*H. Takaku, G. Hirokawa, W. Yamazaki, H. Takahashi*
- OS21-24: **Visualization of Natural Convection Boundary Layer Using BOS Method and Assessment of its Usefulness**  
*S. Ogasawara, Y. Iseki, T. Sawamura, T. Kogawa*
- OS21-25: **Numerical Research of Wind Flow and Wind Turbine Wake over the Typical Complex Terrain**  
*G. Ma, L. Tian, Y. Song, N. Zhao*

- OS21-26: **Experimental Investigation on Dynamic Instability at Transonic Speeds of Thin-aeroshell Reentry Capsule**  
*R. Kawano, T. Ikami, H.Nagai, K. Yamada*
- OS21-27: **Three-Dimensional Thermal Analysis of Stone-Incorporated Sauna Stoves Using OpenFOAM**  
*Y. Awaji, T. Kogawa*
- OS21-28: **Evaluation of Heat Transfer Under Laser Treatment by Non-Fourier Effect**  
*T. Tanaka, T. Wada, T. Kogawa*
- OS21-29: **Performance Evaluation of Hydrodynamic Thrust Bearing for Centrifugal Blood Pumps by CFD Simulation**  
*T. Masuda, E. Okamoto, D. Sakota, R. Kosaka, T. Yano*
- OS21-30: **Study on Drying Process of Blood Drop - Automatic Classification of Drying Processes by Using Deep Learning -**  
*M. Fukuda, T. Yano*
- OS21-31: **Enhanced Cascaded Lattice Boltzmann Model for Droplet Impact on Superhydrophobic Surfaces**  
*Y. Xu, L. Tian, C. Zhu, N. Zhao*
- OS21-32: **Numerical Simulation for the Breakup Behavior of a Liquid Jet in a Cross-flow with an Electric Field**  
*K. Hayashi, M. Shirota, Y. Mawatari, M. Yamamura, Y. Saito*
- OS21-33: **Evaluation of Fiber Misalignment in CFRP with Curvature Using Eddy Current Testing**  
*K. Sasaki, S. Takeda, T. Uchimoto, H. Kosukegawa, J. Inoue*
- OS21-34: **Changes in Light Scattering Properties of Suspensions Containing Erythrocytes with Swelling and Collapse**  
*S. Ishizuka, T. Yano*
- OS21-35: **Thermal Fluid Analysis for Gas Mixing in an Internal Condensation Reactor for Methanol Synthesis**  
*A. Toba, S. Shimokawara Y. Saito*
- OS21-36: **Influence of Propeller Wake on Mars Airplane Wing Geometry**  
*N. Hasegawa, M. Kanazaki, H. Nagai*
- OS21-37: **Numerical Analysis of Internal Flowfield in Star-Shaped Grains using Building-Cube Method**  
*S. Yoshinaga, K. Yoshida, S. Ogawa, D. Sasaki*
- OS21-38: Cancelled

- OS21-39: **Molecular Dynamics Study on Mechanical Balance at Three-phase Contact Line of Interfacial Nanobubble**  
*Y. Jonosono, S. Tsuda, T. Tokumasu, H. Nagashima*
- OS21-40: **Development of Numerical Analysis Method for Cavity Flame-Holder in Supersonic Flow using Building-Cube Method**  
*K. Miyata, S. Ogawa, D. Sasaki, K. Mori*
- OS21-41: **POD Analysis of the Unsteady Behavior of Wind Turbine Wakes on Escarpment**  
*L. Tian, P. Xiao, Y. Song, N. Zhao*
- OS21-42: **Basic Research on the Aerodynamic Characteristics of 3-D Wings in the Martian Atmospheric Environment**  
*S. Takaya, D. Numata*
- OS21-43: **Visualization of Sonic Boom Phenomena Using Anodized-Aluminum Pressure Sensitive Paint**  
*C. Yamada, D. Numata*
- OS21-44: **Study on Unsteady Aerodynamic Phenomena around Re-entry Vehicles Using Ballistic Range**  
*M. Yamamoto, D. Numata*
- OS21-45: **Numerical Investigation on Airfoils by the Synergistic Effect of Blowing and Suction**  
*Y. Sun, T. Wang*
- OS21-46: **Study on Combining Method of Time Series Flow Fields with Different Phases around Airfoil for Unsteady PIV**  
*H. Kurahashi, T. Ikami, H. Nagai*
- OS21-47: **Electron Dynamics Evaluation in Different Temperature Using Au/TiO<sub>2</sub> and Au/SiO<sub>2</sub> Nano Particles Dispersion**  
*S. Nakano, R. Hosokawa, Y. Ito, K. Fujiwara, T. Katayama, T. Oto, T. Chiba, H. Gonome*
- OS21-48: **Study on the Pyrolysis of Trimethyl Phosphate and Dimethyl Methyl Phosphonate Using a Micro Flow Reactor with a Controlled Temperature Profile**  
*R. Matsumoto, K. Kanayama, K. Tamaoki, M. Izumi, H. Nakamura, T. Tezuka, K. Maruta*
- OS21-49: **Simultaneous and Non-Simultaneous Drop Impact onto a Wall**  
*H. Sontheimer, L. Elsäßer, P. Stephan, T. Gambaryan-Roisman*
- OS21-50: **Bending of Bundle of Vorticity Lines in a Vortex and its Relationships to Vortical Flow Characteristics in Homogeneous Isotropic Turbulence**  
*K. Uchima, K. Nakayama*
- OS21-51: **Integrating Wing and Fuselage for Silent Supersonic Transport Designed at On-Track and Off-Track Conditions**  
*A. Akashi, K. Shimoyama, S. Obayashi*



- OS21-52: **Study on Aerodynamic Characteristics of Airfoils at Supersonic Flight in the Martian Atmospheric Environment**  
*T. Takizawa, D. Numata*
- OS21-53: **Evaluation of the Effect of Radiative Heat Transfer on the Thermal Resistance of Foamed Insulation Materials**  
*T. Kitazume, Y. Kanda, A. Komiya*
- OS21-54: **Optimal Design of Wavelength-Selective Emitters for Thermophotovoltaic Power Generation Using Carbon Nanotube Thin Films by Machine Learning**  
*K. Kumagai, K. Suzuki, T. Nishihara, Y. Miyauchi, A. Sakurai*
- OS21-55: **Fundamental Study of Two-color AA-PSP for Surface Pressure Measurement on Free-flight Projectile**  
*Y. Kawamata, D. Numata*
- OS21-56: **Deposition Patterns of Evaporating Sugar-Coffee Drops on Heated Surfaces**  
*K. Ando, K. Taguchi, T. Okabe*
- OS21-57: **Topological Data Analysis for Estimation of Rock Fracture Structure**  
*T. Hasumi, Y. Imoto, J. Miyanaga, T. Uda, A. Suzuki*
- OS21-58: **The Effects of a Slit in a Hydrofoil on the Thermodynamic Self-Suppression Effect for Tip Leakage Vortex Cavitation**  
*Y. Oda, J. Okajima, Y. Iga*
- OS21-59: **Numerical Simulation of Bubble Shape and Heat Transfer During Nucleate Pool Boiling of FC-72**  
*H. Ishibashi, K. Ota, P. Stephan, J. Okajima*
- OS21-60: **Numerical Study on a Supercritical Airfoil: Interactions of Vortex Generator-Induced Wake and Shock Waves**  
*Y. Tsukamoto, K. Kitamura*
- OS21-61: **Influence on Flow Velocity Variation on Heat Transfer of Subcooled Boiling in High Speed Flow**  
*F. Ono, J. Okajima*
- OS21-62: **Dynamic Modeling and Aeroelastic Response Study of Ultra-Long Flexible Wind Turbine Blades**  
*Z. Zizhen, W. Tongguang, W. Long, Z. Baoxu*
- OS21-63: **Estimation of Fracture Network Structures Using Heat and Solute Tracers**  
*M. Qiao, K. Goto, J. Maes, A. Patsoukis Dimou, J. Miyanaga, A. Suzuki*
- OS21-64: **Research on Optimization of Runner Efficiency of Francis Turbine Based on CFturbo**  
*J. Song, X. Li, H. Gong, S. Feng, L. Fu*

- OS21-65: **Validation of Momentum Conservation Model to Isothermal Drop Impacts on Solid Surfaces**  
*T. Yamaya, K. Maeda, Y. Nakagawa, T. Miyagawa, M. Shiota*
- OS21-66: **Adhesion Force Acting on Climbing Drops on Heated Ratchets with Heterogeneous Wettability Surfaces**  
*R. Ato, T. Miyagawa, M. Shiota*
- OS21-67: **Time Variation in Temperature Distribution on a Solid Surface during Impacts of Molten Tin Drops**  
*K. Maeda, Y. Nakagawa, T. Miyagawa, T. Okabe, M. Shiota*
- OS21-68: **Effects of Electrical Charge on the Shape Oscillation of Falling Drop**  
*R. Miura, A. Kodama, T. Miyagawa, T. Okabe, Y. Matsushita, Y. Saito, Y. Matsukawa, H. Aoki, M. Daikoku, J. Fukuno, M. Shiota*
- OS21-69: **Characterization of Single Drop Formation from a Needle Using Event-Based Camera**  
*T. Kosugi, R. Yamamoto, K. Maeda, T. Miyagawa, Y. Kimura, M. Shiota*
- OS21-70: **Development of Fast-Response PSP for Surface Pressure Measurement on Airfoils of the Mars Airplane**  
*H. Manome, D. Numata*
- OS21-71: **Effects of Aerodynamic Devices on Airfoil Flow in the Martian Atmospheric Environment**  
*R. Minohara, D. Numata*
- OS21-72: **Aerodynamic Performance Study on a Parafoil Airfoil with an Upper Surface Slit**  
*W. Zhen, W. Tongguang, Z. Wei, F. Kai, Z. Kang, L. Xudong*

**OS22: The 23rd International Symposium on Advanced Fluid Information  
(AFI-2023)  
IFS Collaborative Research Forum**

- CRF-1: **Comparative Analysis of the Chemical Kinetics of Premixed  $\text{NH}_3\text{-H}_2\text{-H}_2\text{O-Air}$  and  $\text{NH}_3\text{-CH}_4\text{-H}_2\text{O-Air}$  Stoichiometric Flames**  
*E. C. Okafor, M. Hayashi, T. Kudo, A. Hayakawa, T. Kitagawa*
- CRF-2: **Effects of Pressure on Flame Structure of Ammonia/methane/air Premixed Flames Stabilized in a Stagnation Flow**  
*A. Hayakawa, M. Kovaleva, A. Crayford, A. Valera-Medina*
- CRF-3: **Atomization and Combustion Characteristics of Fine Bubble Fuel**  
*J. Obata, Y. Nakatake, H. Tanaka, H. Yamashita, A. Hayakawa*
- CRF-4: **Study on the Injection Process of Next-Generation Liquefied Fuels**  
*N. Kawaharada, I. Oshima*
- CRF-5: **Experimental and Kinetics Modeling Study of Tri-Methyl-Phosphate Pyrolysis: Toward P-Containing Fire Suppressants for Lithium-Ion Battery Electrolytes**  
*C. Grégoire, R. Matsumoto, K. Kanayama, T. Tezuka, M. Izumi, H. Nakamura, K. Maruta, E. L. Petersen, O. Mathieu*
- CRF-6: **Effects of Residence Time on  $\text{NO}_x$  Emission of an Ammonia Fueled Supersonic Transportation**  
*H. Kosada, A. Hayakawa, H. Nakamura, D. Shimokuri, Y. Fujimoto, S. Obayashi*
- CRF-7: **Effects of Pressure on Derived Temperature using LITGS for Oxygen Enriched  $\text{CH}_4/\text{O}_2/\text{N}_2$  Flames**  
*H. Kondo, Y. Mizuno, T. Kudo, Shinji. Nakaya, A. Hayakawa*
- CRF-8: **Introduction of New AE Monitoring System for Big-data AI-aided Acoustic Emission Analysis**  
*Y. Mukuhira, M. Naoi, T. Ito*
- CRF-9: **Acoustic Measurement on Basic Physical Properties of Functional Fluids for Innovative Underground Development**  
*K. Sawayama, Y. Mukuhira, Z. Rongchang, T. Ito*
- CRF-10: **Direct Comparison between Resolved Shear Stress and Stress Drop**  
*N. Yoshimitsu, Y. Mukuhira, H. Asanuma*
- CRF-11: **Structural and Thermophysical Properties of Multi-component Crosslinked Epoxy Polymers: A Molecular Dynamics Study with Curing Reaction Model**  
*Y. Zhao, G. Kikugawa*

- CRF-12: **Effect of Surfactant on Surface Energy of Nanobubble Composed of Nitrogen Gas**  
*T. Hori, G. Kikugawa*
- CRF-13: **Data Analysis of Thermophysical Properties of Organic Materials Using Machine Learning Models**  
*H. K. Chilukoti, S. Suzuki, G. Kikugawa*
- CRF-14: **Evaluation of the Interfacial Affinity between Organic Solvents and Surface-modified Nanoparticles**  
*M. Kubo, T. Komori, T. Saito, E. Shoji, G. Kikugawa, D. Surblys, A. Komiya*
- CRF-15: **Permeability of CO<sub>2</sub> Gases through DPPC Lipid Membranes using Molecular Dynamics Simulation**  
*F. P. Nasution, F. Yulia, N. Y. Rodjali, T. Mabuchi*
- CRF-16: **Experimental and Computational Analysis of Solid Oxide Fuel Cell Multilayer Ceramic Composites**  
*T. Ijichi, A. R. Hartwell, H. Nagashima, J. Ahn, T. Tokumasu*
- CRF-17: **Improvement of Ammonia Production Efficiency by Interfacial Reaction between Nitrogen Plasma and Fine Water Droplet**  
*S. Hiramatsu, R. Shiraishi, Y. Hayamizu, N. Sehara, T. Fujii, T. Tokumasu*
- CRF-18: **Analysis of Heat and Momentum Transport Characteristics Through Droplets Inside Nanoorder Channels**  
*A. Fukushima, T. Tokumasu*
- CRF-19: **Molecular Dynamics Study of Interfacial Nano-Bubble and Surface Property**  
*Y. Jonosono, S. Tsuda, T. Tokumasu, H. Nagashima*
- CRF-20: **Evaluation on Stability of Magnesium Oxide Deposited on Silicon Substrate**  
*S. Kaneko, M. Kurouchi, M. Yasui, D. Shiojiri, M. Mitsuhashi, R. Yu, S. Yasuhara, M. Can, K. Sardar, S. K. Sahoo, M. Yoshimura, T. Tokumasu*
- CRF-21: **Analysis of Carrier Mobility in Si-Nanopillar/SiGe Composite Films by a Laser Heterodyne Photothermal Displacement Method**  
*Y. Uno, T. Harada, S. Harada, H. Ohyama, D. Ohori, K. Endo, S. Samukawa, T. Ikari, A. Fukuyama*
- CRF-22: **Pulsed ECT Signal Processing Algorithm for Better Quantification of Ferromagnetic Material**  
*S. Xie, S. Yang, G. Lu, Wei. Guo, Z. Chen, T. Uchimoto, T. Takagi*
- CRF-23: **Influence of Volume Fraction of Carbon Nanofibers on Electrical Characteristics of Foam Rubber Matrix Composite**  
*N. Nakayama, H. Inoue, M. Horita, S. Takeda, T. Uchimoto*
- CRF-24: **Research on the Antibacterial Effect of Ag<sup>-</sup> and Cu-containing Carbon Films using the Self-exudation Effect of Contained Metal Components**  
*M. Goto, S. Takeda, H. Miki, K. Ito, T. Uchimoto*

- CRF-25: **Numerical Simulation of Droplet Generation on the Sub-Microfluidic Channel**  
*N. K. Putra, F. Z. Sarwono, I. Anshori, M. Ohta, H. Anzai*
- CRF-26: **Development of a Flow Field Estimation Method based on Cerebrovascular Images: Stabilization and Speedup of CFD Data Acquisition for Training Datasets**  
*H. Anzai, K. Shibata, G. Li, H. Wang, K. Yanagisawa, S. Sugiyama*
- CRF-27: **Feasibility of Multi node Thermoregulation Model for Repeated Bathing of Sauna**  
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- CRF-28: **Spectral Shielding Evaluation of Mist for Heat Stroke Prevention against Thermal Radiation from the Ground Surface**  
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- CRF-29: **Effect of Nanofluid on The Thermal and Electrical Performances of a Non-Imaging Concentrating Photovoltaic Thermal (CPVT) System**  
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- CRF-30: **Study on Micro-scale Evaporation for Heat Transfer Enhancement**  
*J. Okajima, H. Sontheimer, P. Stephan*
- CRF-31: **Heat Transfer Enhancement of Phase Change Material under the Application of an Oscillating Electric Field**  
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- CRF-32: **Permeation Characteristics of Long-lifetime Reactive Oxygen Species through Biological Membranes under Superimposed Electric Field Generated by the Irradiation of Cold Atmospheric Pressure Plasma**  
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- CRF-33: **Electrical Characteristics of High-speed Mists**  
*Y. Cheng, T. Sato*
- CRF-34: **Characteristics of High-speed Ultrafine Droplets**  
*T. Sato, S. Kanazawa, K. Tachibana, S. Liu, T. Nakajima*
- CRF-35: **Experiment on Mechanical Integrity Evaluation of Degradable Zinc Wire under Tensile Load in Flowing Medium**  
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*G. Tanaka, R. Yamaguchi, S. Sato, A. Muhamed, K. M. Sqr, M. Ohta*

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- CRF-40: **Three-dimensional Density Measurement of Wake Region behind Re-entry Capsule Model to Clarify the Mechanism of its Dynamic Instability**  
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- CRF-49: **Evaluation of Shape-Keeping Performance for Tether Cross-Shaped Keepers by Hypervelocity Impact**  
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*I. Okuyama, H. Hasegawa, S. Obayashi*
- CRF-61: **Numerical Analysis on Aeroacoustics of Multi-directional Wings Aligned in Tandem of the Aero-train**  
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- CRF-68: **Study of Turbulent Transition and Statistical Properties of Turbulence of Destabilized Helical Vortex**  
*Y. Hattori, I. Delbende, M. Rossi*