

9:00	Opening Address & Plenary Lectures @ TACHIBANA, Conference Bldg. 9:20-10:10 Corner effects on shock-induced separation <i>Holger Babinsky</i> Chair: <i>Keisuke Asai</i> 10:15-11:05 Energy conversion in transient molecular plasmas: implications for plasma flow control and plasma assisted combustion <i>Igor V. Adamovich</i> Chair: <i>Hidemasa Takana</i> 11:10-12:00 Probing Combustion Chemistry in Reactors to Internal Combustion Engines <i>Philippe Dagaut</i> Chair: <i>Kaoru Maruta</i>							9:00
12:00	12:00-13:00 Scientific Committee Meeting @ MEETING ROOM 8, Conference Bldg.							12:00
13:00	Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. SHIRAKASHI	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7	13:00
	OS1: The Fourth International Symposium on Innovative Energy Research I Core Technology for Advanced Energy Devises Devices (2016) <i>Chair:K. Amezawa</i>	OS15: The 2nd NUAU-Tohoku University Joint Symposium on Fluid Science, Aerospace Engineering and Smart Structure Technology	OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	GS1: General Session Compressible Flow <i>Chair:M. Sun</i>	OS2:The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-1 <i>Chair:K. Maruta</i>	OS10: Science and Technology of Nanoscale Heat Transfer and Outlook for their Application <i>Chair:H. Nagashima</i>	OS3:The Fourth International Symposium on Innovative Energy Research III Multiphase Energy Science and Disaster Damage Mitigation Technology Related to FSI Analysis <i>Chair:J. Ishimoto</i>	
	13:00-14:00 OS1-1 <i>Invited</i> Hydrogen Energy Supply System by using a Hydrogen Storage Alloy <u>T. Kono</u>	12:55-13:00 Welcome address <i>T. Takagi</i> Flow dynamics for smart structures <i>Chair: Y.Fukunishi & S. Maruyama</i> 13:00-13:30 OS15-1 <i>Invited</i> The Quest for High Reynolds Number Laboratory Turbulence <u>P. H. Alfredsson</u> , <u>R.Örlü</u> , <u>A. Segalini</u> 13:30-13:50 OS15-2 Cartesian Grid Method for Complex Compressible Flows and Its Applications <u>N. Zhao</u> , <u>S. Liu</u> , <u>Z. Shen</u> , <u>O. Hu</u>	13:30 - (15:00) OS16-1 - OS16-28 <i>Short Oral Presentation</i>	13:00-13:20 GS1-1 Direct Numerical Simulation of Compression Wave generated by High-Speed Train going through a Tunnel <u>K. Konno</u> , <u>K. Nishikawa</u> , <u>Y. Hattori</u> 13:20-13:40 GS1-2 A New Simulation Framework of All-Speed Compressible Scheme toward Exascale for Industrial Applications <u>C.G. Li</u> , <u>M. Tsubokura</u>	13:00-13:30 OS2-1 <i>Invited</i> SIP Innovative Combustion Technology Projects; Super Lean Burn Concept for Gasoline Engines with High Thermal Efficiency <u>T. Yokomori</u> , <u>M. Matsuda</u> , <u>N. Iida</u> , <u>Y. Urata</u> , <u>N. Yokoo</u> , <u>K. Nakata</u> 13:30-14:00 OS2-2 <i>Invited</i> New Combustion Technology for High Engine Thermal Efficiency and High Engine Output Performance <u>K. Nakata</u> , <u>Y. Yoshihara</u> , <u>D. Takahashi</u> , <u>T. Oomura</u>	13:00-13:20 OS10-1 <i>Invited</i> Molecular-Scale Structure of Liquid Alkane Mixtures in the Vicinity of α -Quartz Substrate <u>H. K. Chilukoti</u> , <u>G. Kikugawa</u> , <u>T. Ohara</u> 13:20-13:40 OS10-2 <i>Invited</i> Molecular Transport Phenomena of Liquids Confined in the Nanoscopic Structures <u>G. Kikugawa</u> , <u>Y. Naruke</u> , <u>J. Suzuki</u> , <u>T. Nakano</u> , <u>T. Ohara</u>	13:00-13:30 OS3-1 <i>Invited</i> Combustion Modeling of Melting/Burning Thermoplastic Material <u>Y. Nakamura</u> , <u>A. Hossain</u> , <u>Y. Kim</u> 13:30-14:00 OS3-2 <i>Invited</i> Coupled Fluid Solid Simulation For Cavitation And Droplet Impact Damage Prediction <u>A. Combescure</u> , <u>G. Coudouel</u> , <u>J. Ishimoto</u>	

	<p>13:50-14:10 OS15-3 Flow Characteristics in Micro Nozzle-diffuser Elements <i>Y. Cai, J. Zhang, C. Zhu</i></p> <p>14:10-14:30 OS15-4 Numerical Simulation of Super-cooled Large Droplet Impingement Characteristics on 3D Wind Turbine <i>P. Jiang, C. Zhu, Z. Wang</i></p>		<p>13:40-14:00 GS1-3 PLIF Investigation of Compressible Microjets Issuing from a Rectangular Convergent Nozzle <i>T. Handa, H. Kambara, M. Harada</i></p> <p>14:00-14:20 GS1-4 Unstable Phenomena of Low Speed Compressible Natural Convection Flow <i>W.-H. Wang, W.-S. Fu, M. Tsubokura</i></p>	<p>14:00-14:30 OS2-3 <i>Invited</i> Introduction of Research Activities Related to Internal Combustion Engines in Chiba University <i>T. Kuboyama, Y. Moriyoshi, K. Morikawa, T. Yamada</i></p>	<p>13:40-14:00 OS10-3 <i>Invited</i> Effect of Nano Confinement on Simple Liquids: Molecular Dynamics Study with a Realistic Molecular Model <i>H. Matsubara, F. Pichierri, K. Kurihara</i></p> <p>14:00-14:20 OS10-4 <i>Invited</i> Fluctuation of Thermoelectric Properties of Carbon Nanotubes <i>M. Ohmishi, T. Shiga, J. Shiomi</i></p>	<p>14:00-14:30 OS3-3 <i>Invited</i> Interface Instability during Smoldering Spread over a Thin Solid <i>K. Suzuki, K. Kuwana, Y. Tada, G. Kushida</i></p>		
14:30	BREAK						14:30	
14:40	Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. SHIRAKASHI	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7	14:40
	<p>OS1: The Fourth International Symposium on Innovative Energy Research I Core Technology for Advanced Energy Devies Devices (2016) <i>Chair: T. Tokumasu</i></p>	<p>OS15: The 2nd NAAA-Tohoku University Joint Symposium on Fluid Science, Aerospace Engineering and Smart Structure Technology</p>	<p>OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics</p>	<p>GS1: General Session Non-linear Flow Dynamics <i>Chair: M. Hirota</i></p>	<p>OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-II <i>Chair: T. Yokomori</i></p>	<p>OS10: Science and Technology of Nanoscale Heat Transfer and Outlook for their Application <i>Chair: J. Shiomi</i></p>	<p>OS3: The Fourth International Symposium on Innovative Energy Research III Multiphase Energy Science and Disaster Damage Mitigation Technology Related to FSI Analysis <i>Chair: J. Ishimoto</i></p>	
<p>14:40-15:10 OS1-3 Impacts of Separation and Crystallinity of Quantum Dots on Photovoltaic Efficiency of Si/SiC Quantum Dot Superlattice Solar Cells <i>Y.-C. Tsai, M.-Y. Lee, Y. Li, M. M. Rahman, S. Samukawa</i></p> <p>15:10-15:40 OS1-4 <i>Invited</i> <i>Operando</i> Analysis of Solid Oxide Fuel Cells Using Synchrotron Radiation <i>K. Amezawa, Y. Fujimaki, R. Oike, K. Mizuno, T. Nakamura, Y. Kimura, K Nitta, Y. Terada, Y. Tamenori, K. Yashiro, T. Kawada</i></p>	<p>14:40-15:00 OS15-5 Study of Three-Dimensional Rotational Effect on Rotor Blade Icing Process <i>Z. Wang, C. Zhu</i></p> <p>15:00-15:15 OS15-6 Multi-Element High-Lift Configuration Aerodynamics Using Building Cube Method <i>A. Kozlov, T. Misaka, S. Obayashi</i></p> <p>NDE and health monitoring <i>Chair: J. Courbon & T. Uchimoto</i></p> <p>15:15-15:35 OS15-7 Numerical Studies on Transmitter-Receiver type EMAT NDT System <i>F. Kojima, N. Nakajima</i></p>	<p>13:30 - (15:00) OS16-1 - OS16-28 <i>Short Oral Presentation</i></p> <p>(15:00 - 16:40) OS16-1 - OS16-28 <i>Poster Presentation</i></p>	<p>14:40-15:00 GS1-5 Shape Optimization on Hagen-Poiseuille Flow with Stenosis <i>T. Nakazawa, T. Ugawa</i></p> <p>15:00-15:20 GS1-6 Shape Optimization using POD for the Flow Stability <i>T. Nakazawa</i></p> <p>15:20-15:40 GS1-7 Limit Transition of Numerical Solution of Navier–Stokes Equations to Inviscid Solution at Irregular Reflection of Shock Waves <i>G. Shoen</i></p>	<p>14:40-15:00 OS2-4 Improvement in Ignitability and Combustion Stability of Lean Burn SI Engines Using Repetitive Streamer Discharges <i>O. Matsumoto, T. Kuboyama, Y. Moriyoshi, Y. Kinuzawa, T. Nakamura</i></p> <p>15:00-15:20 OS2-5 RON of Gasoline Surrogates and their Weak Flame Characteristics in a Micro Flow Reactor with a Controlled Temperature Profile under Ultra-Lean Conditions <i>P. Grajetzki, H. Nakamura, T. Tezuka, S. Hasegawa, K. Maruta</i></p>	<p>14:40-15:20 OS10-5 <i>Special Invited</i> Thermal Rectification on Polyamide/Silicon Nanowire Interface <i>B.-Y. Cao, Z.-Q. Ye</i></p> <p>15:20-15:40 OS10-6 <i>Invited</i> Thermal Phonon Transport in SiGe Phononic Crystal Nanostructures <i>M. Nomura, K. Sawano</i></p>	<p>14:40-15:03 OS3-4 On Numerical Modeling of 3D Time-Dependent Gas Flows through Porous Objects with Heat Sources <i>N. A. Lutsenko</i></p> <p>15:03-15:25 OS3-5 <i>Invited</i> Computational Study of Unsteady Cavitation in High-Speed Submerged Water Jet <i>N. Ochiai, J. Ishimoto</i></p> <p>15:25-15:48 OS3-6 Numerical Model and Computing of Freezing Front Propagation of Biological Cell Suspension <i>P. Smakulski, J. Ishimoto</i></p>		

15:40-16:10 OS1-5 <i>Invited</i> Synchrotron Soft X-ray Spectroscopy as a Powerful Tool for Micro/nano-structured Energy Devices <i>N. Nagamura, R. Taniki, D. Asakura, E. Hosono, M. Kotsugi, K. Horiba, M. Oshima, I. Honma</i>	15:35-15:55 OS15-8 Quantitative Reconstruction of The Surface Notch Using Rayleigh Surface Waves <i>B. Wang, Y. Da, Z. Qian</i> 15:55-16:10 OS15-9 Modeling Study of EMAT Using Pancake Coil for Magnetic Material <i>H. Sun, R. Urayama, T. Uchimoto, F. Kojima, T. Takagi</i>		15:40-16:00 GS1-8 Numerical Simulation of Free Surface Flow over a Cavity <i>C.-H. Chang</i>	15:20-15:40 OS2-6 LES modeling and Experimental Study of Turbulent Flow in a Swirl Stabilized Burner <i>Y. Han, A. M. Elbaz, B. J. Lee, H. Shao, W. L. Roberts, H. G. Im</i> 15:40-16:00 OS2-7 On the Validity of the Damköhler's Hypothesis in Premixed Turbulent Combustion <i>P. Tamadonfar, Ö. L. Gülder</i>	15:40-16:00 OS10-7 <i>Invited</i> Synthesis and Characterization of Yellow Phosphor with Broad Spectral Width <i>S. Inoue, Y.-C. Lin, Y. Matsumura, J.-C. Chen</i>	15:48-16:10 OS3-7 A Study of Surrogate Measures of Noise Level for Designing Blower Units of a Car Air-Conditioner <i>M. Kamada, K. Shimoyama, Y. Konishi, F. Sato, J. Onodera, J. Washiashi</i>
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Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. SHIRAKASHI	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7
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OS1: The Fourth International Symposium on Innovative Energy Research I Core Technology for Advanced Energy Devises Devices (2016) <i>Chair: Y. Li</i>	OS15: The 2nd NUA-A-Tohoku University Joint Symposium on Fluid Science, Aerospace Engineering and Smart Structure Technology	OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	GS1: General Session Non-linear Flow Dynamics <i>Chair: S. Izawa</i>	OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-III <i>Chair: T. Kuboyama</i>	OS10: Science and Technology of Nanoscale Heat Transfer and Outlook for their Application <i>Chair: S. Inoue</i>	
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16:20-16:50 OS1-6 <i>Invited</i> Molecular Analysis of Nanoscale Transport Phenomena in PEFC <i>T. Tokumasu</i> 16:50-17:20 OS1-7 <i>Invited</i> Multi-Objective Design Exploration to Control a Smart Home System on a Winter Day <i>K. Shimoyama, T. Kato, Y. Ehara, S. Yamada, T. Kokuryo</i>	16:20-16:50 OS15-10 <i>Invited</i> Configuring Structural Health Monitoring Solutions for Metallic Aeronautical Structures through Simulation <i>C. Boller, R. S. Venkat, O. Bareiro, A. Taltavull, L. Qiu, S. Yuan, C. Dürager</i> 16:50-17:10 OS15-11 Evaluation of Microscopic Damage Progress in Composites Using Optical Fiber Ultrasonic Sensor <i>F. Yu, Q. Wu, Y. Okabe</i>	(15:00 - 16:40) OS16-1 - OS16-28 <i>Poster Presentation</i>	16:20-16:40 GS1-9 A Lattice Boltzmann Method with Semiclassical Shakhov Model <i>J.-C. Huang, W.-Y. Huang, J.-Y. Yang, H.-H. Huang</i> 16:40-17:00 GS1-10 Numerical Study of Nonlinear Sound Propagation through Different Fluid Layer for Application to Underwater Technology <i>K. Fujisawa, A. Asada</i>	16:20-16:40 OS2-8 Characteristics of Separated Steady Low Temperature Oxidations in a Micro Flow Reactor with a Controlled Temperature Profile <i>R. Tatsumi, H. Nakamura, S. Hasegawa, T. Tezuka, K. Maruta</i> 16:40-17:00 OS2-9 Dependence of Syngas Weak Flame Locations on their Compositions at Elevated Pressure in a Micro Flow Reactor with a Controlled Temperature Profile <i>T. Tanaka, T. Tezuka, H. Nakamura, K. Maruta</i>	16:20-16:40 OS10-8 <i>Invited</i> Phonon Engineering of Silicon-based Nanocrystalline Thermoelectrics <i>J. Shiomi</i> 16:40-17:00 OS10-9 <i>Invited</i> Enhanced Heat Transport and Phase Change Behavior of Nanocomposites for Thermal Energy Storage Application <i>M. Kohno, D. Orejon, Y. Takata, S. Harish</i>	
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<p>17:20-17:50 OS1-8 Effect of pH on the Pechini Sol-Gel Process during the SOFC Cathode Materials Formation <i>A. Ponomareva, E. Simonenko, N. Simonenko, V. Sevast'janov, S. Olga, S. Minaev, I. Kruchinina</i></p>	<p>17:10-17:30 OS15-12 Laser Ultrasonic Method for Detection of Damage and Fatigue in Composite Materials <i>J. Qiu, C. Zhang, H. Ji, J. Zhao</i></p> <p>17:30-17:50 OS15-13 Assessment of Eddy Current Signal in CFRP for Characterization of Fiber Orientation <i>H. Kosukegawa, Y. Yoshikawa, R. Urayama, T. Uchimoto, T. Takagi</i></p>		<p>17:00-17:20 GS1-11 PIV Measurement of Flowfield around Tandem Flapping Wing and Its Aerodynamic Force Measurement <i>N. Komata, H. Tsuchida, W. Yamazaki</i></p>	<p>17:00-17:20 OS2-10 Flammability Limits of Premixture Flames with Inertial Liquid Droplets <i>N. Belyakov, S. Minaev, V. Babushok</i></p> <p>17:20-17:40 OS2-11 Breakup and Ignition of Water Emulsified n-Dodecane Droplets using Pulse Lasers <i>G. M. Jang, N. I. Kim</i></p>	<p>17:00-17:20 OS10-10 Numerical Investigation on Convective Heat Transfer Characteristics of Different Types of Nanofluids Flowing in a Semi-Circular Cross-Sectioned Microchannel <i>H. Kaya, K. Arslan</i></p>	
<p>17:50</p>	<p>Students / Young Birds Friendship Night @ SAKURA 2, Conference Bldg.</p>					<p>17:50</p> <p>20:00</p>

9:00	Exhibition Bldg. MEETING ROOM 2	Exhibition Bldg. MEETING ROOM 3	Exhibition Bldg. MEETING ROOM 4	Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. TACHIBANA	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7	9:00
	OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-IV Chair: N. I. Kim	OS7: International Symposium on Medical Thermo Fluid Science for Progress in Quality of Life Medical Applications Chair: T. Okabe	OS9: New Dimensions of Magnetic Suspension and Balance System Chair: S. Obayashi	OS14: International Workshop on Functional Plasma Flows and their Applications Thermal Plasma 1 Chair: H. Nishiyama H. Takana	OS15: The 2nd NUAA-Tohoku University Joint Symposium on Fluid Science, Aerospace Engineering and Smart Structure Technology	OS17: IFS Collaborative Research Forum (AFI-2016) & Young Researcher Overseas Visits Program Research Forum	OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	GS1: General Session Heat Transfer Chair: T. Furusawa	OS10: Science and Technology of Nanoscale Heat Transfer and Outlook for their Application Chair: H. Matsubara	OS6: Advanced Physical Stimuli and Biological Responses Chair: T. Sato	
	9:00-9:20 OS2-12 Filtrational Gas Combustion in Porous Media and Micro Combustion <u>S. Minaev</u> , <u>K. Maruta</u> , <u>F. Sirotkin</u> , <u>R. Fursenko</u> , <u>A. Kirdyashkin</u> , <u>A. Maznoy</u>	9:00-9:30 OS7-1 <i>Invited</i> Study on a Pharyngeal Cooling Cuff for the Treatment of Brain Hypothermia <u>K. Fumoto</u> , <u>Y. Takeda</u> , <u>H. Hashimoto</u>	9:00-9:40 OS9-1 <i>Invited</i> Determination of Dynamic Stability Parameters by Magnetic Suspension <u>H. Sugiura</u> , <u>T. Takahashi</u>	9:00-9:40 OS14-1 <i>Keynote</i> A CFD Model of Arc Welding for Industrial Use <u>A. B. Murphy</u> , <u>D. G. Thomas</u>	8:50-9:20 OS15-14 <i>Invited</i> Experimental Study on Strain Distribution of Ionic Polymer-Metal Composite Actuator using Digital Image Correlation <u>H. Liu</u> , <u>K. Xiong</u> , <u>M. Wang</u> , <u>K. Bian</u> , <u>K. Zhu</u>	9:00 - 10:30 CRF-1 - CRF-28 <i>Short Oral Presentation</i>	9:30 - (10:30) OS16-29 - OS16-46 <i>Short Oral Presentation</i>	9:00-9:20 GS1-12 Development of a New Thermal Management System Utilizing Phase Change Material and Heat Pipes <u>T. Yamada</u> , <u>S. Wada</u> , <u>H. Hata</u> , <u>T. Yamada</u> , <u>N. Ono</u>	9:00-9:20 OS10-11 <i>Invited</i> Molecular Dynamics Study of Ionomer Aggregations in Water/Alcohol Solutions <u>T. Mabuchi</u> , <u>T. Tokumasu</u>	9:25-9:30 Opening <u>T. Sato</u> , <u>T. Ohashi</u>	
	9:20-9:40 OS2-13 Evolution of the New Burner by Porous Media <u>K. Tcoi</u> , <u>K. Shtym</u> , <u>D. Mironov</u>	9:30-9:50 OS7-2 Thermodynamic Effect on Fontan Circulation Assist Device <u>A. Yamada</u> , <u>Y. Shiraishi</u> , <u>H. Miura</u> , <u>Y. Tsuboko</u> , <u>Y. Taira</u> , <u>Y. Inoue</u> , <u>H. Dai</u> , <u>M. Yamagishi</u> , <u>T. Yambe</u>	9:40-10:00 OS9-2 Feasibility Study for Implementing Magnetic Suspension in the Glenn Research Center 225cm ² Supersonic Wind Tunnel for Testing the Dynamic Stability of Blunt Bodies <u>A. Sevier</u> , <u>D. O. Davis</u> , <u>M. Schonenberger</u> , <u>P. Barnhart</u>	9:40-10:00 OS14-2 Numerical Modeling of Mixing of Plasma Species in Argon-Water Arc Discharge for Low to Moderate Currents <u>J. Jeništa</u> , <u>H. Takana</u> , <u>S. Uehara</u> , <u>H. Nishiyama</u> , <u>A. B. Murphy</u> , <u>M. Bartlová</u> , <u>V. Aubrecht</u>	9:20-9:40 OS15-15 Synthesis and Thermoelastic Properties of Platelet Na ₂ CoO ₂ Ceramic by Hydrothermal Method <u>W. Zhang</u> , <u>K. Zhu</u> , <u>J. Liu</u> , <u>J. Wang</u>	10:15-10:30 YRF-1 Laser Induced Thermal Grating Spectroscopy (LITGS) and Thermographic PIV for Quantitative Measurement <u>A. Hayakawa</u> , <u>S. Lowe</u> , <u>Y. Gao</u> , <u>L. Fan</u> , <u>S. Hochgreb</u>		9:20-9:40 GS1-13 A Numerical Study of the Axial Gap Effects on the Heat Transfer Characteristics in a High Pressure Turbine Stage with Inlet Hot Streak <u>L. Baek</u> , <u>J. Ryu</u> , <u>H. S. Ryou</u>	9:20-9:40 OS10-12 <i>Invited</i> A Calculation of Diffusion Coefficient in Confined Fluid <u>H. Nagashima</u> , <u>M. Nishigami</u>	9:30-10:00 OS6-1 <i>Invited</i> Bio-Medical R&D of Atmospheric Pressure Plasmas in PHSG <u>H.-P. Li</u> , <u>X.-F. Zhang</u> , <u>Q.-Y. Nie</u> , <u>H.-B. Chang</u> , <u>X.-M. Zhu</u> , <u>X. Zhang</u> , <u>M. Zheng</u> , <u>X.-H. Xing</u> , <u>J.-G. Tan</u>	
	9:40-10:00 OS2-14 Filtration Combustion Synthesis in Forced Oscillation Mode <u>A. Maznoy</u> , <u>A. Kirdyashkin</u> , <u>S. Minaev</u> , <u>R. Gabbasov</u>	9:50-10:10 OS7-3 Implantable Renal Nerve Heat Control Device for Pressure Regulation in Hypertension <u>Y. Shiraishi</u> , <u>H. Nakagata</u> , <u>M. Yuba</u> , <u>T. Suzuki</u> , <u>Y. Tsuboko</u> , <u>A. Yamada</u> , <u>Y. Inoue</u> , <u>K. Sasaki</u> , <u>H. Kumagai</u> , <u>T. Yambe</u>	10:00-10:20 OS9-3 Investigation of Rear-end Flow Separation on a Magnetically Suspended 6:1 Prolate Spheroid Model <u>T. Ambo</u> , <u>Y. Nakamura</u> , <u>L. Taekjin</u> , <u>K. Asai</u>	10:00-10:20 OS14-3 A Two-Temperature Kinetic Model for Thermal Plasma Flow with Non-Transferred DC Arc Operating in Steam <u>S.-W. Chau</u> , <u>C.-M. Tai</u> , <u>S.-H. Chen</u>	9:40-9:55 OS15-16 The Size Effect on Electrical Parameters in Equivalent Circuit of IPMC <u>D. Song</u> , <u>H. Liu</u> , <u>K. Xiong</u>		9:40-10:00 GS1-14 Advanced Exergy Analysis of a Non-imaging Solar Concentrator Powered Organic Rankine Cycle (ORC) <u>A. Ustaoglu</u> , <u>J. Okajima</u> , <u>M. Alptekin</u> , <u>X.-R. Zhang</u> , <u>S. Maruyama</u>	9:40-10:00 OS10-13 <i>Invited</i> A Discussion of Non-condensable Gas Effect on Homogeneous Bubble Nucleation in a Simple Liquid <u>S. Tsuda</u> , <u>D. Yasui</u> , <u>S. Watanabe</u>	10:00-10:30 OS6-2 <i>Invited</i> Agricultural Applications of Atmospheric-Pressure Plasmas Using Pulsed Power Technology <u>K. Takaki</u>		
	10:00-10:20 OS2-15 Features of Combustion for Melting Metal Wires <u>A. Kirdyashkin</u> , <u>V. Salamatov</u> , <u>V. Kitzler</u> , <u>R. Gabbasov</u> , <u>S. Minaev</u>			9:55-10:10 OS15-17 A Gradient Model for Resistance and Young's Modulus of the Electrodes of Ionic Polymer Metal Composite <u>M. Wang</u> , <u>H. Liu</u> , <u>K. Xiong</u>				9:40-10:00 OS10-14 An Improved Lattice Boltzmann Model for Simulation of Bubbles in Nucleate Boiling <u>B. Wang</u> , <u>X. Xu</u> , <u>Y. Li</u> , <u>X. Liang</u>			

				10:10-10:30 OS15-18 Giant Electrocaloric Response of PVDF-TrFE- CFE Based Nanocomposites Induced by In-situ Thermal Reduced Graphene <i>L. Yang, J. Qiu, Q. Zhang</i>							
10:30	BREAK									10:30	
10:40	Exhibition Bldg. MEETING ROOM 2	Exhibition Bldg. MEETING ROOM 3	Exhibition Bldg. MEETING ROOM 4	Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. TACHIBANA	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7	10:40
	OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-V <i>Chair: H. Nakamura</i>	OS7: International Symposium on Medical Thermo Fluid Science for Progress in Quality of Life Measurement and Diagnosis <i>Chair: A. Komiya</i>	OS9: New Dimensions of Magnetic Suspension and Balance System <i>Chair: K. Asai</i>	OS14: International Workshop on Functional Plasma Flows and their Applications Thermal Plasma 2 <i>Chair: J. Jenista</i>	OS15: The 2nd NUAA- Tohoku University Joint Symposium on Fluid Science, Aerospace Engineering and Smart Structure Technology	OS17: IFS Collaborative Research Forum (AFI-2016) & Young Researcher Overseas Visits Program Research Forum	OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	GS1: General Session Multiphase Flow <i>Chair: Y. Iga</i>	OS11: Flow Realization, Measurement and Visualization <i>Chair: T. Yamagata</i>	OS6: Advanced Physical Stimuli and Biological Responses <i>Chair: S. Kawano</i>	
10:40-11:00 OS2-16	10:40-11:00 OS7-4	10:40-11:00 OS9-4	10:40-11:00 OS14-4	10:40-11:00 OS15-19	10:40 - 12:10	(10:40 - 12:00)	10:40-11:00 GS1-15	10:40-11:03 OS11-1	10:40-11:10 OS6-3		
Effect of Inlet Temperature on Flame Tip Opening of Lean H ₂ /air Mixtures in a Microchannel with Wall Cavities <i>W. Yang, A. Fan, H. Yao</i>	Flexible Multi-point Temperature Sensors for Body Temperature <i>Y. Inoue, Y. Shiraiishi, A. Yamada, T. Yambe</i>	An Experimental Study on the Effect of Fineness Ratio on the Aerodynamic Drag of Cylindrical Bodies using a MSBS <i>K. Sato, H. Okuizumi, Y. Konishi, K. Asai, H. Sawada</i>	Advancement of Atmospheric SPPS Deposited TiO ₂ Surface Layer by Applying the Ar-He Plasma Jet Outflowing at Low Reynolds Number <i>O. P. Solonenko, Y. Ando, H. Nishiyama, A. V. Smirnov, D. Kindole, A. A. Golovin, S. Uehara</i>	Composition, Phase Modification, Phase Structures and Electric Properties of (K, Na, Li)(Nb, Sb, Ta)O ₃ -based Lead-free Piezoelectric Ceramics <i>K. Zhu, S. Qian, K. Bian, H. Gu, Q. Gu, J. Qiu</i>	CRF-29 - CRF-48, CRF-R1 <i>Short Oral Presentation</i>	OS16-29 - OS16-46 <i>Poster Presentation</i>	Induced Flow Inside an Ethylene Glycol Droplet in the Presence of a Neighboring Water Droplet <i>T. K. Pradhan, P. K. Panigrahi</i>	The Measurements of Temperature and Flow Fields Inside a Battlemented Microchannel <i>H.-Y. Wang, Y.-L. Sun</i>	<i>Invited</i> Mechano-electrical Profile of the Cochlea in the Mammalian Inner Ear: its Overview and Future Research Direction <i>H. Hibino</i>		
11:00-11:20 OS2-17	11:00-11:20 OS7-5	11:00-11:20 OS9-5	11:00-11:20 OS14-5	11:00-11:20 OS15-20	11:35-11:50 YRF-2		11:00-11:20 GS1-16	11:03-11:25 OS11-2	11:10-11:40 OS6-4		
Blowoff Dynamics of Meso-scale Bluff-body- stabilized Flames in Lean Premixed Hydrogen-air and Syngas-air Mixtures <i>Y. J. Kim, B. J. Lee, H. G. Im</i>	Effect of Thermal Penetration Depth on Diagnosis of Skin Cancer by Thermophysical Property Measurement <i>T. Okabe, J. Okajima, T. Fujimura, A. Komiya, S. Aiba, S. Maruyama</i>	Measurement of Fluid Force Acting on an Oscillating Control Valve Plug Model by a Magnetic Suspension and Balance System <i>I. Tanaka, R. Oshima, K. Komatsubara, I. Tamai, H. Sawada, S. Obayashi, H. Yamakawa</i>	Photo-catalytic Titanium Oxide Film Deposition by ASPPS using Vortex Ar/ N ₂ Plasma Jet <i>Y. Ando, D. Kindole, H. Nishiyama, T. Nakajima, S. Uehara, O. P. Solonenko</i>	Architected Polymer based Materials for Actuation <i>N. Boucida, J.-Y. Cavaille, J.-M. Chenal, G. Digue, G. Sebald</i>	Development of New Variational Approaches to Determining Stability of Fluids and Plasmas <i>M. Hirota, P. J. Morrison, Y. Hattori</i>		Experiment and CFD Simulation of an Air- Water Bubble Column using a Cylindrical Porous Sparger <i>S. A. Hussain, M. Boulet, T. Melchiori, J.-M. Lavoie</i>	Calorimetry of Ground Source Heat Pump System using 3D Scanning PIV Method <i>S. Funatani, S. Amano, T. Takeda</i>	<i>Invited</i> Single Crystalline Metal Oxide Nanowires and Their Promises <i>T. Yanagida</i>		
11:20-11:40 OS2-18	11:20-11:40 OS7-6				11:50-12:05 YRF-3		11:20-11:40 GS1-17	11:25-11:48 OS11-3	11:40-12:10 OS6-5		
Quenching Distance for Flame Propagation along the Gas Flow in Microchannel with Narrowing <i>T. Miroshnichenko, S. Minaev</i>	Temperature Distribution Measurement around Inductively Heated Magnetic Particles <i>N. Kakuta, K. Nishijima, C.V.Han, K. Kondo, Y. Yamada</i>	Discussion			Study of Mechanobiology and Machanopathology in Endothelial Cells at the Mechanobiology Institute, Singapore <i>D. Yoshino</i>		Three-Dimensional Simulation of Wall- Interaction Effects during Gas Bubble Inception in Liquid <i>M. A. Ray, M. K. Das</i>	Zero-Dimensional Simulation of Internal and External Blood Flows of a Human Body: Comparison of Internal and External Bleedings <i>Y. Saito, T. Hayase, S. Miyauchi</i>	<i>Invited</i> Enhancement of Cell Growth on Honeycomb- Structured Polylactide Surface Using Atmospheric-Pressure Plasma Jet Modification <i>K.-Y. Cheng, C.-H. Chang, Y.-W. Yang, G.-C. Liao, C.-T. Liu, J.-S. Wu</i>		
					11:20-11:40 OS15-21						
					Innovative Control for Enhancing Harvested Energy <i>K. Makihara</i>						

<p>11:40-12:00 OS2-19 Effects of NH₃ Addition on the Laminar Burning Velocity and Markstein Length of CH₄-Air Premixed Flames <u>E. C. Okafor</u>, Y. Naito, A. Ichikawa, T. Kudo, A. Hayakawa, H. Kobayashi</p>			<p>11:20-11:40 OS14-6 A Fundamental Study on Chemically Non-Equilibrium State in Decaying SF₆ Arc Plasmas <u>Y. Tanaka</u>, K. Suzuki</p>	<p>11:40-12:00 OS15-22 A New Nonlinear Frequency Up-converting Piezoelectric Energy Harvester <u>Y. Wu</u>, J. Qiu, H. Ji</p> <p>12:00-12:20 OS15-23 Application of Ni-Mn-In based Magnetic Shape Memory Alloy Plates for Energy Harvesting Device <u>H. Miki</u>, E. Abe, S. Takeda, M. Ohtsuka, M. Guelting, M. Kohl, T. Takagi</p> <p>12:20-12:25 Closing K. Xiong</p>			<p>11:40-12:00 GS1-18 Flow Field Investigation in Rectangular Rearing Tanks by Bubbly Flow Simulations and Experiments <u>Y. Takakuwa</u>, W. Yamazaki, T. Sumida</p>	<p>11:48-12:10 OS11-4 Two-Dimensional Ultrasonic-Measurement-Integrated Blood Flow Analysis Considering Deformation of Blood Vessel by Pulsation: Extraction of Unsteady Vessel Shape from B-mode Images <u>D. Harada</u>, T. Hayase, S. Miyauchi, K. Inoue, H. Kadowaki, T. Shimazaki, T. Jibiki, K. Miyama</p>	
<p>BREAK</p>					<p>12:10-13:10 CRF-1 - CRF-48, CRF-R1, Poster Session and Lunch</p>	<p>BREAK</p>			
<p>Exhibition Bldg. MEETING ROOM 2</p>	<p>Exhibition Bldg. MEETING ROOM 3</p>	<p>Exhibition Bldg. MEETING ROOM 4</p>	<p>Conference Bldg. MEETING ROOM 1</p>	<p>Conference Bldg. MEETING ROOM 2</p>	<p>Conference Bldg. TACHIBANA</p>	<p>Conference Bldg. SAKURA 2</p>	<p>Conference Bldg. MEETING ROOM 5</p>	<p>Conference Bldg. MEETING ROOM 6</p>	<p>Conference Bldg. MEETING ROOM 7</p>
<p>SS: Liaison Office Session Chair: M. Ohta</p>	<p>OS13: Vortex Motion: Stability, Nonlinear Dynamics, and Turbulence Vortical Structures in Turbulence Chair: Y. Hattori</p>	<p>OS8: Flow Dynamics and Combustion Technology in Hybrid Rocket Propulsion Flow Dynamics and Modeling Chair: T. Shimada</p>	<p>OS14: International Workshop on Functional Plasma Flows and their Applications Thermal Plasma 3/ Non-thermal Plasma 1 Chair: Y. Okano Y. Tanaka</p>		<p>OS17: IFS Collaborative Research Forum (AFI-2016)</p>	<p>OS16: The 12th International Students / Young Birds Seminar / Multi-scale Flow Dynamics</p>	<p>GS1: General Session Multiphase Flow Chair: N. Ochiai</p>	<p>OS11: Flow Realization, Measurement and Visualization Chair: T. Hayase</p>	<p>OS6: Advanced Physical Stimuli and Biological Responses Chair: T. Ohashi</p>
<p>Collaborative Research activities through Liaison Office S. Ito T. Takagi H. Takana A. Vasiliev O. Volkova N. Williamson A. Komiya I. Sen F. Lundell N. I. Kim B. J. Lee J. Ahn M. P. Favre</p>	<p>13:30-13:50 OS13-1 Clustering, Enstrophy Growth and Vortex Dynamics of the High Energy (Negative Temperature) State in Quasi-Geostrophic Turbulence <u>N. Takahashi</u>, K. Ishikawa, T. Miyazaki, N. Hatakeyama, Y. Hattori</p> <p>13:50-14:10 OS13-2 Homotopy Continuation of the Mirror-symmetric Double-layered Vortex Structures from Plane Couette Flow to Pipe Flow K. Deguchi, <u>M. Nagata</u></p>	<p>13:10-13:50 OS8-1 <i>Invited</i> Numerical Simulations and Modeling Challenges in Hybrid Rockets <u>D. Bianchi</u>, F. Nasuti</p> <p>13:50-14:20 OS8-2 Modeling Combustion Instability in Axial Hybrids using Computational Fluid Dynamics <u>G. Karthikeyan</u>, T. Shimada</p>	<p>13:10-13:50 OS14-7 <i>Keynote</i> In-Situ Plasma Synthesis of Microspherical Cermet Powder TiC-NiCr Under Processing Porous Agglomerated Particles Ti-C-NiCr <u>O. P. Solonenko</u>, A. V. Smirnov, A. E. Chesnokov</p>		<p>13:10 - 14:40 CRF-49 - CRF-82, CRF-R2 <i>Short Oral Presentation</i></p>	<p>13:10 - (14:00) OS16-47 - OS16-62 <i>Short Oral Presentation</i></p> <p>(14:00-15:20) OS16-47 - OS16-62 <i>Poster Presentation</i></p>	<p>13:10-13:30 GS1-19 Development of Two Phases of Gas and Liquid Flow with Density Function Method <u>K. Tsubogo</u></p> <p>13:30-13:50 GS1-20 Numerical Simulation of Transonic Nozzle Flows with Nonequilibrium Condensation <u>T. Furusawa</u>, H. Erhard, H. Miyazawa, S. Yamamoto</p>	<p>13:10-13:33 OS11-5 Characteristics of Liquid-film Behavior and Mass Transfer Rate behind an Orifice in Two Phase Flow <u>T. Yamagata</u>, M. Komatsu, N. Fujisawa, F. Inada</p> <p>13:33-13:55 OS11-6 Mass Transfer Measurement in and Downstream of Elbow <u>Y. Ikarashi</u>, S. Taguchi, T. Yamagata, N. Fujisawa</p>	<p>13:10-13:40 OS6-6 <i>Invited</i> Non-thermal Plasma Directly Controls Inflammatory Reactions of Human Epithelial Cells J.-H. Choi, J.-W. Hong, <u>G.-C. Kim</u></p> <p>13:40-14:10 OS6-7 <i>Invited</i> New Traction Force Microscopy Suggests a Mechanism of Local Geometry Sensing by Individual Cell Adhesions <u>S. Deguchi</u>, S. Yokoyama, T. S. Matsui, T. Ohishi</p>

	14:10-14:30 OS13-3 Statistics of Physical Quantities Associated with Vortices on Vortical Axes in Isotropic Homogeneous Turbulence <u>H. Hasegawa</u> , <u>K. Nakayama</u>		13:50-14:10 OS14-8 Investigation on Temperature Characteristics of Multiphase AC Arc by High-Speed Visualization <u>M. Tanaka</u> , <u>T. Imatsuji</u> , <u>T. Hashizume</u> , <u>T. Watanabe</u> , <u>H. Nagai</u> , <u>T. Koiwasaki</u> , <u>T. Okuma</u> 14:10-14:30 OS14-9 Study of Seed-Free Pure Inert Gas Plasma MHD Electrical Power Generation <u>M. Tanaka</u> , <u>Y. Okuno</u>			13:50-14:10 GS1-21 A Simplified THINC Method for Multi-Dimensional Interface Capturing <u>T. Nakanishi</u> 14:10-14:30 GS1-22 Experimental Study on Bubbly Flow Dynamics Around a Spacer-Shaped Obstacle in a Simulated Subchannel <u>K. Takase</u> , <u>T. Sakka</u> , <u>A. Sato</u> , <u>S. Uesawa</u> , <u>H. Yoshida</u>	13:55-14:18 OS11-7 Formation and Structure of Quasi-Detonation Oblique Reaction Front in Annular Channel <u>M. Kuznetsov</u> , <u>J. Yanez</u> 14:18-14:40 OS11-8 Observation of Vapor Motion in a Heat Pipe System with PIV Technique <u>Y. Hoshi</u> , <u>S. Kameyama</u> , <u>T. Yamada</u> , <u>N. Ono</u>	14:10-14:40 OS6-8 <i>Invited</i> Microfluidic Experiments of Cellular Responses to Hypoxia <u>K. Funamoto</u>			
14:40	BREAK									14:40	
14:50	Exhibition Bldg. MEETING ROOM 2	Exhibition Bldg. MEETING ROOM 3	Exhibition Bldg. MEETING ROOM 4	Conference Bldg. MEETING ROOM 1	Conference Bldg. MEETING ROOM 2	Conference Bldg. TACHIBANA	Conference Bldg. SAKURA 2	Conference Bldg. MEETING ROOM 5	Conference Bldg. MEETING ROOM 6	Conference Bldg. MEETING ROOM 7	14:50
	OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-VI <i>Chair: Ö. Gülder</i>	OS13: Vortex Motion: Stability, Nonlinear Dynamics, and Turbulence Turbulence <i>Chair: S.G.Llewellyn Smith</i>	OS8: Flow Dynamics and Combustion Technology in Hybrid Rocket Propulsion System Analysis <i>Chair: Y.-S. Chen</i>	OS14: International Workshop on Functional Plasma Flows and their Applications Non-thermal Plasma 2 <i>Chair: H. Takana</i> <i>N. Takeuchi</i>	OS5: Biomolecular Dynamics	OS17: IFS Collaborative Research Forum (AFL-2016) & Young Researcher Overseas Visits Program Research Forum	OS16: The 12th International Students / Young Birds Seminar on Multi-scale Flow Dynamics	GS1: General Session Aerodynamics and Space Science <i>Chair: K. Shimoyama</i>	OS11: Flow Realization, Measurement and Visualization <i>Chair: S. Funatani</i>	OS6: Advanced Physical Stimuli and Biological Responses <i>Chair: S. Deguchi</i>	
14:50-15:10 OS2-20 LIF measurements of Methane Weak Flames in a Micro Flow Reactor with a Controlled Temperature Profile <u>T. Onda</u> , <u>H. Nakamura</u> , <u>T. Tezuka</u> , <u>S. Hasegawa</u> , <u>K. Maruta</u> 15:10-15:30 OS2-21 Reconsideration of Edge Flame Propagation Velocity and Stability <u>M.-K. Jeon</u> , <u>M. J. Lee</u> , <u>Y. Jung</u> , <u>N. I. Kim</u>	14:50-15:20 OS13-4 <i>Invited</i> Flapping Flight in Turbulence <u>D. Kolomenskiy</u> , <u>T. Engels</u> , <u>S. Ravi</u> , <u>K. Schneider</u> , <u>C. Wang</u> , <u>J. Sesterhenn</u> , <u>F.-O. Lehmann</u> , <u>H. Liu</u>	14:50-15:20 OS8-3 Flight Analysis of the Hybrid Sounding Rocket HEROS <u>M. Kobald</u> , <u>A. Petrarolo</u> , <u>C. Schmierer</u> , <u>U. Fischer</u> , <u>K. Tomilin</u> 15:20-15:50 OS8-4 Conceptual Design of Launch Vehicle Using A-SOFT Hybrid Rocket <u>S. Ito</u> , <u>H. Yoda</u> , <u>M. Kanazaki</u> , <u>K. Chiba</u> , <u>K. Kitagawa</u> , <u>T. Shimada</u>	14:50-15:10 OS14-10 Advanced Oxidation Process Using Plasmas within Gas Bubbles <u>T. Sugiyama</u> , <u>N. Ishibashi</u> , <u>N. Takeuchi</u> 15:10-15:30 OS14-11 Capillary Plasma Pump with Vapour Bubble for Water Purification <u>S. Uehara</u> , <u>K. Ishihata</u> , <u>Y. Miyaoka</u> , <u>H. Nishiyama</u>	14:50-15:15 OS5-1 <i>Invited</i> Preferential Localization of Bacteriorhodopsin in Binary Lipid Bilayer Composed of Dimyristoylphosphatidylcholine and Its Partially Fluorinated Analog <u>M. Sonoyama</u> 15:15-15:40 OS5-2 <i>Invited</i> Light-Induced Conformational Change of Inward Cl ⁻ Pump Halorhodopsin <u>T. Kikukawa</u> , <u>N. Kamo</u> , <u>M. Demura</u>	14:50-15:25 CRF-83, 84, CRF-R3 - CRF-R5 <i>Short Oral Presentation</i> 15:10-15:25 YRF-4 Multiscale Effect in Near-Wall Evaporative Heat Transfer for High Heat Flux Cooling <u>J. Okajima</u> , <u>P. Stephan</u>	(14:00-15:20) OS16-47 - OS16-62 <i>Poster Presentation</i>	14:50-15:10 GS1-23 Wind Tunnel Test on Scramjet External Nozzle with Clustered Entrance <u>T. Isono</u> , <u>S. Tomioka</u> , <u>N. Sakuranaka</u> 15:10-15:30 GS1-24 Conceptual Study of Supersonic Transports Employing Airframe-Integrated Advanced Nozzle Configuration <u>H. Takahashi</u>	14:40-15:03 OS11-9 Reproduction of Turbulent Flow Field behind a Square Cylinder by Hybrid Wind Tunnel <u>K. Kawamoto</u> , <u>T. Hayase</u> , <u>S. Miyauchi</u> , <u>K. Inoue</u> , <u>S. Bagheri</u> , <u>F. Lundell</u> 15:03-15:58 OS11-10~11-12 OS11-10 Optical Flow Investigations of Shock Induced Flow Separation in Critical Nozzles at Low Reynolds Numbers <u>S. Yagi</u> , <u>S. Inoue</u> , <u>S. Nakao</u> , <u>D. Ono</u> , <u>Y. Miyazato</u>	14:50-15:20 OS6-9 <i>Invited</i> Molecular Mechanisms for Cell Death Induction by Nanosecond Pulsed Electric Fields <u>K. Yano</u> , <u>K. Morotomi-Yano</u>		

<p>15:30-15:50 OS2-22 Study on Lifted Flame Characteristics in High-Temperature Oxygen Combustion Condition <i>T. Monobe, S. Hasegawa, T. Tezuka, H. Nakamura, K. Maruta</i></p> <p>15:50-16:10 OS2-23 Experimental Investigation on CF₄ Destruction using 2-section Porous Medium Combustor <i>S. G. Kim, D. K. Lee, G. Y. Tae, C.-B. Ko, E. K. Lee</i></p>	<p>15:20-15:40 OS13-5 Direct Numerical Simulation of Momentum and Mass Transfer in a Spatially Developing Hybrid Rocket <i>K. Takamura, Y. Ito, Y. Sakai, K. Iwano, T. Hayase</i></p> <p>15:40-16:00 OS13-6 Application of a High-order LES Turbulent Model to Study Wake Induced Unsteady Transition from Laminar to Turbulent Flow <i>D. Biswas, T. Jimbo</i></p> <p>16:00-16:20 OS13-7 A Study of Vortex Stretching along a Vortical Axis in Isotropic Homogeneous Turbulence <i>M. Ohno, K. Nakayama</i></p>	<p>15:50-16:20 OS8-5 Numerical Investigation of Extinction-Reignition Superiority in a Single-Stage Sounding Hybrid Rocket <i>K. Chiba, H. Yoda, M. Kanazaki, T. Shimada</i></p>	<p>15:30-15:50 OS14-12 Recent Investigation of a Plasma-Chemical DeNO_x Process for Glass Melting Furnace Flue Gas <i>T. Kuroki, H. Fujisima, H. Yamamoto, M. Okubo</i></p> <p>15:50-16:10 OS14-13 Numerical and Experimental Analyses on Electric Field Development in High Pressure Air Nanosecond DBD <i>H. Takana, B. M. Goldberg, I. V. Adamovich, H. Nishiyama</i></p>	<p>15:40-16:00 OS5-3 <i>Invited</i> Avian Primordial Germ Cell Migration in the Blood Stream <i>D. Saito</i></p> <p>16:00-16:20 OS5-4 <i>Invited</i> Outer Membrane Permeability and Stability of Gram-negative Bacteria, in the Context of Multi-drug Resistance and Generation of Primitive Chloroplast <i>S. Kojima</i></p> <p>16:20-16:30 OS5-5 Correlation between Protein Subcellular Localization and Sugar Variation <i>K. Etchuya, T. Kikegawa, Y. Mukai</i></p>	<p>15:25-16:20 CRF-49 - CRF-84, CRF-R2 - CRF-R5 <i>Poster Session</i></p>		<p>15:30-15:50 GS1-25 Study of Body Force Generation in Surface Dielectric Barrier Discharge for Applications of Aerodynamics <i>S. Sato, N. Ohnishi</i></p>	<p>OS11-11 Optical Measurements of Shock Wave Oscillations in Critical Nozzles at Low Reynolds Numbers <i>S. Yagi, S. Inoue, S. Nakao, D. Ono, Y. Miyazato</i></p> <p>OS11-12 RANS Simulation of Overexpanded Critical Nozzle Flows at Low Reynolds Numbers <i>S. Yagi, S. Nakao, D. Ono, Y. Miyazato</i></p> <p>15:58-16:20 OS11-13 Magnetic resonance imaging measurements of fibre suspension pipe flow <i>F. Lundell, J. MacKenzie, L. D. Söderberg</i></p>	<p>15:20-15:50 OS6-10 <i>Invited</i> Robotic Vesicle: Motility Control of Microcapsule by DNA Devices and Molecular Motors <i>Y. Sato, Y. Hiratsuka, I. Kawamata, S. Murata, S. M. Nomura</i></p> <p>15:50-16:20 OS6-11 <i>Invited</i> Numerical Modeling of Plasma-Biomembrane Interactions with Molecular Dynamics <i>S. Uchida, F. Tochikubo</i></p>
<p>BREAK</p>									
<p>Exhibition Bldg. MEETING ROOM 2</p> <p>OS2: The Fourth International Symposium on Innovative Energy Research II International Workshop on Combustion Technology and Fundamentals OS2-VII <i>Chair: H. G. Im</i></p>	<p>Exhibition Bldg. MEETING ROOM 3</p> <p>OS13: Vortex Motion: Stability, Nonlinear Dynamics, and Turbulence Boundary Layer <i>Chair: N. Takahashi</i></p>	<p>Exhibition Bldg. MEETING ROOM 4</p> <p>OS8: Flow Dynamics and Combustion Technology in Hybrid Rocket Propulsion A-SOFT HR <i>Chair: M. Kobald</i></p>	<p>Conference Bldg. MEETING ROOM 1</p>	<p>Conference Bldg. MEETING ROOM 2</p> <p>OS4: Biomedical Flow Dynamics <i>Chair: M. Ohta</i></p>	<p>Conference Bldg. TACHIBANA</p> <p>OS17: Fluids Science Research Award Lectures (AFI-2016) <i>Chair: S. Obayashi</i></p>	<p>Conference Bldg. SAKURA 2</p>	<p>Conference Bldg. MEETING ROOM 5</p> <p>GS1: General Session Aerodynamics and Space Science <i>Chair: H. Takahashi</i></p>	<p>Conference Bldg. MEETING ROOM 6</p>	<p>Conference Bldg. MEETING ROOM 7</p> <p>OS6: Advanced Physical Stimuli and Biological Responses <i>Chair: T. Shimizu</i></p>
<p>16:30-16:50 OS2-24 Generalized Model of Inhibition of Chain-Branching Combustion Processes <i>V. I. Babushok, V. V. Gubernov, S. S. Minaev, T. P. Miroshnichenko</i></p>	<p>16:30-16:50 OS13-8 Temporally Developing Direct Numerical Simulation of Boundary Layer Bypass Transition <i>S. Bhushan, C. L. Pasilliao, A. Sescu</i></p>	<p>16:30-17:00 OS8-6 System Requirements for Highly-Functional Hybrid Rocket Demonstration <i>I. Takahashi, T. Shimada</i></p>		<p>16:30-17:00 OS4-1 <i>Invited</i> Fatigue Life Prediction of Stent in a Stenotic Coronary Artery <i>A. Qiao, X. Cui, Q. Ren</i></p>	<p>16:30-16:55 <i>Award Lecture</i></p>		<p>16:30-16:50 GS1-26 Gamma-Ray Emission Process by Coupled Computation of Radiative Transfer with Relativistic Hydrodynamics <i>A. Ishii, N. Ohnishi, H. Nagakura, H. Ito, S. Yamada</i></p>		<p>16:30-17:00 OS6-12 <i>Invited</i> Ionic Current Responses and Induced Liquid Flows <i>K. Doi, A. Yano, S. Kawano</i></p>

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16:30

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<p>16:50-17:10 OS2-25 Construction of Simple Reaction Mechanisms of C₃H₂/air Mixture <u>Y. Sasaki</u>, <u>H. Nakamura</u>, <u>K. Maruta</u></p> <p>17:10-17:30 OS2-26 Flammability Limits of Counterflow Stretched Flames Stabilized in a Planar Microchannel <u>S. Mokrin</u>, <u>E. Odintsov</u>, <u>G. Uriupin</u>, <u>S. Minaev</u>, <u>T. Tezuka</u>, <u>K. Maruta</u></p> <p>17:30-17:50 OS2-27 The Effect of Lewis Number on the Formation of Ball-like Flames in Counterflow Fields under Microgravity at Low Stretch Rates <u>T. Okuno</u>, <u>H. Nakamura</u>, <u>T. Tezuka</u>, <u>S. Hasegawa</u>, <u>M. Kikuchi</u>, <u>K. Maruta</u></p>	<p>16:50-17:10 OS13-9 Numerical Simulation of the Development of Linear Unstable Modes in a Supersonic Boundary Layer <u>M. Yoshino</u>, <u>K. Suda</u>, <u>H. Maekawa</u>, <u>Y. Inoue</u></p> <p>17:10-17:30 OS13-10 Towing Tank Experiment on Boundary Layer Transition Subjected by Free Stream Turbulence <u>M. Ameer</u>, <u>M. Matsubara</u></p>	<p>17:00-17:30 OS8-7 Flow Visualization in Combustion Chamber of Altering-intensity Swirling-Oxidizer-Flow-Type Hybrid Rocket <u>K. Obata</u>, <u>T. Shimada</u></p> <p>17:30-18:00 OS8-8 An Attempt of Thermo-fluid Analysis of Hybrid Rocket with LOX Regenerative Cooling System <u>T. Matsuno</u>, <u>T. Shimada</u></p>		<p>17:00-17:15 OS4-2 Preliminary Study for Fluid Dynamic Effects of Upstream Bifurcation and Bend on Blood Flow Simulation in Cerebral Aneurysm <u>D. Suzuki</u>, <u>K. Funamoto</u>, <u>S. Sugiyama</u>, <u>T. Hayase</u>, <u>S. Miyauchi</u>, <u>T. Tominaga</u></p> <p>17:15-17:30 OS4-3 Fundamental Study of MR-Measurement-Integrated Simulation of Heart-Aorta System: Numerical Simulation of Blood Flow in an Aorta <u>M. Ogitsu</u>, <u>T. Hayase</u>, <u>S. Miyauchi</u>, <u>K. Inoue</u>, <u>A. Lalande</u>, <u>C. Acquitier</u>, <u>J.-J. Christophe</u></p> <p>17:30-17:45 OS4-4 Multi-Field Coupled Numerical Simulation of Aqueous Humor in Rabbit Eye <u>H. Song</u>, <u>L. Li</u>, <u>W. Wang</u>, <u>Z. Liu</u></p> <p>17:45-18:00 OS4-5 Numerical Study of the Effect of Different Models in Hepatic Microwave Ablation <u>Q. Nan</u>, <u>Z. Tian</u>, <u>D. Tong</u></p>	<p>17:00-17:25 <i>Award Lecture</i></p> <p>17:30-17:55 <i>Award Lecture</i></p>		<p>16:50-17:10 GS1-27 Numerical Study of Aerodynamic Characteristics on Waverider with Elevon and Tail Wing <u>T. Muta</u>, <u>N. Tsuboi</u>, <u>Y. Maru</u>, <u>K. Fujita</u></p>		<p>17:00-17:20 OS6-13 Transport of a Microparticle Driven by Electric Field in Monopolar Ion Solution <u>R. Nagura</u>, <u>K. Doi</u>, <u>S. Kawano</u></p> <p>17:20-17:40 OS6-14 Determination of Fluid Mechanical Effects Caused by Near Wall Blood Flow Field on Endothelial Cell Damage: Effect of Shear Stress on Cell Peeling of Cultured Endothelial Cells <u>M. Suzuki</u>, <u>T. Hayase</u>, <u>S. Miyauchi</u>, <u>K. Inoue</u></p> <p>17:40-18:00 OS6-15 Response of Ion-Induced EHD Flow to AC Electric Fields <u>A. Yano</u>, <u>K. Doi</u>, <u>S. Kawano</u></p> <p>18:00-18:05 Closing <u>S. Kawano</u></p>
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18:00

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BANQUET @ SAKURA, Conference Bldg.

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	<p>13:20-14:00 OS13-19 <i>Invited</i> Instability of Vortex Rings and Helical Vortices <i>F. J. BLANCO-RODRIGUEZ, S. L. Dizès</i></p> <p>14:00-14:20 OS13-20 Feedback Control of Gortler Vortices Using Wall Effects <i>A. Sescu, M. Afşar, D. Thompson</i></p> <p>14:20-14:40 OS13-21 Visualization of Flow Fields by Using Dipole Decomposition <i>K. Ueno, T. Kamiyama, Y. Matsumoto, K. Ishiko</i></p>	<p>13:10-13:40 OS8-15 Measurement and Prediction of Local Regression Rate of Solid Burning with Impinging Oxidizer Jet <i>T. Matsuoka, K. Kamei, T. Yamazaki, H. Nagata, Y. Nakamura</i></p> <p>13:40-14:10 OS8-16 Study on the Combustion Response Function of Hybrid Rocket Motors <i>Y. Kurosawa, S. Imafuku, T. Morita</i></p> <p>14:10-14:40 OS8-17 Educational Activities of Hybrid Rockets in Nihon University <i>K. Takahashi</i></p>	<p>13:10-13:40 OS12-7 <i>Invited</i> Application of Magneto-Rheology to Improve Blood Flow and Prevent Heart Attacks <i>R. Tao</i></p> <p>13:40-14:00 OS12-8 Controlling Gas Flow in Magnetic Fluid <i>H. Yamasaki, M. Ueta, H. Yamaguchi</i></p> <p>14:00-14:20 OS12-9 Study of Flow and Energy Transfer in Low-Temperature Geothermal Heat Pipe <i>C. Pumaneratkul, H. Yamasaki, H. Yamaguchi</i></p> <p>14:20-14:40 OS12-10 Numerical Simulation of Condensation Effect on a Steam Ejector by Wet Steam Model <i>A. Li, G. H. Yeoh, V. Timchenko, A. C. Y. Yuen, X. Wang</i></p>	<p><i>Chair: G. Coubebaïsse & S. Tupin</i> 13:20-13:35 OS4-14 The Novel Diagnosis Method for Lymph Node Metastasis By Lymphangiography <i>R. Iwamura, S. Mori, T. Kodama</i></p> <p>13:35-13:50 OS4-15 The Novel Evaluation Methods for Metastatic Lymph Node using Intranodal Pressure <i>K. Takeda, S. Mori, T. Kodama</i></p> <p><i>Chair: Y. Liu & T. Nakayama</i> 13:50-14:20 OS4-16 <i>Invited</i> Development of an In Vitro Test Platform for the Quantitative Evaluation of Stent Devices and their Deployment <i>S. Tupin, Y. Shimizu, H. Anzai, K. Takase, M. Ohta</i></p> <p>14:20-14:35 OS4-17 Hemodynamic Behaviors under Blood Vessel Deformation by Stent Struts: Two Dimensional Study <i>N. K. Putra, H. Anzai, M. Ohta</i></p>	<p>13:10-13:30 GS1-36 Numerical Analysis on the Air Flow Induced by Oscillating Foils <i>H.-C. Chiu, R.-H. Hsieh, J.-H. Jang, C.-R. Yu, T.-L. Yang</i></p> <p>13:30-13:50 GS1-37 Removal of Reactive Black 5 (RB5) Dye From Aqueous Solution By Paper Mill Sludge: Isotherms and Kinetics <i>A. Yaras, H. Arslanoğlu</i></p> <p>13:50-14:10 GS1-38 A Preliminary Assessment of Working Fluids as an Optical Filter In a Concentrator Photovoltaic (CPV) <i>A. Ustaoglu, M. Alptekin</i></p> <p>14:10-14:30 GS1-39 A Study on Effect of Flow Characteristics about Offset Between S-Duct and Flat Plate <i>J. Lee, J. Cho</i></p>			
14:40	BREAK							14:40

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			<p>16:30-16:55 OS8-23 The Oscillation Of Reactive Shear Layer In Hybrid Rocket Post-chamber <i>S. Lee, J. Kim, C. Lee</i></p> <p>17:00-18:00 WRAP-UP <i>T. Shimada</i></p>	<p>16:30-17:00 OS12-14 <i>Invited</i> Passive Control of Inner Cavity Flow for Noise Suppression <i>Y. Fukunishi, M. Sato, Y. Nishio, S. Izawa</i></p> <p>17:00-17:20 OS12-15 Flow Control over Trapezoidal Rib with Synthetic Jet <i>A. Malik, S. Dutta</i></p> <p>17:20-17:40 OS12-16 Alignment of Nanofibrils in Flow Focusing and Converging Channels <i>K. G. Vijayakumar, L. D. Söderberg, F. Lundell</i></p>				
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R. Nishikawa, K. Chiba M. Onda, S. Obayashi, S. Satori, R. Akiba
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