

Preface

Welcome to the Twenty-second International Conference on Flow Dynamics (ICFD2025) hosted by the Institute of Fluid Science, Tohoku University. Considering the convenience of participants from all over the world, we have decided to hold ICFD2025 as a hybrid format as last year.

Flow Dynamics is an Integrated Flow Science that deals with the flow and transport phenomena concerning electrons, molecules and nanoparticles, any continuum fluids and materials, energy, information, and so forth. ICFD is expected to play significant roles in helping Flow Dynamics be a significant academic discipline that deals with various issues that human society faces, such as new energy, environment, resource, and diseases.

ICFD works as a platform of discussion to reach scientific truth and engineering solutions for all the flow-relevant problems. A wide variety of sessions are organized in ICFD to provide the seeds and fulfill the needs from the viewpoint of Flow Dynamics. We would be very grateful if it contributes to initiating scientific and technical exchanges and international research collaboration.

Another significance of this conference is that it provides unique opportunities for young researchers and students to be educated and self-developed through participation and presentation in the Student Session and special events.

The technical program consists of 4 Plenary Lectures, 1 General Session, 31 Organized Sessions, starting in the morning on Monday, November 10. Approximately 620 papers will be presented. It is our great pleasure to meet a large number of participants during the conference.

On behalf of the ICFD2025 organizing committee, we hope you would enjoy fruitful discussions and exchanges of information, and we would like you to have the opportunity to strengthen your friendships and meet new friends.

Prof. Makoto Ohta,
Institute of Fluid Science,
Tohoku University

And
Prof. Vincent Fridrici,
Centrale Lyon

As
General Co-Chairs
The Twenty-second International Conference
on Flow Dynamics
ICFD2025

Twenty-second International Conference on Flow Dynamics

Organized by:

- Executive Committee of International Conference on Flow Dynamics

Supported by:

- Institute of Fluid Science, Tohoku University

In cooperation with:

- CFD-Bio
- Combustion Society of Japan
- Computational Science and Engineering Division, Atomic Energy Society of Japan
- Cryogenics and Superconductivity Society of Japan
- Japan Aerospace Exploration Agency
- Japan Foundry Engineering Society
- Japan Society of Maintenology
- Japanese Society for Multiphase Flow
- Japanese Society of Biorheology
- The Electrochemical Society of Japan
- The Japan Society for Aeronautical and Space Sciences
- The Japan Society for Computational Engineering and Science
- The Japan Society of Applied Electromagnetics and Mechanics
- The Japan Society of Fluid Mechanics
- The Japan Society of Mechanical Engineers
- The Japan Society of Microgravity Application

Supported by a grant from:

- Aoba Foundation for the Promotion on Engineering
- Fluid Sciences Foundation

SCOPE:

The 22nd International Conference on Flow Dynamics (ICFD2025), in the annual series since 2004, will be held from November 10 to 13, 2025 at Sendai, Japan. The objective of this conference is to explore new horizons in science and technology in Flow Dynamics by discussing and exchanging information related to the most advanced scientific fields and to cutting edge technologies. ICFD is now recognized by the researchers and engineers all over the world as one of the largest and the most important international conferences in the field of Flow Dynamics. It has also been playing an important role in promoting international research collaborations. Especially, ICFD2025 focuses on energy related topics, such as clean energy, hydrogen energy, and natural energy. In addition, it should be noted that ICFD provides young researchers and students with unique opportunities to develop themselves through proactive participation in the conference and young researchers and students are encouraged by awards.

The first nine ICFDs were hosted by two Tohoku University COE Programs, “The 21st Century International COE on Fluid Dynamics (21COE, Year 2003 - Year 2007)” and its successor “Global COE Program World Center of Education and Research for Trans-disciplinary Flow Dynamics (GCOE, Year 2008 - Year 2012)”. Institute of Fluid Science (IFS), Tohoku University, was responsible for both 21COE and GCOE programs. GCOE ended in March of 2013. In 2013, on the occasion of its 70th anniversary, IFS was reorganized as an even more powerful research institute, particularly in energy-related research, with three new research divisions and an Innovative Energy Research Center. In this movement, IFS decided to continue to support this conference series, and ICFDs have been held annually since 2013. We pledge to maintain ICFD's dynamism and spirit as a meeting for distinguished scientists in Flow Dynamics as well as for future generations of scientists and engineers.

Flow Dynamics, as the component of Integrated Flow Science, focus on the study of flow and transport phenomena concerning electrons, molecules, nanoscale particles, any continuum fluid with and without chemical reaction, any material, energy, information, economic activity and so forth. It addresses

multiscale, multiphysics and multidisciplinary problems and deals with all-natural phenomena including bio-processes, corrosion, weather, volcanic eruptions, earth magnetic field and tectonic motions, and in most human activities such as industrial processes, energy production & saving, and transportation. ICFD is expected to play a significant role in encouraging Flow Dynamics to become a major academic discipline, which deals with various difficult tasks that human society is facing, such as control of nuclear power generators, global warming, energy, resource and diseases. We expect all scientists and engineers who are working or are interested in such areas to participate in ICFD2025 and extend their research areas and international human networks.

ICFD serves as a platform of discussion to reach scientific truth and engineering solutions for all the flow-relevant problems. We cordially invite researchers, teachers, students and planners exploring and studying in the relevant research and development fields of energy, bio-, nano-, material, environmental, planetary and earth sciences and technologies, particularly in the academic fields of mechanical engineering, aerospace engineering, nuclear engineering, physics, medical science and engineering, chemistry, chemical engineering and all other areas.

We believe that you will enjoy the beautiful and pleasant atmosphere of the autumn at Sendai, since the middle of November is the best season of Sendai.

CONFERENCE COMMITTEE:

Executive Committee Members:

Makoto Ohta (General Co-Chair of ICFD2025, Tohoku University)
Vincent Fridrici (General Co-Chair of ICFD2025, Centrale Lyon)
Kaoru Maruta (Director, IFS, Tohoku University)

International Scientific Committee Members:

Chair: Shigeru Obayashi (Tohoku University)

Asia

Chingyao Chen (National Yang Ming Chiao Tung University)
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Zhenmao Chen (Xi'an Jiaotong University)
Jinsoo Cho (Hanyang University)
Ketaro Doi (Toyohashi University of Technology)
Yuji Hattori (Tohoku University)
Chih-Yung Huang (National Tsing Hua University)
Jun Ishimoto (Tohoku University)
Takatoshi Ito (Tohoku University)
Satoyuki Kawano (Osaka University)
Nam Il Kim (KAIST)
Hideaki Kobayashi (Tohoku University)
Kazunori Kuwana (Tokyo University of Science)
XinGang Liang (Tsinghua University)
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Hiroki Nagai (Tohoku University)

Taku Ohara (Tohoku University)
Jinhao Qiu (Nanjing University of Aeronautics and Astronautics)
Akihiro Sasoh (Nagoya University)
Takehiko Sato (Tohoku University)
Masaya Shigeta (Tohoku University)
Hyung Jin Sung (KAIST)
Toshiyuki Takagi (Tohoku University)
Takashi Tokumasu (Tohoku University)
Michio Tokuyama (Tohoku University)
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Satoru Yamamoto (Tohoku University)
Kazuya Yoshida (Tohoku University)
Huangwei Zhang (National University of Singapore)

Europe

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Christian Boller (Saarland University)
Jean-Yves Cavaillé (INSA de Lyon)

Bastien Chopard (University of Geneva)
Philippe Dagaut (CNRS)
Vincent Fridrici (Centrale Lyon)
Alexis Giauque (Centrale Lyon)
Fredrik Lundell (KTH Royal Institute of Technology)
Sergey S. Minaev (Far-Eastern Federal University)
Gael Sebald (INSA de Lyon-CNRS)

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Hong G. Im (King Abdullah University of Science and Technology)

North America

Igor V. Adamovich (The Ohio State University)
Jeongmin Ahn (Syracuse University)

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Organizing Committee Members:

Anna Suzuki (Chair), Makoto Hirota, Yuka Iga, Kaoru Maruta, Hisanori Masuda, Makoto Ohta, Yutaka Sato, Megumi Takahashi (Observer) Tomohiro Okazaki

ICFD2025 Secretariat:

Natsuko Hatakeyama, Tomomi Nagayoshi

Yiguang Ju (Princeton University)
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Kozo Saito (University of Kentucky)
Rongjia Tao (Temple University)

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Masaaki Sato (Tohoku University)
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Dimos Poulikakos (ETH Zurich)
Serge A. Shapiro (Freie University Berlin)
Alexander Vasiliev (Moscow State University)
Yiannis Ventikos (University College London)
Miklos Zrinyi (Semmelweis University)

North America

Louis N. Cattafesta III (University of Florida)
Ishwar K. Puri (Virginia Tech)
John P. Sullivan (Purdue University)
Satish Udpa (Michigan State University)

Plenary Lectures



Prof. Christophe Bailly
(Centrale Lyon, France)
"Strategies to Model Acoustic Propagation in Inhomogenous Flows"



Prof. Roland N. Horne
(Stanford University, USA)
"Using Chemistry to Measure Flow Rate in Geothermal Wells"



Prof. Hong G. Im
(King Abdullah University of Science and Technology, Saudi Arabia)
"Reduced-Order High Fidelity Simulations of Reacting Flows Using Low Dimensional Manifolds and Machine Learning"



Dr. Denis Veynante
(Université Paris-Saclay, CNRS, CentraleSupélec, France)
"Flame surface models for large eddy simulations of turbulent combustion: achievements, challenges and perspectives"

Sessions

General Session

GS1: **General Session**

Co-Organizers: M. Ohta, A. Suzuki (Tohoku University)

Organized Session

OS1: **The Third International Symposium on Integrated Flow Science I & III Advanced Materials and its Energy Application**

Organizer: S. Samukawa (National Yang Ming Chiao Tung University)

Multiphase Energy Science and Technology (Combination of Monozukuri-Fluid Science / Engineering)

Organizer: J. Ishimoto (Tohoku University)

OS2: **The Third International Symposium on Integrated Flow Science II Combustion Technology and Fundamentals**

Co-Organizers: P. Dagaut (CNRS-INSIS), H. G. Im (KAUST), K. Maruta (Tohoku University)

OS3: **The Third International Symposium on Integrated Flow Science IV Advanced Semiconductor and Digital Transformation**

Co-Organizers: K. Endo, D. Ohori (Tohoku University)

OS4: **Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 17th Edition**

Co-Organizers: Y. Saito (Tohoku University), L. Kamps (Hokkaido University / Letara Ltd.)

OS5: **Advanced Applications of Multi-functional Fluids**

Co-Organizers: H. Takana (Tohoku University), T. Fujino (University of Tsukuba), K. Doi (Toyohashi University of Technology), N. Takeuchi (Tokyo Institute of Technology)

OS6: **Free Flight Experiment with MSBS and Ballistic Range**

Co-Organizers: K. Seo (Kogakuin University), H. Nagai (Tohoku University), K. Ueno (Iwate University)

OS7: **Advances in Simulation Techniques for the Computational Aerosciences**

Co-Organizers: Y. Abe (Tohoku University), F. D. Witherden (Texas A&M University), B. C. Vermeire (Concordia University), T. Haga (JAXA), K. Otsuka (Tohoku University), N. Tsushima (JAXA / The University of Tokyo), J. S. Park (Inha University), A. Yakeno (Tohoku University)

OS8: **Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative Research**

Co-Organizers: Y.-C. Cheng (National Yang Ming Chiao Tung University), H.-Y. Angie Wang (National Tsing Hua University), C. H. Dylan Tsai (National Yang Ming Chiao Tung University), S. Liu (Tohoku University), K. Tachibana (Oita University), T. Sato (Tohoku University)

OS9: **Biomedical Flow Dynamics**

Co-Organizers: H. Anzai (Tohoku University), M. Zhang (Macquarie University), K. Takashima (Kyushu Institute of Technology), T. Nakayama (National Institute of Technology, Nara College), A. Qiao (Beijing University of Technology), M. Ohta (Tohoku University)

- OS10: **Two-Phase Thermal Control Technology**
Co-Organizers: K. Odagiri (JAXA), M. Nishikawara (Nagoya University), H. Nagai (Tohoku University)
- OS11: **Microfluidics and Microphysiological Modeling**
Co-Organizers: K. Funamoto (Tohoku University), T. Fukui (Kyoto Institute of Technology), T. Omori (Tohoku University), E. Corvera Poiré (National Autonomous University of Mexico)
- OS12: **Complex Thermofluid System**
Co-Organizers: C.-Y. Chen, Y.-H. Liu, Y.-H. Liao (National Yang Ming Chiao Tung University)
- OS13: **Flow and Energy**
Co-Organizers: T. Yamagata (Niigata University), S. Iio (Shinshu University), S. Funatani (Yamanashi University), A. Komiya (Tohoku University)
- OS14: **Innovations in Oncology**
Co-Organizers: C. Moyret-Lalle (Cancer Research Center of Lyon), C. Rivière (Claude Bernard University Lyon 1), J.-P. Rieu (Claude Bernard University Lyon 1), F. Hollande (The University of Melbourne), K. Funamoto (Tohoku University)
- OS15: **Turbulence: from Fundamentals to Applications**
Co-Organizers: Y. Hattori (Tohoku University), T. Ishihara (Okayama University), Y. Tsuji (Nagoya University), A. Yakeno (Tohoku University)
- OS16: **Vortex Motion**
Co-Organizers: Y. Hattori (Tohoku University), S. Llewellyn Smith (UCSD)
- OS17: **Supercritical Fluid**
Co-Organizers: Y. Kanda (Tohoku University), Y. Feng (Chinese Academy of Science), H. Yingxue (Xi'an Jiaotong University), L. Chen (Chinese Academy of Science), A. Komiya (Tohoku University)
- OS18: **Flow measurements using PSP/TSP technique**
Co-Organizers: C.-Y. Huang (National Tsing Hua University), Y. Egami (Aichi Institute of Technology), Y. Matsuda (Waseda University), H. Nagai (Tohoku University)
- OS19: **Multiphase Thermal Fluid Flow and Its Interface Dynamics**
Co-Organizers: J. Okajima (Tohoku University), T. Okabe, M. Shirota (Hirosaki University)
- OS20: **Multiphysics in Fluid Mechanics**
Co-Organizers: M. Shigeta (Tohoku University), M. Tanaka (Kyushu University), Y. Saito (Kyushu Institute of Technology), Y. Inada (Saitama University), H. Komen (Osaka University), M. Sugimoto (Tohoku University), M. Hirota (Sumitomo Heavy Industries, Ltd.), H. Muneoka (Tohoku University)
- OS21: **Smart Fluids & Soft Matters and Their Advanced Applications**
Co-Organizers: M. Nakano (SmartTECH Lab. Inc.), X. Gong (University of Science and Technology of China), W. Li (University of Wollongong), G. Sebald (INSA Lyon-CNRS-Tohoku University)

- OS22: **Fundamentals and Applications of Thermoacoustics**
Co-Organizers: T. Biwa (Tohoku University), E. Luo (Chinese Academy of Sciences), Y. Ueda (Tokyo University of Agriculture and Technology), S. Zhu (Durham University), G. Chen (Southeast University)
- OS23: **Aerospace Heat, Fluid Engineering, and Mathematical Physics: Nonlinear Dynamics and Stochastic Processes with JST CREST**
Co-Organizers: A. Yakeno, S. Kano (Tohoku University), I. Ishikawa (Kyoto University), Y. Abe (Tohoku University), S. Yatsuyanagi (JAXA)
- OS24: **Dynamics of Flow of Matter in Moving Contacts**
Co-Organizers: V. Fridrici (Centrale Lyon), T. Tokumasu, M. Ohta (Tohoku University)
- OS25: **Combustion-generated Pollutants**
Organizer: P. Dagaut (CNRS)
- OS26: **Liaison Office Session**
Co-Organizers: M. Ohta, T. Uchimoto, T. Tokumasu, A. Komiya (Tohoku University)
- OS27: **The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics**
Co-Organizers: T. Hirano, G. Tamura, T. Tani, K. Yanagisawa (Tohoku University)
Supervisors: Y. Kanda, T. Ikami, Y. Kaneko (Tohoku University)
- OS28: **The 25th International Symposium on Advanced Fluid Information (AFI-2025) IFS Collaborative Research Forum**
Co-Organizers: H. Masuda, M. Ohta (Tohoku University)
Fluids Science Research Award Lectures
- OS29: **IFS Lyon Center Collaborative Research Forum**
Organizer: T. Uchimoto (Tohoku University)
- OS30: **JSPS Core to Core program workshop**
-Construction of an international research exchange center for ammonia combustion and materials toward the realization of a low-carbon society-
Organizer: T. Tokumasu (Tohoku University)
- OS31: **Japan-South Africa Bilateral Workshop**
Co-Organizers: T. Kodama (Tohoku University), O. A. Arotiba (University of Johannesburg), A. Komiya (Tohoku University)

General Information

Opening: 10:00-, Monday, November 10 @ EX-Hall-1A, Exhibition Bldg.

ISC Meeting (closed meeting): 12:20-13:00, Monday, November 10 @ EX-1, Exhibition Bldg.

Students / Young Birds Friendship Night: 18:45-20:00, Monday, November 10 @ EX-Hall-3B, Exhibition Bldg.

Women in Flow Dynamics: 12:30-13:15, Tuesday, November 11@EX-2, Exhibition Bldg.

Banquet: 19:00-20:30, Wednesday, November 12 @ SENDAI (4th floor), Hotel Metropolitan Sendai JR-EAST (not Hotel Metropolitan Sendai, SENDAI-EAST)

Exhibition Hall: Three Days (November 10 – November 12) @ EX-Hall-3B, Exhibition Bldg.

AICE / Dantecdynamics K. K. / nac Image Technology Inc. / Nobby Tech. Ltd. / PHOTRON LIMITED

Exhibitor Presentation Session (Luncheon Seminar): 12:10-12:30, Wednesday, November 12, 2025@EX-Hall-3B, Exhibition Bldg.

12:10-12:15 Nobby Tech. Ltd.

12:15-12:20 PHOTRON LIMITED

12:20-12:25 Dantecdynamics K.K.

12:25-12:30 nac Image Technology Inc.

12:30-12:35 AICE

Light meal: Light meal will be served for the following lunch break time.

12:30-13:15, November 12 @ EX-Hall-3B, Exhibition Bldg.

12:30-13:10, November 13 @ EX-Hall-1A, Exhibition Bldg.

Registration:

The conference registration desk is in the lobby, 1st floor, Exhibition Building.

9:00 -, Monday, November 10, 2025

8:30 -, Tuesday, November 11, 2025

8:30 -, Wednesday, November 12, 2025

8:30 -, Thursday, November 13, 2025

Coffee Service

Preparation will be made during the scheduled break time, as noted in the program. Distribution will end once supplies are depleted.

Monday, November 10 – Wednesday, November 12 @ EX-Hall-3B, Exhibition Bldg.

Thursday, November 13 @ EX-Hall-1A, Exhibition Bldg.

Other information

A quiet room is available. Please ask the ICFD Secretariat.

Group Photo

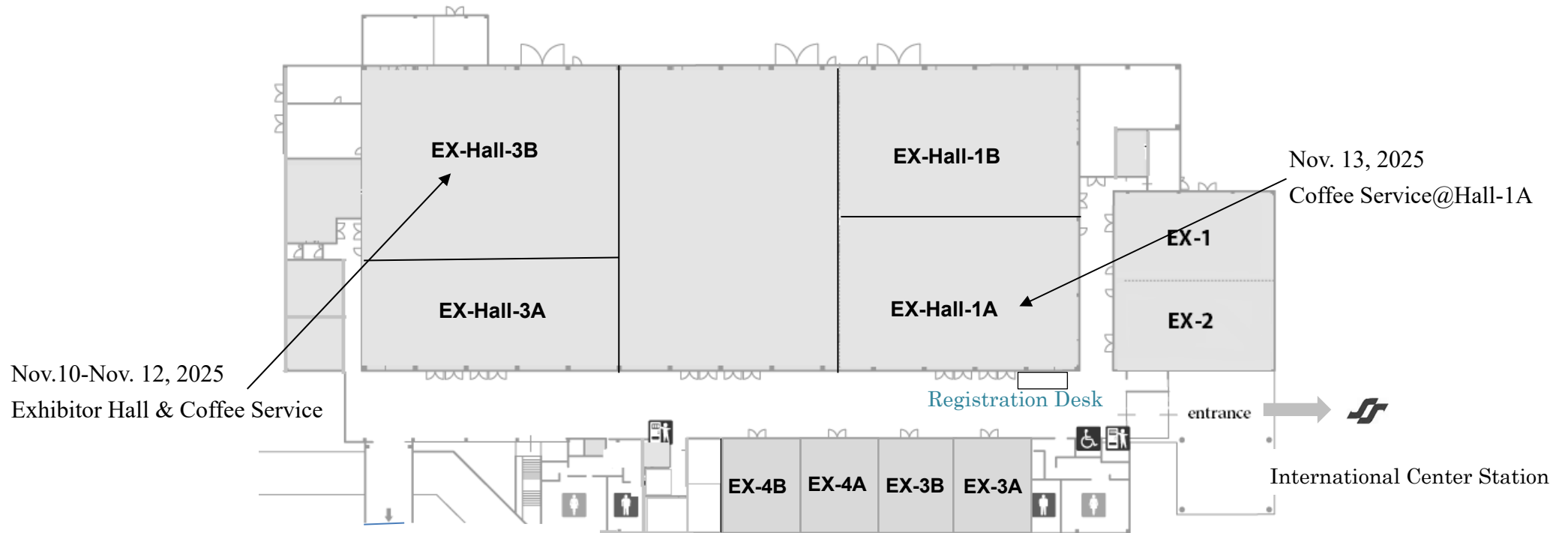
We will take a group photo at the following date and time, so please gather.

12:20, Tuesday, November 11, 2025 @ EX-Hall-3A, Exhibition Bldg.

Floor Plan of Sendai International Center

Exhibition building

Exhibition building 1st Floor



Monday, November 10, 2025

10:00	EX-Hall-1A										10:00
12:10	Opening Address & Plenary Lectures										12:10
13:30	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	13:30
15:00	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications	OS5: Advanced Applications of Multi-functional Fluids	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 17th Edition	OS8: Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative Research	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics	GS: General Session	OS12: Complex Thermofluid System	OS24: Dynamics of Flow of Matter in Moving Contacts	15:00
15:15	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	15:15
16:45	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications	OS5: Advanced Applications of Multi-functional Fluids	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 17th Edition	OS8: Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative Research	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics	OS14: Innovations in Oncology	OS12: Complex Thermofluid System	OS24: Dynamics of Flow of Matter in Moving Contacts	16:45
17:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	17:00
18:30	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications	OS5: Advanced Applications of Multi-functional Fluids	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 17th Edition	OS8: Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative Research	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics	OS14: Innovations in Oncology	OS12: Complex Thermofluid System	OS24: Dynamics of Flow of Matter in Moving Contacts	18:30
18:45											18:45
19:45	Students / Young Birds Friendship Night @ EX-Hall-3B, Exhibition Bldg.										19:45

9:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	9:00
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals		OS5: Advanced Applications of Multi-functional Fluids	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS7: Advances in Simulation Techniques for the Computational Aerosciences	OS8: Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative	OS20: Multiphysics in Fluid Mechanics	OS6: Free Flight Experiment with MSBS and Ballistic Range	OS12: Complex Thermofluid System	OS31: Japan-South Africa Bilateral Workshop	
10:30											10:30
10:45	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	10:45
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications	OS5: Advanced Applications of Multi-functional Fluids	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS7: Advances in Simulation Techniques for the Computational Aerosciences		OS20: Multiphysics in Fluid Mechanics	OS6: Free Flight Experiment with MSBS and Ballistic Range	OS12: Complex Thermofluid System	OS31: Japan-South Africa Bilateral Workshop	
12:15	Group Photo@EX-Hall-3A					Women-in-Flow-Dynamics					12:15
13:30	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	13:30
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications	OS5: Advanced Applications of Multi-functional Fluids	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences		OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics	OS10: Two-Phase Thermal Control Technology	OS12: Complex Thermofluid System	OS31: Japan-South Africa Bilateral Workshop	
15:00											15:00
15:15	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	15:15
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS15: Turbulence: from Fundamentals to Applications &OS23: Aerospace Heat, Fluid Engineering, and Mathematical Physics: Nonlinear Dynamics and Stochastic Processes with JST CREST	OS5: Advanced Applications of Multi-functional Fluids	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences	OS13: Flow and Energy	OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics	OS10: Two-Phase Thermal Control Technology	OS12: Complex Thermofluid System	GS: General Session	
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17:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	17:00
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18:30											18:30
18:45	EX-Hall-1A										18:45
19:40	Plenary Lecture										19:40

9:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	9:00
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS16: Vortex Motion	OS1: The Third International Symposium on Integrated Flow Science I & III	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences	OS13: Flow and Energy	OS3: The Third International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation	OS18: Flow measurements using PSP/TSP Technique	OS9: Biomedical Flow Dynamics	GS: General Session	
10:30											10:30
10:45	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	10:45
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS16: Vortex Motion	OS1: The Third International Symposium on Integrated Flow Science I & III	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences	OS13: Flow and Energy	OS3: The Third International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation	OS18: Flow measurements using PSP/TSP Technique	OS9: Biomedical Flow Dynamics	OS22: Fundamentals and Applications of Thermoacoustics	
12:15	12:10- Exhibitor Presentation Session @EX-Hall-3B										12:15
13:30	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	13:30
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS25: Combustion-generated Pollutants	OS1: The Third International Symposium on Integrated Flow Science I & III	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences	OS13: Flow and Energy	OS21: Smart Fluids & Soft Matters and Their Advanced Applications	OS18: Flow measurements using PSP/TSP Technique	OS9: Biomedical Flow Dynamics	OS22: Fundamentals and Applications of Thermoacoustics	
15:00											15:00
15:15	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	15:15
	OS28: Fluids Science Research Award Lectures	OS25: Combustion-generated Pollutants	OS1: The Third International Symposium on Integrated Flow Science I & III	OS28: IFS Collaborative Research Forum (AFI-2025)	OS29: IFS Lyon Center Collaborative Research Forum		OS21: Smart Fluids & Soft Matters and Their Advanced Applications	OS18: Flow measurements using PSP/TSP Technique	OS11: Microfluidics and Microphysiological Modeling	OS22: Fundamentals and Applications of Thermoacoustics	
16:45											16:45
17:00	EX-Hall-1A										17:00
	Plenary Lecture										
18:00											18:00
19:00	Banquet @ Hotel Metropolitan Sendai JR-EAST ※ It's not Hotel Metropolitan Sendai, SENDAI-EAST, JR-EAST										19:00
20:30											20:30

9:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	9:00
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS25: Combustion-generated Pollutants			OS29: IFS Lyon Center Collaborative Research Forum	OS17: Supercritical Fluid	OS21: Smart Fluids & Soft Matters and Their Advanced Applications	OS18: Flow measurements using PSP/TSP Technique	OS11: Microfluidics and Microphysiological Modeling	OS22: Fundamentals and Applications of Thermoacoustics	
10:30											10:30
10:45	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	10:45
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals	OS25: Combustion-generated Pollutants			OS29: IFS Lyon Center Collaborative Research Forum	OS17: Supercritical Fluid	OS21: Smart Fluids & Soft Matters and Their Advanced Applications		OS11: Microfluidics and Microphysiological Modeling	OS22: Fundamentals and Applications of Thermoacoustics	
12:15											12:15
13:30	EX-Hall-1A										13:30
	Liaison Office Session & Core to Core Session										
16:00											16:45

5:00

Students / Young Birds Friendship Night @ EX-Hall-3B, Exhibition Bldg.

9:00	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals <i>Chair: T. Akiba</i>		OS5: Advanced Applications of Multi-functional Fluids Plasma Flow <i>Chair: H. Takana</i>	OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics	OS7: Advances in Simulation Techniques for the Computational Aerosciences <i>Chair: T. Haga</i>	OS8: Advanced Physical Stimuli and Biological Responses: Promotion of Collaborative Research <i>Chair: C.-H. Dylan Tsai</i>	OS20: Multiphysics in Fluid Mechanics Dynamics of multiphysics flows 1 <i>Chairs: Y. Inada & H. Muneoka</i> <i>Chair: M. Shigeta</i>	OS6: Free Flight Experiment with MSBS and Ballistic Range <i>Chair: K. Seo</i>	OS12: Complex Thermofluid System Complex Fluid Flow <i>Chair: Y.-H. Liao</i>	OS31: Japan-South Africa Bilateral Workshop Japan-South Africa Bilateral / Sakura Science Workshop 1 <i>Chair: A. Komiya</i>
	9:00-9:18 OS2-14 Stability Modes of Non-Premixed Flames Formed on a Slot Burner with Low Reynolds Number Flows <i>C.-K. Huang, T. Tomidokoro, J. Hayashi, T. Sato, H. Kawanabe</i>		9:20-9:50 OS5-13 Invited Study on Performance Characterization and Physical Mechanism on Dielectric-Barrier-Discharge Plasma Synthetic Jet Actuator <i>H. Nishida, I. Fukumori, Y. Ishi, A. Komuro</i>		9:00-9:20 OS7-1 Study on Aerodynamic Approximation for Aeroelastic Analysis <i>N. Okabe, N. Morita, T. Tsuchiya</i>	9:00-9:30 OS8-13 Invited Study on Microbial State Changes Caused by PEF Application <i>T. Taniue</i>	9:15-9:30 OS20-1 Proposal of an Instability Evaluation Method for a Liquid Jet Model Using Surface Texture <i>J. Minami, S. Nakashima, Y. Mavutari, M. Yamamura, Y. Saito</i>	9:00-9:30 OS6-1 Invited Studies of Tumbling Bluff Bodies at Low Speeds <i>C. P. Bricher, C. Hull, M. Schoenberger, H. Shehata</i>	9:00-9:25 OS12-16 Effects of Phase Separation in a Viscously Stable Hele-Shaw Flow <i>C.-Y. Chen, P. Verma</i>	9:00-9:30 OS31-1 Invited Molecular Dynamics Simulation of Hydroxide Transport and Stability in Polyfluorene-based Anion Exchange Membranes Functionalized with Hexamethylenediamine <i>T. R. Maunam, T. T. Letsau, N. W. Maxakato, T. Mabuchi, P. F. Mami</i>
	9:18-9:36 OS2-15 Numerical Simulations on Premixed Methane-Air Flame Propagation under Electric Fields in a Hele-Shaw Chamber <i>Z. Zhang, X. Kang</i>		9:50-10:10 OS5-14 Assessment of a Shock-Based Flow Reconstruction Method in Supersonic Plasma Jets via CFD <i>L. Yang, M. W. Song, H. You, J. G. Kim, J.-H. Seo</i>		9:20-9:40 OS7-2 Application of Deep Koopman Operator Theory to Fluid-Structure Interaction <i>K. Marumoto, Y. Kawano, C. Lee, Y. Abe</i>	9:30-10:00 OS8-14 Invited Atmospheric-Pressure Plasma Jet for Transdermal Drug Delivery and Diamond Surface Function Alization <i>A. Sung, C.-Y. Chen, H.-H. Weng, J.-H. Jiang, W.-Y. Woon, Y.-C. Cheng</i>	9:30-9:45 OS20-2 Flow Visualization and Acoustic Characteristics of Underexpanded Jets from a Tabbed Convergent Nozzle <i>S. Tognoli, S. Nakao, Y. Miyazato</i>	9:30-9:50 OS6-2 Free-motion Wind Tunnel Testing of Lifting Capsules with Different Inertia Moments <i>N. Kurosawa, K. Ueno, Y. Takeda, K. Asai, M. Kikuchi, H. Nagai, T. Ikami, Y. Sasaki</i>	9:25-9:40 OS12-17 Numerical Simulation of the Effect of Fluid Miscibility on Natural Convection in Porous Media Flow Fields <i>Y.-A. Chen, L.-Z. Huang, C.-Y. Chen</i>	9:30-9:45 OS31-2 Evaluation of the Effect of Ultrasound-Induced Bubbles in Biological Tissue for the Purpose of Suppressing Light Scattering <i>T. Tami, A. Komiya</i>
	9:36-9:54 OS2-16 Road Tunnel Fire Simulations Using a Combustion Reaction Model <i>S. Nemoto, K. Seo, K. Takahashi, T. Chihara</i>		10:10-10:30 OS5-15 A Convertible Plasma Torch with Hollow Electrodes and Reverse Polarity Discharge Structure <i>S.-Y. Baik, N.-G. Lee, D.-H. Lee, S.-W. Kim, J.-H. Seo</i>		10:00-10:20 OS7-3 Analysis of Fluid-Structure Interaction Using Residual Force Stabilization <i>H. Asanoumi, Y. Kawano, C. Lee, Y. Abe</i>	10:00-10:30 OS8-15 Invited Exploring the Characteristics and Biomedical Applications of Charged Cavitation <i>S. Liu, T. Sato, O. Supponen, M. Farhat, T. Nakajima</i>	9:45-10:00 OS20-4 Temperature-Driven Leaching of Lithium Cobalt Oxide Black Mass: Experimental Insights and Pore-Scale Lattice Boltzmann Modeling <i>J. Restrepo-Cano, E. Colleoni, E. di Pieri, P. Guida, W. L. Roberts</i>	9:50-10:10 OS6-3 Dynamic Stability of a Family of Earth Entry Vehicles using the Magnetic Suspension Dynamics Tunnel <i>C. Hull, C. Bricher, H. Shehata, M. Schoenberger</i>	9:45-10:00 OS31-3 Investigation of the Effect of Ultrasound Combined with PhotoElectroCatalysis on ZnFe ₂ O ₄ Doped with Gold as a Piezo-Photo Anode for the Removal of Ciprofloxacin in Water <i>L.-J. Schokajodi, D. S. Sipuka, K. D. Jayeola, O. A. Arotiba</i>	
	9:54-10:12 OS2-17 Investigation on the Combustion Behavior of Young Conifer Trees <i>S. Suzuki, S. L. Manzello</i>				10:00-10:20 OS7-4 Fourier Neural Autoencoder for Modal Analysis in Fluid Flows <i>K. Zakaria, H. R. Akhmad, M. A. Yano, S.-W. Palae, J. Morlier, R. R. Zuhail</i>	10:30-10:45 Award Ceremony & Closing <i>K. Tachibana & H. Y. Wang</i>	10:00-10:15 OS20-3 Carbon Dioxide Driven Precipitation of Lithium Carbonate in a Bubble-Column Reactor <i>E. Colleoni, J. Restrepo Cano, P. Guida, W. L. Roberts</i>	9:55-10:10 OS12-19 DSMC Simulation of Rarefied Aerodynamic Effects on Deployable Drag Sails for CubeSat Deorbit <i>W.-J. Guo, M.-C. Lo</i>	9:55-10:10 OS12-20 Effects Of Natural Convection On MagnetoHydrodynamic Bubbly Jet <i>M.-H. Lu, H.-J. Guo, C.-Y. Chen</i>	10:10-10:15 OS31-4 A Perovskite/Spinel Structured LaFeO ₃ /Co ₃ O ₄ Heterojunction for Photoelectrocatalytic Applications in Degradation of Tetracycline and Water Splitting <i>G. P. Ndima, O. Y. Nkwachukwu, O. A. Arotiba</i>
	10:12-10:30 OS2-18 Numerical Study on Flame Behaviors in a One-Step Sudden-Expansion Tube <i>L.-L. Lin, T.-H. Chuang, S.-Y. Hsu</i>						10:10-10:30 OS20-5 Invited Generation of Pulsed Discharges over Water Surface and Their Applications for Environment and Agriculture <i>K. Takahashi, K. Takaki</i>	10:10-10:30 OS6-4 Investigation of Dynamic Instability for Hayabusa-type Reentry Capsule Using 1-m Magnetic Suspension and Balance System <i>Y. Sasaki, H. Okutsumi, T. Ikami, H. Nagai</i>	10:10-10:25 OS12-21 Variation of Helical Wire Pitch <i>C.-K. Wang, Y.-T. Huang, C.-W. Lo</i>	10:15-10:30 OS31-5 The Timing of Immune Checkpoint Inhibitor Administration via The Lymphatic Drug Delivery System Attenuates Inhibition of Metastasis, Particularly when Combined with Docetaxel <i>J. Sukhbaatar, S. Mori, K. Kodama</i>
10:30	COFFEE BREAK @ EX-Hall-3B									
10:45	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals <i>Chair: S. Suzuki</i>	OS15: Turbulence: from Fundamentals to Applications Noise & Bluff Body <i>Chair: N. Yokoi</i>	OS5: Advanced Applications of Multi-functional Fluids EHD/MHD <i>Chair: N. Takeuchi</i>		OS7: Advances in Simulation Techniques for the Computational Aerosciences <i>Chair: F. D. Witherden</i>		OS20: Multiphysics in Fluid Mechanics Dynamics of multiphysics flows 2 <i>Chair: M. Shigeta</i> <i>Chairs: H. Komen & Y. Saito</i>	OS6: Free Flight Experiment with MSBS and Ballistic Range <i>Chair: H. Nagai</i>	OS12: Complex Thermofluid System Flow Analysis and Measurement <i>Chair: M.-C. Lo</i>	OS31: Japan-South Africa Bilateral Workshop Japan-South Africa Bilateral / Sakura Science Workshop 2 <i>Chair: P. Mami</i>
	10:45-11:15 OS2-19 Invited Incompletely Stirred Reactor Low-Order Modelling for Gas Turbine Combustors <i>H. S.A.M. Awad, B. Harikrishnan, S. Gkantanos, E. Mastorakos</i>	10:45-11:05 OS15-10 The Sound-Vortex Feedback Loop under Wing-in-Ground Effect <i>L. Tan, Y. Hattori</i>	10:45-11:05 OS5-16 Experimental Demonstration of Detonation-Driven MHD Power Generation with Potassium Chloride Seeding <i>K. Noda, A. Kawasaki</i>		10:45-11:05 OS7-5 Unsteady Aerodynamic Characteristics of a Thin Elastomeric Membrane Wing by Fluid-Structure Interaction Analysis <i>K. Funada, E. Osaki, Y. Chikamoto, T. Kimura, D. Sasaki, K. Fujita, M. Okamoto, Y. Kawamoto, S. Takahashi, T. Ikami, H. Nagai</i>		10:45-11:15 OS20-6 Invited Zero-defect Printing with DED-GMA via Adaptive Controls <i>G.-F. Gottschalk, P. K. Chaurasia, S.-F. Goecke</i>	10:45-11:05 OS6-5 Experimental Investigation of Afterbody Geometry Effects on Dynamic Instability of Atmospheric Entry Capsule in Transonic Regime <i>J. Kim, M. C. Engin, B. J. Lee, H. Nagai</i>	10:45-11:00 OS12-21 A Rapid Design Method for Low-Specific Speed Centrifugal Pump Impellers Based on Deep Learning <i>J.-Y. Chiu, Y.-H. Liu, L. M. Wright</i>	10:45-11:00 OS31-6 Smart Multifunctional Nanocarriers for Targeted Antibiotic Delivery: A Triple-Action Approach to Sepsis Management <i>R. Mausoe, E. A. Iemai, C. A. Omolo, G. Elamin, J. Govender, M. A. Gafar, T. Govender</i>
	11:15-11:33 OS2-20 Quantitative Measurement of Temperature using Two-Line Atomic Fluorescence (TLAF) in a Reactive Flow Impinging a Wall <i>A. Blondel, A. Vandel, S. Idlachen, R. Benafjaoud, G. Godard, F. Grisch, P. Xavier</i>	11:05-11:25 OS15-11 Effects of Grooved Nozzle on Underexpanded Jet Structure and Screech Tones <i>R. Sekai, S. Nakao, Y. Miyazato</i>	11:05-11:25 OS5-17 Numerical Simulation of Taylor-Couette Flow in a Co-axial MHD Energy Conversion Device <i>T. Hasebe, K. Namba, T. Fujino, H. Takana, H. Kobayashi</i>		11:05-11:25 OS7-6 Simulation of Axisymmetric Bodies at High Angle of Attack with an Optimized Rotation-Curvature Correction in the ko-SST Model <i>B. Park, J. Park, J. S. Park, S. Lee</i>		11:15-11:30 OS20-7 Invited Electron Energy Transport Process in Weakly Ionized Gases and Its Application to Arc Interruption <i>N. Kodama</i>	11:05-11:25 OS6-6 Comparison of Dynamic Stability of New Re-entry Capsule in Low Altitude Free-Flight Test at Different Flight Processes <i>H. Yoshimoto, T. Ikami, K. Takahashi, H. Takayanagi, K. Yamada, H. Nagai</i>	11:00-11:15 OS12-22 Wind Tunnel Flow Measurement under Ambient and High-Temperature Conditions Using Multi-Hole Probe <i>H.-W. Hsu, T.-W. Chiu, Y.-H. Liu</i>	11:00-11:15 OS31-7 Comprehensive Analysis of the Impact of Solvent Osmolarity and Viscosity on Lymph Node Pharmacokinetics and the Surrounding Environment in Lymphatic Drug Delivery System <i>T. Shimamura, A. Sukhbaatar, S. Mori, T. Kodama</i>
	11:33-11:51 OS2-21 Local Principal Component Transport for Reduced-order Reacting Flow Simulations <i>R. Malik, F. E. Hernández-Pérez, H. G. Im</i>	11:25-11:45 OS15-12 Numerical Analysis and Wind-tunnel Experiment on the Flow around a 5:1 Rectangular Cylinder Moving near the Ground at Re = 6700 <i>R. Tominaga, Y. Kichise, K. Hirata</i>	11:25-11:45 OS5-18 Development of Air Pressure Control System which Applied the EHD Pump <i>H. Murata, S. Terasaka, T. Shimosokawa, A. Nagatsuma, H. Anzai, K. Mitsui</i>		11:25-11:45 OS7-7 Numerical Simulation Study of Aerodynamic Parameters for Tailless Aircraft Configuration <i>W.-J. Leung, Y.-C. Lin, H.-S. Yang, R.-S. Hsu</i>		11:30-11:45 OS20-8 Large Eddy Simulations of an Inverted Umbrella Aerator Using Smoothed Particle Hydrodynamics <i>M. Hirota</i>	11:15-11:30 OS12-23 Enhanced Pool Boiling Performance via Variation of Helical Wire Pitch <i>C.-K. Wang, Y.-T. Huang, C.-W. Lo</i>	11:15-11:30 OS12-24 The Maxwell-Garnett Effective Dielectric Model in Inorganic Filler-Polymer Composite Systems: From Theoretical Derivation to Optical Behavior Simulation <i>C.-H. Wu, J.-Y. Chang</i>	11:15-11:30 OS31-8 Exploring the Antibacterial and Antitumor Activities of Bioactive Constituents Secreted by Bacterial Endophytes Isolated from <i>Eleocharis acicularis</i> <i>M. P. Maela, M. H. Serepa-Dlamini</i>
	11:51-12:09 OS2-22 Combustion Modeling and Analysis of a Micro Gas Turbine with Biofuels <i>M. Ihsan, H.-Y. Shih, I. B. Suryo</i>	11:45-12:05 OS15-13 LES of Flow around a Longitudinal Square Cylinder Moving near the Ground <i>M. F. Ruffore, Y. Miatamura, K. Matsuno, T. Inoue, K. Hirata</i>	11:45-12:05 OS5-19 Influence of Droplet Conductivity and Pulse Voltage Polarity on Electrostatic Precipitation <i>T. Hatakeyama, K. Takahashi, K. Takaki, A. Zukeran, S. Tsuge, M. Nonoyama, Y. Hayashi</i>		11:45-12:05 OS7-8 Numerical Investigation of High-lift Aerodynamic Configuration for Twin-Tail UAV Design Applications <i>Y.-C. Liu, J.-C. Lin, H. -S. Yang, W.-J. Leung, R.-S. Hsu</i>		11:45-12:00 OS20-9 Numerical Investigation Of Two-Fluid MagnetoHydrodynamics Flow In Channels With Heat Flux <i>A. Sinha, S. Gopalakrishnan, S. Umi, U. Bhandarkar, K. Bodi</i>	11:30-11:45 OS12-25 Pharmacokinetic Modeling of a Lymphatic Camera Based on Modified Hough Transform <i>C.-C. Hsu, W.-H. Tien</i>	11:30-11:45 OS31-9 Pharmacokinetic Modeling of a Lymphatic Drug Delivery System Targeting Clinically Occult N0 Lymph Nodes <i>R. Miyazaki, A. Sukhbaatar, S. Mori, T. Kusaka, K. Katagiri, T. Sugitara, T. Kodama</i>	
								12:00-12:15 OS12-26 Flow Visualization of The Effect of Acoustic Mesh in A Channel with A Sound Speaker <i>H. S. Maulana, M. R. Sudarsana, Y.-Y. Lin, L. Chen, W.-H. Tien</i>		

											11:45-12:00 OS31-10 Electrochemical Detection of Nicotine in Hookah Smoke Using a Graphene-PEDOT: PSS/Nitrogen-Doped Carbon Nanosheet/Screen-Printed Carbon Electrode Sensor <i>S. Makalaza , F. O. G. Olorundare, B. N. Zwane, D. Nkasi, O. A. Arotiba</i> 12:00-12:15 OS31-11 Targeted Treatment of Metastatic Lymph Nodes via Lymphatic Drug Delivery System of a HDAC/P3K Dual Inhibitor <i>E. Tada, A. Sukkhbaatar, S. Mori, K. Saijo, C. Ishioke, H. Kawakami, T. Sugiyura, T. Kodama</i>	
12:15	LUNCH BREAK / Women-in-Flow Dynamics@EX-2, Exhibition Bldg.											12:15
13:30	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	13:30	
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals <i>Chairs: Z. Chen & Y. Morii</i>	OS15: Turbulence: from Fundamentals to Applications Coherent Structures <i>Chair: Y. Hattori</i>	OS5: Advanced Applications of Multi-functional Fluids Functional Flow in Material Process 3 <i>Chair: T. Fujino</i>	OS28: IFS Collaborative Research Forum (AFI-2025) <i>Chair: I. Oshima</i>	OS7: Advances in Simulation Techniques for the Computational Aerosciences <i>Chair: Y. Abe</i>		OS19: Multiphase Thermal Fluid Flow and Its Interface Dynamics <i>Chair: M. Shirota</i>	OS10: Two-Phase Thermal Control Technology <i>Chair: H. Nagai</i>	OS12: Complex Thermo-fluid System Computational Fluid Dynamics II <i>Chair: C.-Y. Chen</i>	OS31: Japan-South Africa Bilateral Workshop Japan-South Africa Bilateral / Sakura Science Workshop 3 <i>Chair: T. Kodama</i>		
	13:30-13:50 OS2-23 Canceled 13:50-14:10 OS2-24 Canceled 14:10-14:30 OS2-25 Invited Numerical Simulation of Two-phase Detonation in a Reactive Particle-laden Flow using Compressible Multiphase Particle-in-cell Method <i>J. He, B. Meng, B. Tian, J.Li</i> 14:30-14:50 OS2-27 Invited Rayleigh Flow as a Platform for Examining General Behaviors of 1D Reactive Flows: From Theoretical Prediction to Stable Realization of Weak Detonations <i>Y.Morii, K. Maruta</i>	13:30-13:50 OS15-14 Hierarchy of Coherent Vortices in Wall Turbulence using Numerical Simulation and Experimental Data <i>Y. Motozumi, P. Braganca, S. Goto</i> 13:50-14:10 OS15-15 Turbulent Transport Characteristics of Coherent Structures in Ideal Vegetation Morphology Based On Wind Tunnel Experiments <i>G. Chen, F. Li, L. Yan, S. Liu, C.-H. Liu, Z. Mo</i> 14:10-14:30 OS15-16 On the Effect of Navier Slip Length on Turbulent Transport in the Wake behind a Square Prism <i>M. Wang, Y. Ito</i> 14:30-14:50 OS15-17 Experimental Study on the Effect of Microbubbles on Large-Scale Turbulent Structures in Pipe Flow <i>X. Wu, Y. Hamana, M. Nishikawara, Y. Tsuji</i>	13:30-13:50 OS5-20 Preparation of Spherical Titanium Powders by Using a DC Plasma Torch with Hollow Electrodes and Reverse Polarity Discharge Structure <i>S.-W. Kim, D.-H. Lee, S.-Y. Baek, N.-G. Lee, S.-Y. Yang, J.-H. Seo</i> 13:50-14:10 OS5-21 Synthesis of Carbon Catalyst with Large Surface Area Using Liquid Plasma with Ultrasonic Cavitation <i>H. Ong, A. Shigematsu, M. Kodama, O. L. Li, N. Takesuchi, H. Takano</i> 14:10-14:30 OS5-22 Flow-Induced Reactivity Amplification in a CuS/ZnS/SnS-Based Sonocatalytic Interface for Aqueous Pollutant Degradation <i>K. P. Sharma, M. Shin, T.-K. Kwon, M.-Y. Kim, C. Yu</i> 14:30-14:50 OS5-23 Sonic Resonance for Polymer Synthesis <i>A. Tokutake, H. Nakamura, H. Goto</i>	13:30-15:00 Short Oral Presentation CRF-1 - CRF-26 13:30-13:50 OS7-9 Reduced Order Modeling of Turbulent Channel Flow Undergoing Wavy Walls <i>M. Brockham, A. Secu</i> 13:50-14:10 OS7-10 Fluid-Structure Interaction Analysis based on Control Theory <i>C. Lee, T. Yamazaki, Y. Kawano, Y. Abe</i> 14:10-14:30 OS7-11 Machine Learning-Based Surrogate Modeling for Fluids Engineering Simulation and Design <i>K. Shimoyama, R. Saito, S. Yoshida</i> 14:30-14:50 OS7-12 Machine-learning-based Informative Mode Analysis for Separated Airfoil Wakes <i>K. Fukami, R. Araki</i>		13:30-13:50 OS19-10 Pressure Estimation of Acoustic and Shock Waves through Calibrated Schlieren Imaging <i>G. Vicicnte, P. Guida, T. T. Truscott, W. L. Roberts</i> 13:50-14:10 OS19-11 Bubble Shock Waves Characterization in Aerated Cavitating Flows in Water and Dodecane via Computer Vision Tools <i>E. Zur, I. Ghuman</i> 14:10-14:30 OS19-12 Is There a Chance to Absorb Atmospheric Moisture for an Evaporating Methanol Drop? <i>A. K. Mannem, D. K. Mandal</i> 14:30-14:50 OS19-13 Visualization Investigation of the Methanol/Diesel Spray-To-spray Impingement Characteristics <i>Y. Zhang, Z. Zhang, D. Dong, G. Li, X. Xie</i>	13:30-13:50 OS10-1 Characterization of Temperature Controllability of Loop Heat Pipe with Electrohydrodynamic Pump <i>M. Nishikawara, T. Miyakita</i> 13:50-14:10 OS10-2 Development of a New Seal System of Turboexpander for Hydrogen Liqueifiers <i>N. Nakamura, Y. Miyamoto</i> 14:10-14:30 OS10-3 Design and Experimental Demonstration of a Nitrogen-Charged Loop Heat Pipe for a Cryogenic Passive Cooler <i>H. Hamano, K. Odagiri, A. Gomi, H. Ogawa</i> 14:30-14:50 OS10-4 Numerical Analysis of Heat Transfer Phenomena in a Meander-Shaped Low-Fill Heat Pipe <i>A. Hatamoto, K. Furumoto, H. Nagai</i>	13:30-13:45 OS12-27 Physics-Informed Neural Network-Based Optimization Method for Pneumatic Systems <i>Y.-H. Chan, H.-C. Chang, W.-H. Wang</i> 13:45-14:00 OS12-28 Optimization Design of Airfoils by Genetic Algorithm and Computational Fluid Dynamics Identification <i>Z.-H. Yu, P.-C. Chuang, W.-H. Wang</i> 14:00-14:15 OS12-29 The Investigation of Wind Turbine Aerodynamics by 6-DOF motion and Immersed Boundary Method <i>Y.-T. Lin, C.-W. Tsao, W.-H. Wang</i> 14:15-14:30 OS12-30 Scalable Multi GPU CFD Simulations of High Rayleigh Number Natural Convection on Large Circular Heated Plates <i>H.-C. Chung, W.-H. Wang</i> 14:30-14:45 OS12-31 Turbulent Mixed Convection with Oppositely Heated Plates Using Implicit LES <i>P.-L. Hou, C.-G. Li</i> 14:45-15:00 OS12-32 A CFD Study on the Effects of 2D Patterned Superbifilic Heated Surfaces on Pool Boiling Heat Transfer <i>S.-M. Huang, J.-Y. Zhang, Y.-C. Lin</i>	13:30-13:45 OS31-12 A Label-Free TB Test Using Electrochemiluminescence As The Transducer <i>M. Cox, S. F. Douman, E. I. Isnotha</i> 13:45-14:00 OS31-13 Efficacy of Radioimmunotherapy for Metastatic Lymph Nodes without Site-Specific Identification <i>R. Suzuki, W. S. Aulia, T. Shimano, A. Sukkhbaatar, S. Mori, T. Kodama</i> 14:00-14:15 OS31-14 Dendrimer – Gold Nanocomposite-Based Electrochemical Aptasensor for the Detection of Dopamine <i>D. S. Sinha, F. O. G. Olorundare, S. Makalaza, N. Midiyi, T. I. Sebokolodi, O. A. Arotiba, D. Nkosi</i> 14:15-14:30 OS31-15 The Evaluation of Histopathology Related to Treatment Efficacy of Docetaxel Treatment by LDMS for Lymph Node Metastasis <i>W. S. Aulia, K. Kanon, A. Sukkhbaatar, S. Mori, T. Sugiyura, T. Kodama</i> 14:30-14:45 OS31-16 Electrochemical Detection of Paracetamol in Wastewater Using an Exfoliated Graphite-CuInSe/ZnS QDs Electrode <i>P. S. Silinda, T. I. Sebokolodi, O. S. Oluwafemi, O. A. Arotiba</i>			
15:00	COFFEE BREAK @ EX-Hall-3B											15:00

18:30

18:45	EX-Hall-1A	18:45
19:40	Plenary Lectures II 18:45-19:40 "Flame Surface Models for Large Eddy Simulations of Turbulent Combustion: Achievements, Challenges and Perspectives" Denis Veynante Chair: Philippe Dagaut	19:40

	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	9:00	
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals <i>Chair: K. Kanayama</i>	OS16: Vortex Motion Boundary Layer & Instability <i>Chair: Y. Fukumoto</i>	OS1: The Third International Symposium on Integrated Flow Science I & III <i>Chair: J. Ishimoto</i>	OS28: IFS Collaborative Research Forum (AFI-2025)	OS7: Advances in Simulation Techniques for the Computational Aerosciences <i>Chair: T. Haga</i>	OS13: Flow and Energy <i>Chair: A. Komiya</i>	OS3: The Third International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation <i>Chair: K. Endo</i>	OS18: Flow measurements using PSP/TSP Technique <i>Chair: Y. Egami</i>	OS9: Biomedical Flow Dynamics <i>Chairs: K. Takashima & M. Shiddiq</i>	GS: General Session Multiscale Dynamics and Non-Destructive Evaluation of Complex Media <i>Chair: L. A. Lesmana</i>		
	9:00-9:18 OS2-37 Intrinsic Instabilities of Partially Cracked Ammonia-Air Flames <i>Q. Wen, Y. Wang, L. Yang, T. Zirwes, S. Wang, Z. Chen</i>	9:10-9:30 OS16-5 Global Stability Analysis of Boundary Layer Flow Over Complex Roughness Modeled by the Volume Penalization Method <i>H. Fujii, M. Hirota, Y. Hattori</i>	9:00-9:35 OS1-1 Invited Numerical Analysis of Multi-loop Pulsating Heat Pipes on Cooled Cylinder for Rotary Applications <i>M. Opalski, A. Ruziewicz, A. I. Nowak, C. Czajkowski, J. Ishimoto, S. Pietrowicz</i>		9:00-9:20 OS7-19 Strong Stability Preserving Runge-Kutta Projection Methods <i>M. R. Najafian, B. C. Vermeire</i>	9:00-9:15 OS13-11 Towards Efficient Ammonia Gas Turbines: Role of Indirect and Direct Cooling in Compression Process <i>L. Zhou, K. Shi, F. Duan</i>	9:00-9:30 OS3-1 Invited Synthesis and Properties of Group IV Clathrate Thin Film <i>T. Kume, F. Ohashi, H. S. Jha</i>	9:00-9:40 OS18-1 Invited Boundary Layer Transition Measurement by Temperature-Sensitive Paint in Low-Speed Flow <i>T. Ikami, H. Nagai</i>	9:00-9:15 OS9-6 Invited Composite Meshes for Biomedical Applications <i>S. Halmöczki, V. Pálos, C. Voniatis, H. Sajfarrahman, M. Ohta, A. Jedlovsky-Hajdu</i>	9:00-9:18 GS1-16 Momentum Transport in Sheared Liquids: Insights from Molecular Dynamics Simulations <i>M. Yoshida, D. Surblys, T. Ohara</i>		
	9:18-9:36 OS2-38 Numerical Analysis of Boiling Liquid Expansion of Pressurized Hydrogen <i>M. Kuiznetsov, A. Lelyukin, E. Torres de Ritter</i>	9:30-9:50 OS16-6 DNS Investigation of the Mechanics of Görtler Vortices Breakdown in Hypersonic Flows <i>O. Es-Saifi, M. Brockhaus, A. Sescu, Z. Koshuriyan, Y. Hattori</i>	9:35-10:10 OS1-2 Invited Experimental and Numerical Analyses of the Flow Pattern in Pulsating Heat Pipes in Micro and Hypergravity <i>S. Pietrowicz, J. Ishimoto</i>		9:20-9:40 OS7-20 Development of a Porosity-Based Immersed Boundary Model for the Compressible Navier-Stokes Equations on Cartesian Grids <i>E. Kawashiro, H. Terashima, N. Oshima</i>	9:15-9:30 OS13-12 Numerical Simulation of Overtopping Behavior and Reservoir Flow in OBREC Systems for Turbine Design <i>Y. Y. E. Darma, B. H. Pratama, A. T. Rohman, S. D. Nurcholik, I. Oshima</i>	9:30-9:45 OS3-2 Pulse Response of Ag/S Resistance Change Device <i>K. Hamada, T. Ohno, K. Endo</i>	9:40-10:00 OS18-2 Study of the Micro-Scale Heat Transfer Enhancement by 3-D Acoustic Streaming Flow Using TSP <i>W.-S. Lee, W.-H. Tien</i>	9:15-9:30 OS9-7 Development of Polysuccinimide-Salt Nanofibers for Wound Dressing Applications <i>V. Pálos, D. G. Kis, S. Halmöczki, C. Voniatis, H. Sajfarrahman, M. Ohta, A. Jedlovsky-Hajdu</i>	9:18-9:36 GS1-17 Experimental Study on Nondestructive Evaluation of Mechanical Properties of Fatigue Damaged 304 Stainless Steel with Eddy Current Testing Signals <i>Y. Qiu, K. Deng, H.-E. Chen, S. Xie, Z. Chen, T. Uchimoto</i>		
	9:36-9:54 OS2-39 On the Accuracy of Laminar Burning Velocity Measured from Spherically Expanding NH ₃ /air Flames <i>S. Zitziumi, C. Schwenzner, R. Glaznev, R. Hesse, H. Pitsch, J. Beekmann, C. Mouaïm-Rousselle, N. Chaumetx, F. Halter</i>	9:50-10:10 OS16-7 Effect of Wall Temperature and Transpiration on Görtler Vortices in High-speed Boundary Layers <i>A. Ahagouch, A. Sescu, Z. Koshuriyan, Y. Hattori</i>	10:10-10:30 OS1-3 Geometry Effect of PCM Container on the Thermal Management of Lithium-Ion Batteries: Numerical Investigation <i>Z.-X. Ji, L. Lin, K. C. Lin</i>		9:40-10:00 OS7-21 Online Load Balancing of High-Order Mixed Element Simulations on Heterogeneous Architectures <i>S. Mishra, S. Akkurt, F. Witherden</i>	9:30-9:45 OS13-13 Spectral Optical Properties of a Porous Polymer for Efficient Radiative Cooling <i>M. Baneshi, A. Komiya</i>	9:45-10:00 OS3-3 The Modeling and Heat Transfer Analysis in RRAM Devices <i>A. Marcelino, H.-Y. Shih, Prabowo</i>	10:00-10:20 OS18-3 Temperature-Sensitive Paint Measurements and Numerical Analysis of Hybrid Thermal Management System using PCM and Microchannel Flow <i>C.-Y. Jou, J.-L. Lian, C.-Y. Huang, T. -M. Liou</i>	9:30-9:45 OS9-8 Nanostuctured Composites in Biomedical Research <i>S. Halmöczki, K. Osán, A. Jedlovsky-Hajdu, C. Voniatis, V. T. Pálos, M. Ohta, H. Sajfarrahman</i>	9:36-9:54 GS1-18 Nondestructive Evaluation of Mechanical Property of SS400 Steel with Fatigue Damage Based on Magnetic Adaptive Testing Signals <i>K. Deng, Z. Wang, Y. Qiu, H.-E. Chen, S. Xie, Z. Chen, T. Uchimoto</i>		
	9:54-10:12 OS2-40 Enhancing Ammonia Ignition Using Combustion Products of Pre-Ignited Ammonia-Air, Hydrogen-Air and Methane-Air Mixtures: A Chemical Kinetics Study <i>E. C. Okafor, R. Takao, D. Matsuda, T. Kitagawa</i>	10:10-10:30 OS16-8 Study on Rotating Flow Instability Induced by a Rotating Blade Cascade in Quiescent Fluid <i>D. Tsuchida, A. Kiyama, K. Yokota, K. Sato, D. Kang</i>			10:00-10:20 OS7-22 A Cartesian Multilevel Multigrid Method for Steady-State Reynolds-Averaged Navier-Stokes <i>A. Anil Das, N. Williamson, S. Arnfield</i>	10:00-10:15 OS13-14 Optical Performance and Flux Uniformity Optimization for Parabolic Dish Solar Concentrators: Coupled Effects of Receiver Axial Position and Tracking Error <i>S. D. Paul, K. R. Kumar, B. Selvan</i>	10:15-10:30 OS3-5 Numerical Study of Extensional Characteristics of Liquid Ligament from the Edge of a Rotating Disk <i>Y. Kawaguchi, A. Ishimaru, S. Aihara, T. Matsuda, M. Muto, S. Tamano, N. Matsui</i>	9:45-10:00 OS9-9 Catheter Tracking System Using Magnetic Field <i>L. Paquet, M. Ohta, Y. Haga, N. Tsurukawa, A. Solignac, K. T. V. Koon, B. Ducharme</i>				
	10:12-10:30 OS2-41 Shock Tube Measurement of Ignition Delay Times for NH ₃ /O ₂ /Ar under High-Temperature and High-Pressure Conditions with a Constrain Reaction Volume Approach <i>A. Sharma, Y. Morimoto, Y. Wakata, A. Hayakawa, H. Nakamura, Y. Fujimoto, S. Ohbayashi, D. Shimokuri</i>					10:15-10:30 OS13-15 Thermal Plasma Driven Perovskite Phase High Entropy Oxide Nanoparticles for Efficient Thermochemical Water Splitting <i>A. Pasupathi, M. S. Babu, S. Bellan, S. Yugavaran</i>		10:00-10:15 OS9-10 Study on Effects of Various Parameters on Penetration Accidents during Catheter Introduction <i>H. Hidaka, K. Takashima, Y. Haga, M. Ohta, K. Mori, N. Toma, M. Shojima</i>				
	COFFEE BREAK @ EX-Hall-3B											10:30
10:45	EX-Hall-1A	EX-Hall-1B	EX-Hall-3A	EX-Hall-3B	EX-1	EX-2	EX-3-A	EX-3-B	EX-4-A	EX-4-B	10:45	
	OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals <i>Chair: E. C. Okafor</i>	OS16: Vortex Motion Compressible Flow & Vortex <i>Chair: M. Hirota</i>	OS1: The Third International Symposium on Integrated Flow Science I & III <i>Chair: J. Ishimoto</i>	OS28: IFS Collaborative Research Forum (AFI-2025) <i>Chair: S. Liu</i>	OS7: Advances in Simulation Techniques for the Computational Aerosciences <i>Chair: F. D. Witherden</i>	OS13: Flow and Energy <i>Chair: S. Funatani</i>	OS3: The Third International Symposium on Integrated Flow Science IV: Advanced Semiconductor and Digital Transformation <i>Chair: D. Ohori</i>	OS18: Flow measurements using PSP/TSP Technique <i>Chair: H. Nagai</i>	OS9: Biomedical Flow Dynamics <i>Chairs: T. Nakayama & M. Zhang</i>	OS22: Fundamentals and Applications of Thermoacoustics Thermoacoustics I <i>Chair: T. Biva</i>		
	10:45-11:15 OS2-42 Invited Liquid Ammonia Injection in Internal Combustion Engines: Droplet Sizing <i>U. Sonawame, C. Hespel, C. Mouaïm-Rousselle, K. Honda, A. Hayakawa</i>	10:45-11:05 OS16-9 Representations for Wave Energy on Steady Flows of a Compressible Baroclinic Fluid <i>Y. Fukumoto, R. Zou</i>	10:45-11:05 OS1-4 Evaluating Energy Saving for Active Cooling in PCM-based Lithium-ion Battery Thermal Management <i>P. W. Lee, K. C. Lin, J. Li</i>	10:45-12:15 Short Oral Presentation CRF-27 - CRF-52	10:45-11:05 OS7-23 Structure of Underexpanded Star Jets by Numerical Simulation <i>T. Toyoyama, S. Togoshi, S. Nakao, Y. Miyazato</i>	10:45-11:00 OS13-17 Numerical Investigation of Hydrogen Production Efficiency for Methane Pyrolysis Using a Reduced Chemical Reaction Model <i>K. Fukuda, M. Asahara, A. Kiyama, D. Kang</i>	10:45-11:15 OS3-6 Invited Emerging Plasma Nanotechnology That Breaks Through the Limitations of Plasma Processing –Neutral Beam Atomic Layer Processing– <i>S. Samukawa</i>	10:45-11:05 OS18-4 Application of Silica-based PSP to Unsteady Pressure Distributions on Delta Wing Surface During Wing Rock <i>Y. Yamaguchi, M. Okawa, T. Ikami, H. Nagai</i>	10:45-11:00 OS9-12 A Hidden Physics-Informed Multilayer Perceptron Neural Network for Real-Time Prediction of Coronary Hemodynamics <i>J. Liu, S. Huang, Z. Hu, X. Ding, Y. Liu</i>	10:45-12:00 OS22-1 Invited On the Progress of Some Fundamentals and Prototypes of Thermoacoustic/Stirling Heat Engines and Refrigerators at TPC-CAS <i>E. Luo, J. Hu, Z. Wu, Y. Chen, L. Zhang, Y. Sun, X. Wang, R. Yang</i>		
	11:15-11:33 OS2-43 Investigation on Combustion Characteristics of Lean NH ₃ /H ₂ /NO ₂ /Ar Mixtures Using a Micro Flow Reactor with a Controlled Temperature Profile <i>K. Nishimura, K. Kanayama, M. Izumi, T. Tetsuka, H. Nakamura</i>	11:05-11:25 OS16-10 Numerical Simulation for Compressible Navier-Stokes Equation using SQUID <i>T. Nakazawa</i>	11:05-11:25 OS1-5 Experimental Fluid Dynamic Study on Enhancing Water Harvesting Efficiency of Solar Evaporators via Bioinspired Surface Design <i>J. Y. Kim, S. H. Kim, J. J. Kim</i>		11:05-11:25 OS7-24 Three-Dimensional Structure of Underexpanded Hexagonal Jets by Numerical Calculations <i>K. Zhang, C. Zhang, S. Zheng, T. Suekane</i>	11:00-11:15 OS13-18 Effects of Capillary Number on Dynamic Dissolution and Flow of Supercritical CO ₂ During Cyclic Injection in Porous Media <i>K. Zhang, C. Zhang, S. Zheng, T. Suekane</i>	11:15-11:30 OS3-7 Evaluation of Thermal and Carrier Diffusion Properties of Si-Nanopillar/SiGe Composite Films by Laser Heterodyne Photothermal Displacement Method with Controlled Probe and Excitation Positions <i>S. Uragami, Y. Hosokoshi, D. Ohori, K. Endo, S. Samukawa, A. Fukuyama</i>	11:05-11:25 OS18-5 Experimental Study in Supersonic Cavity Flow with Different External Stores <i>T. T. Chang</i>	11:25-11:45 OS18-6 Investigation of Supersonic Micronozzles with Secondary Flow Injection at Different Locations <i>Y.-J. Wu, H.-R. Li, C.-Y. Huang</i>	11:00-11:15 OS9-13 Fundamental Study on a Flow Resistance Model of Heart Valves in Blood Flow Analysis <i>K. Ueda, S. Miyauchi, K. Funamoto</i>		
	11:33-11:51 OS2-44 Experimental Study on the Effect of a Preheated NH ₃ Stagnation Flame on Ferrous Metals <i>K. Kanayama, M. Izumi, T. Tetsuka, G. Miyamoto, H. Nakamura</i>	11:25-11:45 OS16-11 PZT Generated BAW-Induced Streaming and Capillary Waves in Microliter Droplet on Paper-Substrate <i>V. Karma, S. Pushpannam</i>	11:25-11:45 OS1-6 Green Petroleum Coke as CO ₂ /CH ₄ Separation in Natural Gas Processing Industry <i>F. Yuliu, S. A. Pradanawati, M. Yusril, T. Mabuchi</i>		11:25-11:45 OS7-25 Numerical Simulations of Underexpanded Square Jets <i>M. Takamura, S. Nakao, Y. Miyazato</i>	11:15-11:30 OS13-19 From Nucleation to Ligament Fragmentation: Ultra-Fast Imaging of Liquid-Ammonia Flash Atomization Using SLE-Fabricated Glass Nozzles <i>P. Augustin, R. Kneer, M. Reddemann</i>	11:30-11:45 OS3-8 Effect of Ligands of Amino Silane Precursors on SiO ₂ Growth <i>Y. Tsuchihara, T. Otsuka, M. Yamazaki, D. Ohori, H. Arimoto, K. Endo</i>	11:25-11:45 OS18-6 Investigation of Supersonic Micronozzles with Secondary Flow Injection at Different Locations <i>Y.-J. Wu, H.-R. Li, C.-Y. Huang</i>	11:45-12:05 OS18-7 Basic Characteristics of Pressure-Sensitive Paint with Metal Nanoparticles <i>M. Okawa, T. Ikami, T. Yoshikawa, K. Watanabe, H. Nagai</i>	11:15-11:30 OS9-14 Fluid-Structure Interaction Analysis of an Internal Carotid Artery Aneurysm <i>K. Yasuda, K. Matsumoto, M. Ohta, G. Tanaka</i>		
	11:51-12:09 OS2-45 Exploring the Clean Potential of Next-Generation Internal Combustion Engines through Experimental Analysis <i>C.-Y. Lee, H.-H. Chen, P.-S. Chang</i>	11:45-12:05 OS16-12 Wind Tunnel Experiment and Numerical Simulation of Compressibility Effect for AGARD-B Model <i>H.-Y. Chou, T.-T. Chang, Y.-C. Liu</i>	11:45-12:05 OS1-7 Investigation of Different Hydrogen-Rich Fuels Co-Injected with Pulverized Coal into the Blast Furnace <i>J.-H. Huang, S.-Y. Hsu, B.-J. Lin, T.-Y. Huang</i>		11:45-12:05 OS7-26 Effects of Ultrasonic Vibration Frequency on Heat Transfer Enhancement in Pool Conditions <i>C.-C. Hung, P.-H. Hsu, H. Lee, T.-W. Chen, S.-W. Chen</i>	11:30-11:45 OS13-20 Effects of Ultrasonic Vibration Frequency on Heat Transfer Enhancement in Pool Conditions <i>C.-C. Hung, P.-H. Hsu, H. Lee, T.-W. Chen, S.-W. Chen</i>	11:45-12:00 OS3-9 Plasmonic Coupling-Driven Spectral Engineering in Metal Nanostructure-Integrated Light-Emitting Devices <i>T. Kiba, K. Ikeda, M. Kawamura, A. Higo, D. Ohori, K. Endo</i>	11:45-12:05 OS18-7 Basic Characteristics of Pressure-Sensitive Paint with Metal Nanoparticles <i>M. Okawa, T. Ikami, T. Yoshikawa, K. Watanabe, H. Nagai</i>	11:30-11:45 OS9-15 Effects of Local Changes in Geometric Characteristics and Mechanical Properties of Blood Vessel Wall on Reflected Pulse Waveform Using Fluid-Structure Interaction Analysis <i>D. Komatsu, T. Fukui</i>			

COFFEE BREAK @ EX-Hall-3B

20:30

9:00	EX-Hall-1A OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals Chair: T. Tomidokoro 9:00-9:18 OS2-50 Combustion and NO _x Formation Characteristics of CH ₄ /N ₂ O Opposed-jet Diffusion Flames C.-Y. Liu, H.-Y. Shih 9:18-9:36 OS2-51 Investigation on Extinction Stretch Rate and NO Formation for NH ₃ /Air Counterflow Premixed Flames at Elevated Temperature and Pressure Y. Kitagawa, H. Nakamura, H. Takeishi, A. Hayakawa 9:36-9:54 OS2-52 Extinction and Differential Diffusion in KAUST Piloted Ammonia-Hydrogen Jet Flames: A Principal Component Transport Modeling Approach S. Abdelwahid, I. Trabelsi, M. Bawazeer, M. Rafi Malik, J. Guo, F. E. Hernández-Pérez, H. G. Im 9:54-10:12 OS2-53 Oxidation Characteristics of NH ₃ /Lower Hydrocarbon Mixtures Using a Micro Flow Reactor with a Controlled Temperature Profile Y. Ichida, K. Tamaoki, K. Kanayama, T. Tezuka, H. Nakamura 10:12-10:30 OS2-54 Numerical Simulation on the Stability (Combustion) and Emission Characteristics of Ozone-assisted Premixed NH ₃ /Air Swirl Flames M. Cai, M. Zhai, D. Yang, X. Zou, L. Guo	EX-Hall-1B OS25: Combustion-generated Pollutants DME and engines Chair: Z. Wang 9:00-9:20 OS25-7 Hydrogen Enrichment Effects on Flame Dynamics and Combustion Characteristics in DME- and Ethane-fueled micro-TPV systems J. F. Chang, Z. X. Wang, J. Wang 9:20-9:40 OS25-8 DME + Combustion Enhancer for Ammonia Engines C. Maunaim Rousselle, G. Duraisamy 9:40-10:00 OS25-9 Development of a Model for Predicting Particle Size Distribution and Experimental Validation using Engine Tests under Cold-Start Conditions J. Hashimoto, K. Ito, S. Matsumae, T. Kuboyama, Y. Sakai, K. Aikawa 10:00-10:20 OS25-10 Effects of a Near-Wall Cooling Air Film on the Formation of Carbon Monoxide A. Blaise, G. Godard, F. Grisch, P. Xavier	EX-Hall-3A	EX-Hall-3B OS29: IFS Lyon Center Collaborative Research Forum Chairs: G. Feuillard and G. Sebald 9:10-9:30 OS29-4 Analysis of the Drift Velocity of Carbon in Iron Crystal under High Electric Fields B. Onozuka, P. Chantrenne, T. Tokumasa 9:30-9:50 OS29-5 Neural Network-based Prediction of Flaw Parameters in Periodic Rough Surface Using Ultrasound Reflection Data K. Fujii, H. Nakamoto, P. Gay, T. Uchimoto 9:50-10:10 OS29-6 Study of Steel Hydrogen Embrittlement Using Ultrasonic Technique G. Feuillard, J. Taupin, H. Achdjan, J. Bastillo, L. Jeffray, N. Mary, T. Uchimoto 10:10-10:30 OS29-7 Elucidation of Degradation Mechanism of VIP Performance by Aging Effect A. Komiya, M. Groux, G. Foray	EX-1 OS29: IFS Lyon Center Collaborative Research Forum Chairs: A. Komiya and K. Funamoto 10:45-11:05 OS29-8 Monitoring Eukaryotic Cell Functions under Various Hypoxic Conditions with Microfluidic-Based Oxygenators N. Ghazi, N. Kawahara, S. Hirose, S. Yanagita, K. Funamoto, G. Anjard, J.-P. Rieu 11:05-11:25 OS29-9 Investigation of a Predictive Therapeutic Response Under Controlled Oxygen Condition in Cancer Patient-Derived Organoids A. Aratake, M. Roizard, J.-P. Rieu, K. Funamoto, N. Azcar	EX-2 OS17: Supercritical Fluid Chair: Y. Kanda 9:20-9:40 OS17-1 Invited Gas-Liquid Crossover and Density Fluctuation Effects in Supercritical Fluid Plasmas H. Munekata 9:40-10:00 OS17-2 Preliminary Measurements on Supercritical Region CO ₂ Refractive Index and Boundary Film Thickness by Spectroscopic Ellipsometer H. Liu, A. Komiya, L. Chen 10:00-10:20 OS17-3 Pore-Scale Insight into CO ₂ Bubble Morphology and Dissolution Mass Transfer Coupling Y. Hu, Y. Kanda 10:20-10:40 OS17-4 Experimental and Numerical Analysis of CO ₂ -CO ₂ Jet and CO ₂ -N ₂ Jet Mixing Flows Around the Supercritical Region X. Li, W. Xi, L. Chen 11:05-11:25 OS17-5 Measurement of High-speed Supercritical CO ₂ Convective Density Field with Local Heat Input from Bottom Side by Pixel-Arrayed Phase-Shifting Interferometer Z. Jiang, S. Li, G. Zeng, R. Zhang, Y. Kanda, A. Komiya, L. Chen 11:25-11:45 OS17-6 Interferometric Measurement and Numerical Analysis of Converging-Diverging Channel Flow of Supercritical CO ₂ Z. Xu, H. Wang, L. Chen 11:45-12:05 OS17-7 Key Evaporation of Composite Fuel Droplets Under Sub-/Supercritical Environment K. Ragui, L. Chen, W. Huangsi, W. Lida, L. Guangze, A. Komiya	EX-3-A OS21: Smart Fluids & Soft Matters and Their Advanced Applications Chair: X. Gong 9:20-9:50 OS21-9 Invited Controllable Liquid Metal Microparticle Production with Filter-Sieve Generators Q. Zhang, H. Lu, W. Li 9:50-10:10 OS21-10 Optimization Characterization Method for Piecewise Parametric Modeling of Magnetorheological Dampers J. Li, B. Liu, X. Lian, S. Sun, X. Gong 10:10-10:30 OS21-11 Investigation of Wheel-Rail Wear Reduction by Using MRF Rubber Joints with Bidirectional Adjustable Stiffness N. Gong, J. Yang, S. Sun 10:45-11:15 OS21-12 Invited Research and Application of Negative Stiffness Characteristics in Active Vehicle Suspension L. Pan, L. Jiang, T. Hu, J. Li, N. Gong, X. Gong, M. Nakano, S. Sun 11:15-11:35 OS21-13 Hybrid Torque Control Strategy with Gaussian Process Feedforward for a Novel MRF Dual-Clutch of an Electric Vehicle Transmission H. Zhang, L. Deng, W. Li, H. Du	EX-3-B OS18: Flow measurements using PSP/TSP Technique Chair: C.-Y. Huang 9:00-9:20 OS18-13 Temperature Sensitivity of Ru(phen) and Ru(tpy) Dye with Several Kinds of Binder Materials at Cryogenic Temperature S. Someya, Y. Morimoto, T. Koyama 9:20-9:40 OS18-14 Investigation of Cryo-TSP Formulation for Cryogenic Flows T. Yokouchi, T. Ikami, K. Odagiri, J. Li, B. Liu, X. Lian, S. Sun, X. Gong 9:40-10:00 OS18-15 Temperature-Sensitive Paint Visualization of Liquid-Film Evaporation in a Three-Phase Contact Line S. Fujiwara, T. Fukunaga, Y. Abe, Y. Egami, O. Kawanami, Y. Matsuda 10:00-10:20 OS18-16 Investigation of Temperature-Sensitive Organic Dyes for Two-Color PSP Y. Egami, N. Yoshii, R. Kanai, T. Yamada, Y. Matsuda 10:45-11:05 OS18-17 Research and Application of Negative Stiffness Characteristics in Active Vehicle Suspension L. Pan, L. Jiang, T. Hu, J. Li, N. Gong, X. Gong, M. Nakano, S. Sun 11:05-11:25 OS18-18 Observation of the Migration of Neutrophil-like HL-60 Cells under Controlled Dissolved Gas Concentrations by Using a Microfluidic Device T. Nakamura, K. Funamoto 11:25-11:45 OS18-19 The Behavior of the Multi-microalgae in the Microchannel C.-H. Chuang, J.-X. Shiu 11:45-12:05 OS18-20 Evaluation of Chondrogenesis in 3D Micromass Culture by Using Microfluidic Devices S. Yamagata, K. Funamoto	EX-4-A OS11: Microfluidics and Microphysiological Modeling Chair: K. Funamoto 9:00-9:45 OS11-5 Invited Advances in 3D-Printed Microfluidic Devices: Methods, Materials, and Applications M. Hashimoto 9:45-10:05 OS11-6 Nanofluid Droplet Generation and Osmosis-Induced Shrinking in a Single Microfluidic Device towards Continuous Reflective Pigment Production K. Kurioka, T. A. J. Welling, K. Inoue, H. Namigata, K. Watanabe, K. Suga, K. Funamoto, D. Nagao 10:05-10:25 OS11-7 The Phase Field and Level Set Methods Applied to Droplet Formation in T-Junction Microchannel M. A. W. Adhichahya, R. Irvansyah, Harinaldi 10:45-11:05 OS11-8 Microfluidic Experiment on the Response of Vascular Endothelial Monolayer to Inflammatory and Severe Hypoxic Stimuli K. Sone, A. Funatsu, S. Sampei, K. Funamoto 11:05-11:25 OS11-9 Observation of the Migration of Neutrophil-like HL-60 Cells under Controlled Dissolved Gas Concentrations by Using a Microfluidic Device T. Nakamura, K. Funamoto 11:25-11:45 OS11-10 The Behavior of the Multi-microalgae in the Microchannel C.-H. Chuang, J.-X. Shiu 11:45-12:05 OS11-11 Evaluation of Chondrogenesis in 3D Micromass Culture by Using Microfluidic Devices S. Yamagata, K. Funamoto	EX-4-B OS22: Fundamentals and Applications of Thermoacoustics Thermoacoustics 4 Chair: S. Zhu 9:15-9:30 OS22-14 Estimating Amplitude Saturation in a Standing-Wave Thermoacoustic Engine with Nonlinear Friction Losses S.-H. Hsu, Y.-C. Peng 9:30-9:45 OS22-15 Oscillation Characteristic of Electricity-Feedback Traveling-Wave Type Thermoacoustic Generator based on a Four-Terminal Network Analysis Y. Kobayashi 9:45-10:00 OS22-16 Heat Transfer Characteristics of Tubular Heater with Spiral Fins Under Oscillatory Flow in Stirling Engine Q. Jin, H. Sun, W. Xiao, Y. Cheng, Y. Ma, G. Yu, E. Luo 10:00-10:15 OS22-17 Research on the Enhanced Heat Transfer Performance of Heat-Drop Structures Under Alternating Flow in Stirling Engines H. Xiao, G. Yu, E. Luo 10:15-10:30 OS22-18 Study of the Thermoacoustic Effects in a Single-Piston Stirling Engine Y.-C. Lin, P.-H. Yang, H.-S. Yang
10:30	COFFEE BREAK @ EX-Hall-1A									
10:45	EX-Hall-1A OS2: The Third International Symposium on Integrated Flow Science II: Combustion Technology and Fundamentals Chair: C. M. Gregoire 10:45-11:03 OS2-55 Generation of a Detailed NH ₃ Combustion Mechanism Using Micro Flow Reactor Speciation Data M. Kovács, H. Nakamura 11:03-11:21 OS2-56 Staged Injection of Ammonia into Methane Flames for Emissions Reduction H.-Y. Wu, L.-H. Huang, M.-H. Wu, A. Faucy, F.-H. Wu, W.-D. Hsieh 11:21-11:39 OS2-57 Impacts of Thermochemistry on Model Prediction for NH ₃ Oxidation K. Tamaoki, H. Nakamura 11:39-11:57 OS2-58 Extinction Limits of Non-Premixed NH ₃ /H ₂ Counterflow Flames: Effect of Oxidizer Preheating and Dilution A. S. Singh, K. Kanayama, T. Tezuka, H. Nakamura 11:57-12:15 OS2-59 Partially Premixed Combustion of Ammonia-Hydrogen-Nitrogen Blends S. B. Rojas Chavez, S. Kumar Soni, P. Ma, J. Li, H. Zhang	EX-Hall-1B OS25: Combustion-generated Pollutants Other pollutants Chair: Y. Li 10:45-11:05 OS25-11 Study on Vortex-Dispersed Combustion Characteristics and NO _x Emissions of Natural Gas under Low-Oxygen Partial Pressure Conditions X. Zou, P. Wang, C. Gu, L. Gu, L. Guo, M. Zhai 11:05-11:25 OS25-12 Furans Formation and Atmospheric Implications P. Dagaut	EX-Hall-3A	EX-Hall-3B	EX-1 OS29: IFS Lyon Center Collaborative Research Forum Chairs: A. Komiya and K. Funamoto 10:45-11:05 OS29-8 Monitoring Eukaryotic Cell Functions under Various Hypoxic Conditions with Microfluidic-Based Oxygenators N. Ghazi, N. Kawahara, S. Hirose, S. Yanagita, K. Funamoto, G. Anjard, J.-P. Rieu 11:05-11:25 OS29-9 Investigation of a Predictive Therapeutic Response Under Controlled Oxygen Condition in Cancer Patient-Derived Organoids A. Aratake, M. Roizard, J.-P. Rieu, K. Funamoto, N. Azcar 11:25-11:45 OS29-10 Turing Patterns on 3D Rigid Materials F. Kato, H. Kobuchi, E. Bretin, C. Carvalho, R. Denis, S. Masnou, M. Nakayama, S. Tasaki, T. Uchimoto 11:45-12:05 OS29-11 Identification of Transient Aspect in Taylor Vortex Structures between Double Cylinders using DMD H. Yata, K. Akinaga, A. Komiya, T. Adachi 12:05-12:25 OS29-12 Mass Transfer Enhancement and Control by using Ultrasound Induced Flow B. Zhu, V. Botton, S. Miralles, A. Komiya	EX-2 OS17: Supercritical Fluid Chair: Y. Hu 10:45-11:05 OS17-4 Experimental and Numerical Analysis of CO ₂ -CO ₂ Jet and CO ₂ -N ₂ Jet Mixing Flows Around the Supercritical Region X. Li, W. Xi, L. Chen 11:05-11:25 OS17-5 Measurement of High-speed Supercritical CO ₂ Convective Density Field with Local Heat Input from Bottom Side by Pixel-Arrayed Phase-Shifting Interferometer Z. Jiang, S. Li, G. Zeng, R. Zhang, Y. Kanda, A. Komiya, L. Chen 11:25-11:45 OS17-6 Interferometric Measurement and Numerical Analysis of Converging-Diverging Channel Flow of Supercritical CO ₂ Z. Xu, H. Wang, L. Chen 11:45-12:05 OS17-7 Key Evaporation of Composite Fuel Droplets Under Sub-/Supercritical Environment K. Ragui, L. Chen, W. Huangsi, W. Lida, L. Guangze, A. Komiya	EX-3-A OS21: Smart Fluids & Soft Matters and Their Advanced Applications Chair: G. Sebald 10:45-11:15 OS21-12 Invited Research and Application of Negative Stiffness Characteristics in Active Vehicle Suspension L. Pan, L. Jiang, T. Hu, J. Li, N. Gong, X. Gong, M. Nakano, S. Sun 11:15-11:35 OS21-13 Hybrid Torque Control Strategy with Gaussian Process Feedforward for a Novel MRF Dual-Clutch of an Electric Vehicle Transmission H. Zhang, L. Deng, W. Li, H. Du	EX-3-B	EX-4-A OS11: Microfluidics and Microphysiological Modeling Chair: T. Omori 10:45-11:05 OS11-8 Microfluidic Experiment on the Response of Vascular Endothelial Monolayer to Inflammatory and Severe Hypoxic Stimuli K. Sone, A. Funatsu, S. Sampei, K. Funamoto 11:05-11:25 OS11-9 Observation of the Migration of Neutrophil-like HL-60 Cells under Controlled Dissolved Gas Concentrations by Using a Microfluidic Device T. Nakamura, K. Funamoto 11:25-11:45 OS11-10 The Behavior of the Multi-microalgae in the Microchannel C.-H. Chuang, J.-X. Shiu 11:45-12:05 OS11-11 Evaluation of Chondrogenesis in 3D Micromass Culture by Using Microfluidic Devices S. Yamagata, K. Funamoto	EX-4-B OS22: Fundamentals and Applications of Thermoacoustics Thermoacoustics 5 Chair: E. Luo 10:45-11:00 OS22-19 Linear Stability Analysis of a Combustion Oscillation System with a Delayed Feedback Tube Y. Takahashi, H. Kasudo, E. Shoji, T. Bivva 11:00-11:15 OS22-20 Amplification of Self-Excited Acoustic Oscillations in Standing-Wave Thermoacoustic Engines L. Gu, K. Wang, Y. Zhang, G. Chen 11:15-11:30 OS22-21 Investigation of Acoustic Power Amplification Mechanisms and Performance Enhancement in Thermoacoustic Amplifiers B. Sun, G. Chen, L. Tang, K. C. Aw 11:30-11:45 OS22-22 Experimental Study of Cavity Tone with a Heated Honeycomb Stack Y. Hosoya, T. Kuraiishi, H. Yokoyama
12:15	LUNCH BREAK									

13:30	EX-Hall-1A	13:30
16:00	Liaison Office Session & CZC Session	16:00

OS27: The 21st International Students / Young Birds Seminar on Multi-scale Flow Dynamics

- OS27-1: **Thermodynamic Analysis of Closed-cycle MHD Power Generation System for Output Adjustment**
H. Kikuta, K. Tabuchi, T. Fujino, H. Takana
- OS27-2: **Temperature-dependent Solar Absorption Characteristics of Thermally Oxidized Stainless Steel for Photothermal Applications**
K. Matsui, A. Sakurai
- OS27-3: **Surface Temperature Fluctuations in Fin-type Pulsating Heat Pipe by Infrared Imaging**
T. Sasagawa, K. Ichikawa, M. Miura
- OS27-4: **Fundamental Experiments on the Thermodynamic Suppression Effects of a Cavitation Instability Suppression Device**
K. Eki, S. Moriya, J. Okajima, Y. Iga
- OS27-5: **Combined Evaluation of Radiative and Conductive Heat Transfer for Regolith Layer**
S. Kamiya, K. Kawai, S. Tachikawa, H. Gonome
- OS27-6: **Spectral Switching using Thermosensitive Gel/SiO₂ Pickering Microparticles**
Y. Koizumi, T. Nagata, Y. Nonomura, A. Masuhara, H. Gonome
- OS27-7: **Directional Mid-infrared Thermal Emitters based on Planar Thin-film Structures**
A. Kakei, A. Sakurai
- OS27-8: **Estimation of Heat Generation in Spacecraft using Graph Neural Networks**
D. Yamashita, T. Ikami, H. Nagai
- OS27-9: **Quantifying Stripe Pattern Formation in Evaporating Sugar-solution Drops on Heated Surfaces via Confocal Laser Microscopy**
K. Tajiri, T. Miyagawa, M. Shiota, Y. Saito, Y. Matsukawa, H. Aoki, M. Daikoku, J. Fukuno, T. Okabe
- OS27-10: **Computational Study of Thickness Effect on Aerodynamic Performance of a Flat Plate at Low Reynolds Number Flow**
T. Kimura, K. Funada, S. Inoue, D. Sasaki, Y. Kawamoto, M. Okamoto, T. Ikami, H. Nagai
- OS27-11: **Numerical Simulation of Amine Absorbent Flow considering Property Changes in Random Packed Column**
G. Tashiro, Chairunnisa, T. Miyazaki, Y. Uehara, H. Machida, K. Norinaga, Y. Saito
- OS27-12: **Experimental Study of Unsteady Flow Field of a Pitching Airfoil at Low Reynolds Number**
G. Yiting Lim, T. Ikami, H. Nagai

- OS27-13: **Aerodynamic Testing with a Wind Tunnel Model on a Roadable Aircraft using FDM 3D Printer**
Y. Shinzato, S. Morizawa
- OS27-14: **Simulation of Plasma-contacted Liquid Flow Including Short-Lived Reactive Species with Chemical Reactions**
S. Murakami, S. Tomita, J. Yoshikawa, K. Barman, M. Sugimoto, S. Sasaki, H. Komen, H. Muneoka, T. Kaneko, M. Shigeta
- OS27-15: **Investigation of the Effects of Surface Plastic Skin on Lava Flow Dynamics using SPH Simulation**
S. Tomita, T. Sato, S. Murakami, J. Yoshikawa, M. Sugimoto, H. Komen, M. Shigeta
- OS27-16: **Characterizing Horizontal-axis Wind Turbine Aerodynamics across Different Tip Speed Ratios**
Y. Li, T. Sha, R. Hung
- OS27-17: **Curved Laser Sheet Visualization of Wall-bounded Vortical Structures over a NACA0012 Airfoil**
R. Mise, T. Ikami, H. Nagai
- OS27-18: **High-speed Infrared Measurements to Estimate Interfacial Temperature during Transient Contact between Two Materials**
K. Kudo, S. Koishikawa, T. Kogawa, Y. Kita, T. Okabe
- OS27-19: **Heat Transfer Analysis and Visualization of Nitrogen Pool Boiling under Pressure Variation**
S. Tokunaga, M. Kubota, J. Okajima
- OS27-20: **Evaluation of the Effect of Humidity on Heat Stroke by a Thermoregulation Model**
K. Kitamura, T. Kogawa, H. Gonome
- OS27-21: **Numerical Analysis Approach to Heat Flux Enhancement by Pyramid Structures**
R. Miura, K. Kikuchi, S. Ishii, A. Sakurai
- OS27-22: **Experimental Study on Flame Structure of Liquid Ammonia Co-flow Combustion under Oxygen-enriched Conditions**
J. Liang, Y. Chen, T. Kudo, A. Hayakawa, H. Kobayashi
- OS27-23: **Ultra-high-speed Measurement of Transient Heat-flux Distributions during Droplet Impact on Heated Surfaces**
Y. Kudo, H. Echigo, M. Shiota, T. Okabe
- OS27-24: **Characterization of Elastocaloric Effect of Natural Rubber under Wide Range Temperature and Elongation Conditions**
T. Oiri, G. Sebald, G. Coativy, A. Komiya
- OS27-25: **Effect of Weak Forced Convection on Natural Convection Heat Transfer of Optimized Heatsink**
R. Sato, A. Komiya

- OS27-26: **Visualizing Convection and Vortex Generation from Stripes Illuminated by Halogen Lamps using Background Oriented Schlieren (BOS)**
K. Naganuma, Y. Iseki, T. Sawamura, S. Ogasawara, T. Kogawa
- OS27-27: **Characteristics of an Axial Flow of a Vortex in Homogeneous Isotropic Turbulence**
K. Sakurai, K. Nakayama
- OS27-28: **Experimental and Numerical Performance Evaluation of a Small Flapping-wing Air Vehicle**
Y. Arai, W. Yamazaki
- OS27-29: **Cross-sectional Design Optimization and Three-dimensional Effect Evaluation for Small Vertical Axis Wind Turbines**
A. Kadoguchi, S. Imai, W. Yamazaki
- OS27-30: **Optimization of Multi-element Airfoil Configuration Integrating Experimental and Numerical Analysis Data**
M. Kanno, S. Fujisaki, W. Yamazaki
- OS27-31: **High-Reynolds-number Compressible Flow Simulation using Immersed Boundary Method and Wall Function on Adaptive Cartesian Grids**
H. Chen, Z. Wang, L. Tian, J. Liu, N. Qin, N. Zhao
- OS27-32: **A Study on Evaluation Method for the Time Variation of Tip Leakage Flow in Liquid Rocket Inducer**
K. Ikeda, K. Tamura, S. Kawasaki, Y. Iga
- OS27-33: **Aerodynamic Testing of a Mars Aircraft Wing Model using PC-PSP**
R. Hanyuu, K. Shibata, D. Numata
- OS27-34: **Development of Phase-field Lattice Boltzmann Method for Gas-Liquid Multiphase Evaporation Simulation in Porous Media**
Y. Ishikawa, J. Yoshikawa, H. Muneoka, M. Sugimoto, M. Shigeta
- OS27-35: **Studies of High-pressure Ethane Oxidation up to 100 atm using a Supercritical-pressure Jet-stirred Reactor**
R. Bo, S. Guo, H. Zhao
- OS27-36: **Three-dimensional Evaluation of Flake Particle Migration Behavior during Liquid Droplet Impact on a Solid Wall**
A. Kurogi, N. Hashiguchi, T. Miyagawa, T. Okabe, M. Shiota, Y. Matsukawa, H. Aoki, M. Daikoku, J. Fukuno, Y. Saito
- OS27-37: **Simulation of Water Droplet Motion with Anisotropic Wettability Using Smoothed Particle Hydrodynamics**
R. Shinozaki, Y. Nishio
- OS27-38: **Effect of the Number of V-shaped Slits on Atomization near an Air Spray Gun Nozzle**
K. Mikami, T. Miyagawa, W. Kurebayashi, N. Serizawa, T. Teraoka, M. Shiota

- OS27-39: **Quantitative Analysis of Flake Content in Inkjet via Internal Flow Visualization**
Y. Arata, T. Miyagawa, T. Okabe, M. Daikoku, Y. Matsukawa, H. Aoki, Y. Saito, J. Fukuno, M. Shiota
- OS27-40: **Evaluation of Wetting and Evaporation Characteristics at 3-phase Contact Region in Cryogenic Fluids with Moving Contact Line Evaporation Model**
T. Akita, P. Stephan, J. Okajima
- OS27-41: **Spatio-temporal Imaging of Water Precursor Film Behavior at Interfaces by Phase Shifting Ellipsometry**
H. Narita, A. Komiya
- OS27-42: **Large Deformation Analysis of Flexible Wings using Modal Rotation Method**
N. Nagai, K. Shimura, Y. Nishizaki, T. Yamada, K. Otsuka
- OS27-43: **Monitoring and Evaluation of Hydrogen-assisted Crack Propagation in Austenitic Stainless Steels using Acoustic Emission**
R. Matsumoto, T. Uchimoto, K. Ito, H. Enoki, T. Iijima
- OS27-44: **Enhanced Near-Field Thermal Radiation in Multilayered hBN–Graphene Structures without Vacuum Gaps**
J. Minaki, M. Suzuki, A. Sakurai
- OS27-45: **Scattering Behavior of Cu, Sn-Enriched Droplets from Molten Metal Pool under Nitrogen-containing Arc Plasma**
T. Gunji, T. Ito, K. Terashima, J. Yoshikawa, M. Sugimoto, M. Shigeta, H. Muneoka
- OS27-46: **Effect of Ligand Structure on Interfacial Behavior at the Nanoscale Interface between Surface-modified Ag and Curing Agent**
Y. Kurosawa, T. Saito, Y. Okada, M. Inutsuka, C. Tokoro, E. Shoji, M. Kubo, M. Kubo
- OS27-47: **Molecular Insights into Thermal Conduction Mechanisms in Sugar Alcohol Phase Change Materials**
S. Cheng, D. Surblys, T. Ohara
- OS27-48: **Quantitative Analysis of Convective Mass Transfer near the Gas-liquid Interface in CO₂ Absorption into Ionic Liquid**
S. Gunji, Y. Kanda, A. Komiya
- OS27-49: **Machine Learning-based Vibration Control of Flexible Space Structures using Magnetostrictive Transducers with Negative Inductance Circuits**
S. Solehuddin, Y. Kobayashi, R. Habe, R. S. Adyatama, Y. Hara, K. Makihara
- OS27-50: **Real-time Moving Morphable Components Topology Optimization using Neural Networks**
Y. Matsumoto, M. Kawai, A. Komaba, K. Otsuka
- OS27-51: **Extrapolation Predictions using Physics-informed Neural Networks (PINNs) for Shock Wave Propagation based on the Burgers Equation**
S. Nakama, S. Morizawa

- OS27-52: **Homogenization Method based on Conservative Physics-informed Neural Network for Thermal Analysis**
R. Kato, S. Eguchi, Y. Hara, K. Makihara, K. Otsuka
- OS27-53: **Reinforcement Learning-based Control of Drop Position in Inkjet Printing**
R. Yamamoto, T. Miyagawa, M. Shiota
- OS27-54: **A Study on Droplet Breakup Behavior and its Electrical Characteristics 2nd Report, Formation of Uniform Droplets by Vibration Method**
Y. Mizuguchi, Y. Kurihara, M. Daikoku, T. Miyagawa, T. Okabe, M. Shiota, Y. Matsukawa, H. Aoki, Y. Saito, J. Fukuno
- OS27-55: **Development of High-performance Underwater Drone (ROV)**
T. Kume, J. Mizuno, Y. Sasaki, T. Ota
- OS27-56: **A Study on the Extension of Topology Optimization Methods using Moving Morphable Components**
M. Kawai, Y. Matsumoto, A. Komaba, K. Otsuka
- OS27-57: **Semi-Active Vibration Control of Space Structures with Disturbance Estimation by Interacting Multiple Model**
T. Morikawa, M. Zhou, K. Yamao, Y. Hara, K. Makihara
- OS27-58: **Subspace Identification of Frequency-domain State Space Models using Expectation-maximization Algorithm**
X. Li, T. Tang, H. Saito, T. Matsukura, K. Suzuki, Y. Hara, K. Makihara
- OS27-59: **Performance Evaluation of Supersonic Transport Considering Uncertainties of Flight Conditions and Atmospheric Conditions**
F. Asano, W. Yamazaki
- OS27-60: **Molecular Dynamics Analysis of Hydrophobic Modified DNA Membrane Penetration via Lipofection**
S. Kurosawa, T. Mabuchi
- OS27-61: **Fundamental Characterization of Sulfuric-Acid-Type DP-AA-PSP**
K. Yoneyama, H. Takata, Y. Kawamata, T. Kawashima, D. Numata
- OS27-62: **Effect of Titanium Dioxide Particle Size on the Characteristics of PC-PSP**
K. Bando, T. Takizawa, D. Numata
- OS27-63: **Application of Sulfuric-Acid-Type DP-AA-PSP to Aerodynamic Testing**
H. Takata, K. Yoneyama, Y. Kawamata, T. Kawashima, D. Numata
- OS27-64: **Fast Damage Detection Using Recursive Subspace Identification with Forgetting Factor for Structural Health Monitoring**
H. Saito, T. Tang, X. Li, T. Matsukura, K. Suzuki, Y. Hara, K. Makihara

**OS28: The 25th International Symposium on Advanced Fluid Information
(AFI-2025)
IFS Collaborative Research Forum**

- CRF-1: **Numerical Studies for Plasma Dynamics on a Space Propulsion System**
M. Takahashi, S. Uno, K. Sakamoto, K. Ito, H. Suzuki, H. Nagai
- CRF-2: **Space Debris Shield Performance of Partially Cured Inflatable Structures**
Y. Sugiyama, Y. Yamakoshi, K. Wakai, K. Ohtani, Y. Hara, K. Makihara
- CRF-3: **Four-Dimensional Density Measurement in Unsteady Flow Field Around a Re-Entry Capsule Model by Multi High-Speed Camera BOS Systems**
R. Miyazaki, M. Ikawa, M. Ota, T. Inage, M. Yamagishi, K. Ohtani, H. Nagai
- CRF-4: **RF Energy Harvesting via Orthogonal Dipole Antennas and Charge-Pump Circuitry on a Flapping-Wing Aerial Vehicle**
H. Izumi, T. Ishide, H. Nagai
- CRF-5: **Numerical Analysis of the Flow around a Wing-body Combination Model with Three-degree-of-freedom Flapping**
M. Mitsunaga, T. Ishide, H. Izumi, Y. Katsu, H. Nagai
- CRF-6: **Study of Vortex Generators on Small Rotor Blades for Minimizing Noise Emissions**
H. Otsuka, H. Sasaki, H. Tokutake, T. Ikami, H. Nagai, H. Osaki, D. Sasaki, Y. Kawamoto
- CRF-7: **Trial-experiment Study for Improvement of the Aerodynamic Performance on a Roadable Aircraft using Wind Tunnel Testing**
S. Morizawa, Y. Shinzato, M. Okawa, T. Ikami
- CRF-8: **Ribbed Membrane Wing Characteristics in Low Reynolds Number Flow by Numerical and Experimental Approach**
H. Kono, S. Kudo, H. Kurahashi, T. Ikami, H. Nagai, M. Kanazaki
- CRF-9: **Investigation of the Effects of Trailing Edge Shape and Thickness on Tonal Noise and Its Mechanism**
K. Harada, H. Sumikawa, T. Shibata, R. Mise, M. Okawa, T. Ikami, H. Nagai
- CRF-10: **The Precise Measurement of Drag Coefficient of Decelerating Free-flight Sphere (2nd-Report)**
T. Kikuchi, K. Ohtani
- CRF-11: **On the Friction Drag Reduction Mechanism by Distributed Micro Roughness in Transitional Boundary Layer Flow**
R. Osaki, K. Nakagawa, A. Yakeno, T. Kawata

- CRF-12: **Dynamic Mode Decomposition Analysis of Three-Dimensional Smooth and Riblet Surface at Mach 0.2**
L. A. Tuan, K. Zakaria, P. S. Palar, V. D. Duong, L. R. Zuhail, A. Oyama, A. Yakeno
- CRF-13: **Surrogate Modeling of Sonic Boom Loudness Under Atmospheric Variability**
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