



International Conference on Flow Dynamics
Organized by Institute of Fluid Science, Tohoku University



International Conference on Flow Dynamics (ICFD) is held in Sendai in annual series since 2004. The ICFD is now recognized by world researchers as one of the biggest and most important international conferences in the field of Flow Dynamics.

Flow Dynamics, as a component of Integrated Flow Science, focus on the study of flow and transport phenomena involving electrons, molecules, nanoscale particles, and continuum fluids—with or without chemical reactions—as well as the movement of materials, energy, information, and economic activity. Addressing multiscale, multiphysics, and multidisciplinary challenges, the field spans both natural processes and human activities. As a growing academic discipline, ICFD contributes to solving complex issues facing society, including nuclear power control, global warming, sustainable energy and resource management, and disease mitigation.

Keynote plenary lectures by top-level researchers (3 lectures/year)

This conference presents plenary lectures by world-leading researchers presenting cutting-edge findings. The themes vary each year, covering a wide range of academic fields.



Around 30 organized sessions

Around 30 organized sessions promote knowledge sharing and academic exchange across diverse research fields.



International Scientific Committee

The International Scientific Committee is composed of renowned researchers from around the world and plays a key role of determining the direction and strategy of ICFD.



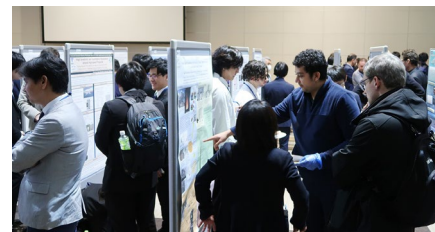
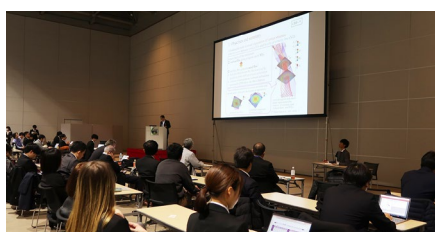
Liaison Office Session

This session brings together representatives from the overseas bases of Tohoku University, including liaison offices from seven countries, with IFS serving as the coordinating department. They will discuss the future of collaborative research and education.



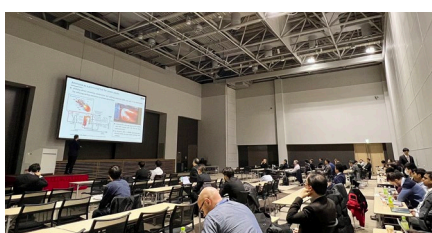
The International Symposium on Advanced Fluid Information (AFI)

The session provides a platform to discuss "Collaborative Research Projects" between the researchers of other institutes and those of Institute of Fluid Science, and to share common interest among participants.



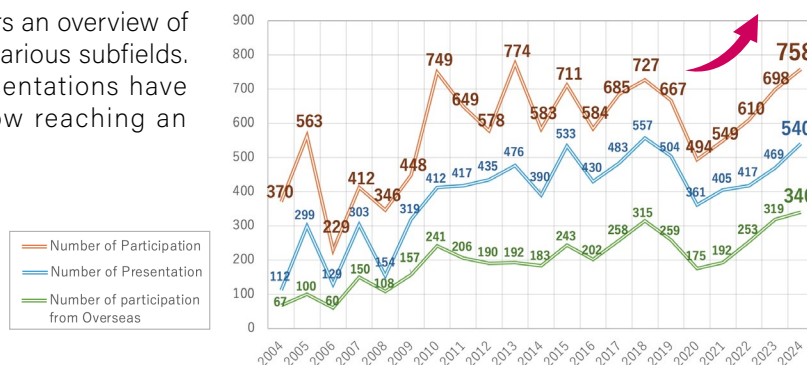
Core to Core Program session (2021 -)

The Core to Core session will focus on reporting and discussing the activities of the program "Construction of an international research exchange center for ammonia combustion and materials toward the realization of a low-carbon society", organized around Institute of Fluid Science, Tohoku University.



ICFD Participation & Presentation for 2004 - 2024

This conference, held annually in Sendai, offers an overview of the entire field of fluid science, including its various subfields. Both the number of participants and presentations have steadily increased, with each session now reaching an international conference scale.





Nov. 10-13, 2025

Sendai International Center,
Sendai, Miyagi, Japan

22nd International Conference on Flow Dynamics **2025**

Organized by Institute of Fluid Science, Tohoku University

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 ICFD is now recognized by world researchers as one of the biggest and most important international conferences in the field of Flow Dynamics.

Important Deadlines

Title Submission Deadline : June 16, 2025 (Mon)

Paper Submission Deadline : July 22, 2025 (Tue)

Early Registration Deadline : August 25, 2025 (Mon)

Banquet Registration Deadline : September 30, 2025 (Tue)

Plenary Lecture



Prof. Christophe Bailly

Centrale Lyon, France

Title : "Strategies to Model Acoustic Propagation in Inhomogeneous Flows"



Prof. Hong G. Im

King Abdullah University of Science and Technology, Saudi Arabia

Title : "Reduced-Order High Fidelity Simulations of Reacting Flows Using Low Dimensional Manifolds and Machine Learning"



Prof. Roland N. Horne

Stanford University, USA

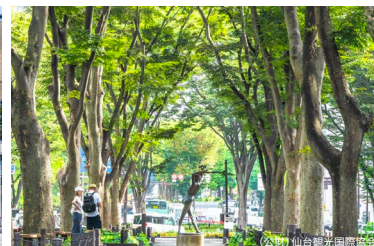
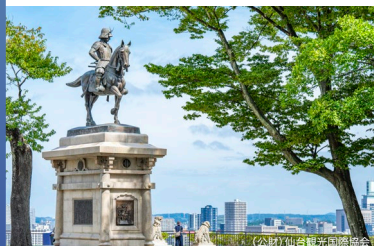
Title : "Using Chemistry to Measure Flow Rate in Geothermal Wells"



Dr. Denis Veynante

Université Paris-Saclay, CNRS, CentraleSupélec, France

Title : "Flame surface models for large eddy simulations of turbulent combustion: achievements, challenges and perspectives"



The event is supported by Tohoku University's Institute of Fluid Science and serves as a great opportunity for young researchers and students to exchange ideas and initiate international research collaborations. Registration is required.

ICFD2025
Website



ICFD2025
Registration
Website



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.

Executive Committee Members

The 22nd International Conference on Flow Dynamics (ICFD2025)



Prof. Makoto Ohta
General Co-chair of ICFD2025
Institute of Fluid Science,
Tohoku University



Prof. Vincent Fridrici,
General Co-chair of ICFD2025
Centrale Lyon



Prof. Kaoru Maruta
Director of IFS
Tohoku University

