

# The 19<sup>th</sup> International Conference on Flow Dynamics (ICFD2022)

November 9 – 11, 2022

Sendai, Japan

<https://www.ifs.tohoku.ac.jp/icfd/2022/index.html>

*First Circular*

## SCOPE

The 19th International Conference on Flow Dynamics (ICFD2022), in the annual series since 2004, will be held from November 9<sup>th</sup> to 11<sup>th</sup>, 2022 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, ICFD2022 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 is an Integrated Flow Science which deals with 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 ICFD2022 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 are still in the middle of the COVID-19 pandemic and we are not sure if we can get together at Sendai in November 2022 or not. If so, we believe that you will enjoy beautiful and pleasant atmosphere of the autumn at Sendai, since the beginning November is the best season of Sendai. If not, we will do our best to make ICFD2022 successful as the online conference.

Hiroki Nagai, Professor,  
Tohoku University  
and

Chih-Yung Huang, Professor,  
National Tsing Hua University  
General Co-Chairs, ICFD2022

## Important Dates

- June 15, 2022: Deadline for Presentation Submission
- July 22, 2022: Deadline for Paper Submission (2 or more pages)
- August 25, 2022: Deadline for Advanced Registration

## Executive Committee Members

- Hiroki Nagai (General Co-chair of ICFD2022, Tohoku University)
- Chih-Yung Huang (General Co-chair of ICFD2022, National Tsing Hua University)
- Kaoru Maruta (Director of IFS, Tohoku University)