

Executive Committee Members

Takatoshi Ito (General Co-Chair of ICFD2017,
Tohoku University)
Julien Fontaine (General Co-Chair of ICFD2017, Ecole
Centrale de Lyon)
Shigeru Obayashi (Director of IFS, Tohoku University)

International Scientific Committee Members

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Tomohide Niimi	Rongia Tao
Hideya Nishiyama	Satish Udpa

Location

Sendai International Center

Aobayama, Aoba-ku, Sendai, 980-0856
TEL (81)22-265-2211 FAX(81)22-265-2485
<http://www.aobayama.jp/english/>

Registration Fee

	With Banquet	Without Banquet
Advanced Registration Fee (on or before Aug. 31)	General 22,000 JPY	General 14,000 JPY
	Student 7,000 JPY	Student 3,000 JPY
Onsite Registration Fee (on and after Sep. 1)	General 32,000 JPY	General 22,000 JPY
	Student 11,000 JPY	Student 5,000 JPY

Important Dates

July 1, 2017: Deadline for **Presentation Submission**.
July 10, 2017 Please present your paper title / author's
Now extended! name / keywords through Presentation
Submission page of ICFD2017 website.
Aug. 10, 2017: Deadline for **Short Paper (A4, 2pages)**
Submission
Aug. 31, 2017 Deadline for **Advanced Registration**

Publication & Special Issues of International Journals

Proceedings will be distributed to the conference
participants with USB flash memory. Selected papers are
being planned to be published in a journal after the
conference. Please visit ICFD2017 website for the details.

ICFD Secretariat

For further details and related questions, please contact

ICFD2017 Secretariat: icfd2017@fmail.ifs.tohoku.ac.jp

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<http://www.ifs.tohoku.ac.jp/icfd2017/>

The 14th International Conference on Flow Dynamics

Second Circular

As of July 6, 2017

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November 1 - 3, 2017
Sendai International Center
Sendai, Japan



SCOPE

The 14th International Conference on Flow Dynamics (ICFD2017), in the annual series since 2004, will be held from 1st to 3rd November 2017 at the Sendai International Center, Sendai, Japan. The objectives of this conference are to explore new horizons in science and technology by discussing and exchanging information related to the most advanced scientific fields and to cutting edge technologies in Flow Dynamics. ICFD is now recognized by the world researchers and engineers 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 initiating international research collaborations. It should be noted that ICFD provides young researchers and students with unique opportunities to develop themselves through proactive participation in the conference.

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 the principal operating body for both 21COE and GCOE programs, the latter which came to an end in March 2013. In 2013, on the occasion of its 70th anniversary, IFS was regenerated as an even more powerful research institute, particularly in energy-related research, with three new flow research divisions and Innovative Energy Research Center. In this new movement, IFS has continued to support this conference series, and ICFDs were held annually in 2013, 2014, 2015 and 2016. We pledge to maintain ICFD's dynamism and spirit as a meeting for present-day distinguished scientists in Flow Dynamics as well as for future generations of scientists. Flow Dynamics is a comprehensive scientific field which deals with flow and transport phenomena concerning molecules, electrons and 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. Scientists and engineers, who are working or are interested in such areas, please participate in ICFD2017 and extend your domains

and international human networks.

ICFD works as a platform of discussion to reach scientific truth and engineering solutions for all the flow-relevant problems. Participants will know when they come to Sendai that a wide variety of sessions are opened to provide the seeds and to fulfill the needs from a viewpoint of flow. We cordially invite scholars, researchers, educationists, students and planners exploring and studying in the relevant research and development fields of bio-, nano-, material, energy, 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. This will be a beautiful season in Sendai. We believe that you will enjoy comfortable atmosphere of autumn in Sendai.

Takatoshi Ito, Professor
Institute of Fluid Science, Tohoku University
and
Julien Fontaine, Dr.
Ecole Centrale de Lyon
General Co-Chairs, ICFD2017

Plenary Lectures

Professor Koshi Adachi (Tohoku University, Japan)

Title: Creation of Nanointerface for Super-Low Friction"

Professor Paul Chaikin (New York University, USA)

Title: Unstable fronts and stable 'critters' from microrollers, self-assembly from hydrodynamics

Professor Patrick Jenny (ETH-Zentrum, Switzerland)

Title: From high pressure to vacuum – Fokker-Planck/DSMC method for gas dynamics at all Knudsen numbers"

Sessions

General Session:

GS1: General Session

Co-Organizers: T. Ito, H. Nakamura

Symposium / Workshop / Organized Sessions:

OS1: Tohoku University-National Chiao Tung University 2nd Technical Workshop 2017

Organizer: S. Samukawa

OS2: The Fifth International Symposium on Innovative Energy Research II : International Workshop on Combustion Technology and Fundamentals

Co-Organizers: S. Minaev, H. Im, N. I. Kim, K. Maruta

OS3: The Fifth International Symposium on Innovative Energy Research III : Multiphase Energy Science and Technology Related to FSI Coupled Problems

Organizer: J. Ishimoto

OS4: Biomedical Flow Dynamics

Co-Organizers: M. Ohta, H. Anzai, T. Nakayama, K. Takashima

OS5: Biomolecular Dynamics

Co-Organizers: Y. Ikeda, M. Ohta

OS6: Advanced Physical Stimuli and Biological Responses

Co-Organizers: T. Sato, T. Ohashi, S. Kawano, R. Shirakashi

OS7: Bilateral Programs between South Africa and Japan

Co-Organizers: T. Kodama, S. O. Oluwafemi

OS8: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion

Co-Organizers: T. Shimada, K. Sawada

OS9: New Dimensions of Magnetic Suspension and Balance System

Co-Organizers: K. Asai, S. Obayashi

OS10: Fluid Dynamics of Real Flight Test Environment

Co-Organizers: H. Nagai, K. Mori

OS11: Flow Realization, Measurement and Visualization

Co-Organizers: N. Fujisawa, T. Yamagata, T. Hayase, S. Funatani

OS12: Advanced Control of Smart Fluids and Fluid Flows

Co-Organizers: M. Nakano, Y. Fukunishi

OS13: Complex Thermofluid System

Co-Organizers: C.-Y. Chen, Y.-H. Liu

OS14: Vortex Motion: Stability, Nonlinear Dynamics, and Turbulence

Co-Organizers: Y. Hattori, S. G. Llewellyn Smith

OS15: International Workshop on Functional Plasma Flows and their Innovative Applications

Co-Organizers: H. Takana, O. P. Solonenko, J. Jenista, Y. Tanaka, Y. Okuno, M. Tanaka, T. Watanabe, M. Okubo, N. Takeuchi, H. Nishiyama

OS16: Fourth International Symposium on Smart Layered Materials and Structures for Energy Saving

Co-Organizers: T. Takagi, T. Uchimoto, J. Y. Cavallé, C. Boller, J. Qiu, F. Lundell

OS17: The 13th International Students / Young Birds Seminar on Multi-scale Flow Dynamics

Co-Organizers: Y. Kanda, K. Otsuka, T. Yamaguchi
Supervisors: J. Okajima, H. Shimizu, S. Uehara, Y. Iga, K. Sato

OS18: The 17th International Symposium on Advanced Fluid Information (AFI-2017) (Invited presentation session)

➤ IFS Collaborative Research Forum

Co-Organizers: H. Masuda, T. Ito

➤ Fluids Science Research Award Lectures

Organizer: S. Obayashi

OS19: Porous Media

Co-Organizers: A. Suzuki, M. Ohta

Special Session

SS1: Liaison Office Session (Invited presentation session)

Co-Organizers: T. Takagi, M. Ohta, A. Komiya, H. Takana