



# Seventh International Conference on Flow Dynamics

Second Circular

[http://www.ifs.tohoku.ac.jp/gcoe/ICFD\\_html/ICFD2010\\_html](http://www.ifs.tohoku.ac.jp/gcoe/ICFD_html/ICFD2010_html)

Sponsored by  
Tohoku University Global COE Program  
"World Center of Education and Research for  
Trans-disciplinary Flow Dynamics"



November 1<sup>st</sup> – 3<sup>rd</sup>, 2010  
Sendai International Center  
Sendai, Japan

<http://www.sira.or.jp/icenter/english/index.html>  
As of Jul.1,2010

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## Organized and Sponsored by:

Tohoku University Global COE Program, "World Center of Education and Research for Trans-disciplinary Flow Dynamics"  
Institute of Fluid Science, Tohoku University

## In Cooperation with:

The Japan Society of Mechanical Engineers  
The Japan Society of Applied Physics  
Japan Society of Maintenance  
The Japan Society for Computational Engineering and Science  
The Japan Society of Applied Electromagnetics and Mechanics  
Cryogenics Association of Japan  
The Japan Society of Fluid Mechanics  
Atomic Energy Agency of Japan Computational Science and Engineering Division  
The International Centre for Heat and Mass Transfer

## ICFD Secretariat

For further details and related questions, please contact  
ICFD2010 Secretariat

[icfd2010@gcoe.ifs.tohoku.ac.jp](mailto:icfd2010@gcoe.ifs.tohoku.ac.jp)

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<http://www.ifs.tohoku.ac.jp/gcoe/index-e.html>

## Important Dates

July 1, 2010: ~~Deadline for presentation submission.~~  
**July 31, 2010: Deadline for presentation submission has been extended.**  
Please present your paper title /author's name/  
Keywords submission through PRESENTATION  
SUBMISSION page of ICFD2010 website.  
Sep. 3, 2010: Deadline for short paper (A4, 2 pages)  
Submission  
Please submit your paper through PAPER  
SUBMISSION page of ICFD2010 website.  
Oct. 1, 2010: Deadline for registration.

## SCOPE

The Seventh International Conference on Flow Dynamics (ICFD2010) in the annual series will be held at Sendai International Center in Sendai, Japan from November 1st to 3rd, 2010, which is fully supported by Tohoku University Global COE Program: World Center of Education and Research for Trans-disciplinary Flow Dynamics. The objectives of this conference are not only to explore new science horizon and exchange cutting edge technologies of "Flow Dynamics", but also to provide young researchers and students with unique opportunities of education and self-development.

"Flow Dynamics" is a comprehensive scientific field which deals with the flow and transport phenomena concerning to any fluid, any material, energy and information. The Scope of this conference covers the fluid, thermal, material, molecular and quantum dynamics of the multi-scale flows ranging from nano-scale flows such as behaviors of molecules, atoms, ions and electrons, to gigantic scale flows such as solar radiation, air-flow, multi-phase flow and typhoon on earth, oceanic flow and volcanic flow.

On behalf of the organizing committee, we cordially invite scholars, researchers, engineers, educationists and planners in the related research and development fields of bio-, nano-, energy and environmental science and technologies, mechanical engineering, aerospace engineering, nuclear engineering, physics, medical science, chemistry, chemical engineering, etc, to participate in the conference.

We are looking forward to seeing you in Sendai on November 1<sup>st</sup> to 3<sup>rd</sup>, 2010.

## Plenary Lectures

**Prof. Kozo SAITO** (*University of Kentucky, USA*)

Title: "The win-win R&D strategy: How The University of Kentucky's Institute (IR4TD) attained innovative automobile surface coating technology"

**Prof. Dimos POULIKAKOS** (*ETH Zurich, Switzerland*)

Title: "Toward Green IT: Petaflop Supercomputers Cooled with Warm Water Combine Microcooling Technologies with Waste Heat Reuse and set a new Norm"

**Prof. Javad MOSTAGHIMI** (*University of Toronto, Canada*)

Title: "Radio Frequency Thermal Plasma: The Cutting Edge Technology in Production of Single-Walled Carbon Nanotubes"

## Sessions

This conference consists of the following professional sessions. If you have questions and requests about the session of your interest, please contact the ICFD2010 secretariat ([icfd2010@gcoe.ifs.tohoku.ac.jp](mailto:icfd2010@gcoe.ifs.tohoku.ac.jp)).

General Session:

GS1: General Session on Multi-Scale Flow Dynamics

Organizer: M. Nakano, T. Sato (Tohoku University)

Organized Sessions:

OS1: Fluid Dynamics Aspects of Environmentally Advantageous

Hybrid Rockets

Organizer: T. Shimada (JAXA), K. Sawada (Tohoku University)

OS2: Aviation Research in Aspects of Environment

Organizer: S. Obayashi, K. Asai (Tohoku University) and

S. Watanabe (JAXA)

OS3: Advanced Control of Smart Fluids and Fluid Flows

Organizer: M. Nakano, Y. Fukunishi (Tohoku University)

OS4: Flow Dynamics in Fluid Machinery

Organizer: T. Ikohagi, S. Yamamoto (Tohoku University) and

M. Nohmi (Ebara Corporation)

OS5: Molecular and Nanoscale Phenomena in Fluids and Interfaces

Organizer: T. Ohara (Tohoku University), M. Shibahara (Osaka University)

OS6: Flow Dynamics in Thermal Science & Technology

Organizer: S. Maruyama, T. Ohara (Tohoku University)

OS7: The Sixth International Students / Young Birds Seminar on Multi-Scale Flow Dynamics

Planned Sessions: (General papers will not be accepted.)

PS1: Workshop on Sustainable Atomization and Spray Technology (AFI/TFI-2010)

Organizer: J. Ishimoto (Tohoku University)

PS2: Workshop on Functional Plasma Flow Dynamics and its Systems

Organizer: H. Nishiyama (Tohoku University), Y. Okuno

(Tokyo Institute of Technology) and M. Tanaka (Osaka

University)

PS3: International Seminar on Maintenance Science and Technology for Nuclear Power Plants  
Organizer: T. Takagi, H. Hashizume (Tohoku University),

PS4: 4th Functionality DEsign of the COntact Dynamics: (DECO2010)

Organizer: T. Takagi, H. Miki (Tohoku University) and Julien Fontaine (LTDS, France)

PS5: IFS Collaborative Research Forum (AFI/TFI-2010)

Organizer: J. Ishimoto (Tohoku University)

PS6: Alumni Session

Organizer: S. Maruyama (Tohoku University)

PS7: Liaison Office Session

Organizer: T. Takagi, M. Ohta (Tohoku University)

## Publication in Special Issues of Three International Journals

Proceedings will be published.

Selected papers are to be published as the special issues of "Journal of Fluid Science and Technology (JFST)", "Journal of Thermal Science and Technology (JTST)" and "E-Journal of Advanced Maintenance (EJAM)" after the conference.

Please visit ICFD2010 website for the details.

[http://www.ifs.tohoku.ac.jp/gcoe/ICFD\\_html/ICFD2010\\_html/index.html](http://www.ifs.tohoku.ac.jp/gcoe/ICFD_html/ICFD2010_html/index.html)

## Registration Fee

Registration Fee: Free

Banquet Fee: General 3,000 JPY

Student 1,000 JPY

## Location

The conference will be held at Sendai International Center in Sendai. (<http://www.sira.or.jp/center/english/index.html>)  
Aobayama, Aoba, Sendai, 980-0856 TEL: +81-22-265-2211

