Call for Abstract

AJK FED2023

ASME-JSME-KSME Joint Fluids Engineering Conference

July 9-13, 2023 @ Grand Cube Osaka, Japan

https://ajk2023-fed.org/

Deadline February 10, 2023:　Website for submissions will open in mid-January.

The Fluid Engineering Divisions (FED) of the American Society of Mechanical Engineers (ASME), the Japan Society of Mechanical Engineers (JSME) and the Korean Society of Mechanical Engineers (KSME) will hold joint conference in Osaka, Japan. AJK FED has been held every four years: 2011 in Hamamatsu, Japan; 2015 in Seoul, Korea; 2019 in San Francisco in the USA. The 4th conference will be face-to-face style in Osaka, Japan at the Osaka International Convention Center (Grand Cube Osaka): https://www.gco.co.jp/en/

Topics

AJK FED2023 invites presentations of the latest research on fluid engineering from both inside and outside AJK. The topics in this conference include, but not limited to, the following:

I. Fundamental Fluid Mechanics

Organizers: JSME Prof. Kazuyasu SUGIYAMA (Osaka University)
ASME Prof. Deify LAW (California State University Fresno)
KSME Prof. Jinkee LEE (Sungkyunkwan University)

Keywords: Turbulent Flows,　High-Speed Flows,　Vortex Dynamics,　Jet, Wake and Separated Flows,
Fluid Structure Interaction,　Flow Control and Manipulation,　Fluids Engineering Education

II. Fluid Mechanics - Complex & Functional Fluids

Organizers: JSME Prof. Yohsuke IMAI (Kobe University)
ASME Prof. Deify LAW (California State University Fresno)
KSME Prof. Hyoungsoo KIM (KAIST)

Keywords: Non-Newtonian Fluid Mechanics,　Functional Fluids (ER/MR Fluids, Liquid Crystal),
Bio-Inspired Fluid Mechanics,　Biomedical Fluid Mechanics

III. Multiphase/Multicomponent Flows

Organizers: JSME Prof. Hiroyuki TAKAHIRA (Osaka Metropolitan University)
ASME Dr. Bertrand ROLLIN (Lawrence Livermore National Laboratory)
KSME Prof. Jae-Sung KWON (Incheon University)

Keywords: Method (Computational, Experimental, Theoretical),
Fluid-Fluid Two-Phase Flows (Gas-Liquid, Liquid-Liquid),
Particle-Laden Flows (Gas-Solid, Liquid-Solid, Slurry),
Cavitation (Erosion),　Bubble, Droplet, and Interfacial Phenomena,
Industrial Application (Nuclear, Petroleum),　Flow with Reaction and/or Phase Change,　Combustion

IV. Micro & Nano Fluid Mechanics

Organizers: JSME Prof. Yasutaka YAMAGUCHI (Osaka University)
ASME Prof. Sangjin RYU (University of Nebraska-Lincoln)
KSME Prof. Wonjung KIM (Sogang University)

Keywords: Micro/Nano Modelling and Simulation,　Micro/Nano Thermodynamics and Heat Transfer,
Microfluidics and Biomicrofluidics,　Applications of Micro/Nano Fluidic Systems,
Micro/Nano measurement of Fluid and Heat,　Micro/Nano Fluidic Based Energy Storage, etc.

V. Data-based Simulations and Machine Learning

Organizers: JSME Prof. Susumu GOTO (Osaka University)
ASME Prof. Shanti BHUSHAN (Mississippi State University)
KSME Prof. Sung Goon PARK (Seoul National University of Science and Technology)

Keywords: Deep Learning, Optimization, Modeling and Prediction, Data Assimilation, Extraction from Big Data

VI. Fluids Engineering Applications and Systems

Organizers: JSME Prof. Satoshi WATANABE (Kyushu University)
ASME Dr. Ravi YERRAM (General Electric)
KSME Prof. Wontae HWANG (Seoul National University)

Keywords: Fluid Machinery, Pumping Machinery, Turbomachinery, Rotating Machinery, Renewable Energy, Aerospace, Vehicle Flows (Automobile, Train), Environmental Flows, Industrial Fluid Mechanics, Fluid Power Systems, Propulsion, Manufacturing Process

VII. Experimental Fluid Dynamics

Organizers: JSME Prof.Tatsuro WAKIMOTO (Osaka Metropolitan University)
ASME Prof. Soroor KARIMI (University of Tulsa)
KSME Prof. Daegyoum KIM (KAIST)

Keywords: Experimental Facilities, Sensors and Instrumentation, Flow Visualization, Techniques (Volumetric, Tomographic, Ultrasonic, etc.), Noninvasive Measurements, Data Processing/Algorithms, Uncertainty Quantification in Flow Measurements, Verification and Validation

VIII. Computational Fluid Dynamics

Organizers: JSME Prof. Takahiro TSUKAHARA (Tokyo University of Science)
ASME Prof. Shanti BHUSHAN (Mississippi State University)
KSME Prof. Jung-Il CHOI (Yonsei University)

Keywords: CFD Development (Algorithm, Discretization, Grid Generation), Turbulence Models (DNS, LES, RANS, Hybrid), Fluid Structure Interaction, Discrete Element Method (LBM, Particle Method, Vortex Method), Multi-Physics Simulation, CFD Applications, High-Performance Computing, Visualization and Fluid Informatics, Verification and Validation

Abstract Submission

All authors must submit a one-page abstract, no copy rights. Please visit the conference website, https://ajk2023-fed.org/, and click on 'Submit Abstract'. First, please download the template of one-page abstract. When you upload your abstract, (1) please create a user account and (2) select the topic keyword that best describes your field from the list of categories (and a second keyword if necessary). In the period of AJK FED2023, only a collection of abstracts will be distributed on the website.

Important Dates

Submission of One-Page Abstract	February 10
Paper Acceptance Notification	March 10
Early Bird Registration	April 30
Conference	July 9-13

Registration Fee

	Until April 30	May-June	On-site
AJK member and Presenter	JPY 80,000	JPY 90,000	JPY 100,000
Non member	JPY 100,000	JPY 110,000	JPY 120,000
AJK life member (*1)	JPY 35,000	JPY 40,000	JPY 45,000
Student (*2)	JPY 35,000	JPY 40,000	JPY 45,000

(*1) Proof by the society required, (*2) Banquet participation not included

Planned event/option (separate fee): Seminars hosted by ASME; Banquet for accompanying person and student

Information for AJK Members

A member of ASME, JSME, or KSME who wishes to apply for awards or scholarship from any of the societies (for example, ASME Graduate Student Scholar Award, Best Paper Award) will be required to submit an additional article (extended abstract or full-length paper). Please follow the instruction of each society, that will be linked from AJK FED2023 website.

Proceedings and Journal Publication

For any author who wants to publish a full-length paper, a separate link is provided on the conference webpage. Please select one from the followings.

For *ASME proceedings of AJK FED 2023*, the link will direct the authors to the ASME web tool and ASME will handle the review process of these papers as well as the copyrights.

Journal of Fluid Science and Technology by JSME and *Journal of Mechanical Science and Technology* by KSME will provide the website for the special issue of AJK FED 2023, respectively.

Conference Venue

Conference: Osaka International Convention Center

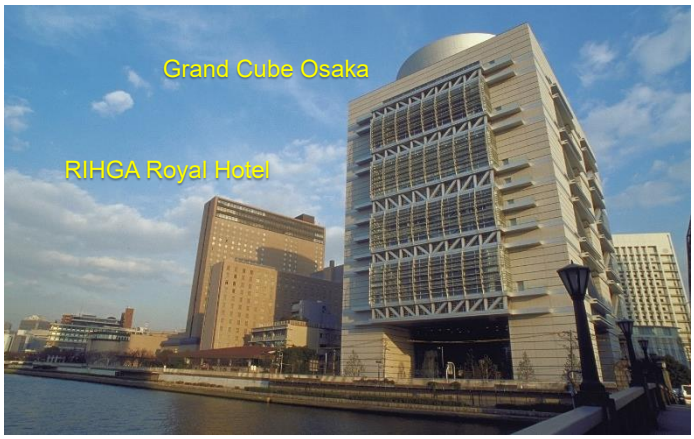
"Grand Cube Osaka"

5-3-51, Nakanoshima Kita-ku, Osaka 530-0005 JAPAN

Access is indicated in https://www.gco.co.jp/en/

The "OICC / MICE Road / Walk Navi" will assist you to reach the venue from the railway stations near OICC.

Reception & Banquet: RIHGA Royal Hotel Osaka



The City of Osaka

Osaka is one of the most multicultural and cosmopolitan cities in Japan. Popular landmarks in the city include Osaka Castle, Sumiyoshi Taisha Grand Shrine, Shitennoji Buddhist Temple, Osaka Aquarium Kaiyukan, Nakanoshima Park, Dotonbori, Abeno Harukas, Universal Studios Japan, and so on. The venue of AJK FED2023 is in the central area of Osaka - Nakanoshima lying between Dojima and Tosabori Rivers.

Co-Chairs

JSME Takeo Kajishima (Shikoku Polytechnic College / Osaka University)
Genta Kawahara (Osaka University)

ASME Kamran Siddiqui (University of Western Ontario)
Marianne Francois (Los Alamos National Laboratory)

KSME Han Seo Ko (Sungkyunkwan University)
Gwang Hoon Rhee (University of Seoul)