

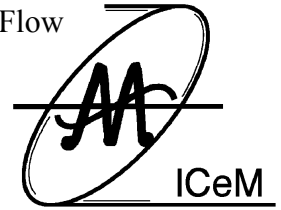


The International Information Center for Multiphase Flow

NEWSLETTER

No. 38, September 2012

The Japanese Society for Multiphase Flow



The 8th KSME-JSME Thermal and Fluids Engineering Conference March 18-21, 2012, Incheon, Korea

by Eiji Tomita

The 8th KSME (Korean Society of Mechanical Engineers) - JSME (Japan Society of Mechanical Engineers) Thermal and Fluids Engineering Conference was held in Songdo, Incheon, Korea, from March 18 till 21, 2012. The first KSME-JSME Thermal and Fluids Engineering Conference started in 1988 in Seoul. After the meeting, both Societies hold conferences separately for thermal and fluids engineering from the Second. For the Fluids Engineering Conference, the Second was held in 1990 in Seoul, the Third in 1994 in Sendai, the Fourth in 1998 in Busan, and the Fifth in 2002 in Nagoya. For the Thermal Engineering Conference, the Second was held in 1992 in Kitakyushu, the Third in 1996 in Gyeongju, and the Fourth in 2000 in Kobe. Both Societies reunite two separate conferences into one conference from the Sixth KSME-JSME Thermal and Fluids Engineering Conference (TFEC6) held in Cheju in 2005. The TFEC7 was held in Sapporo, Hokkaido in 2008.

Songdo at Incheon was selected as the conference

site to attract more participants from both Korea and Japan because Songdo is the modernist city in Korea and very close to the Seoul/Incheon International Airport. Thermal and fluids phenomena are associated with a variety of interesting fields of science and engineering such as energy generation, conversion and transport, environmental pollution, and moving vehicles. The subject bearing such an importance to the welfare of mankind, many researchers have been and will be attracted to the challenging problems in thermal and fluids engineering.

There were 8 plenary lectures; Characteristics of quenching high temperature surface and vapor explosion by Prof. Masanori Monde (Saga University), Recent progress in laser diagnostics and DNS of turbulent combustion by Prof. Toshio Miyachi (Tokyo Institute of Technology), Thermoacoustics as instability of gas due to diffusion under temperature gradient by Prof. Nobumasa Sugimoto (Osaka University), Simulation of

To Join ICeM:

Everybody, who is interested in Multiphase flow, is welcome to join ICeM. Please contact one of the following board members to register in ICeM member.

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The number of the paper was 152 in 15 Forum Session for specific topics and 308 in General Session. In total, there were 468 papers and 218 from Japanese side. The number of participants was 626, which was almost the same as in 6th and 7th TEFC. From Japan, 295 persons attended the conference as well as 308 persons from Korea. And 23 persons gathered from other 11 countries. Furthermore, 301 students joined this conference. That is to say, about a half of the participants was students. This conference is very suitable to the students who have presentation for the first time because almost all the participants are not native speakers and do not speak fluent and fast

English. The second reason is cheaper travel fee. Korea is very close to Japan. The third is short presentation time because the speaker had 15 minutes in total including 5 minutes discussion. But, I think this presentation time is too short to discuss deeply.

In this conference, the committee decided that copyright does not belong to the Society but to the authors. The authors can submit their papers to some journals that the authors like without any limitations. This will be a new trend for future conferences.

Finally, I appreciate much effort of preparing and organizing this conference by Korean organizing committee members, in particular, Prof. Nae-Hyun Kim, chair of this conference and Prof. Yong Tae Kang, secretary general in Korean side and Prof. Yutaka Tabe, secretary general in Japanese side.

Prof. Eiji Tomita
Chair in Japanese side
Okayama University, Japan



The second toast by Prof. Toshio Miyauchi, Tokyo Institute of Technology, in Banquet



Banquet in a ballroom with many participants

Japan-U.S. Seminar on Two-Phase Flow Dynamics 2012 June 7-12, 2012, Tokyo, Japan

by Tomoji Takamasa

Japan-U.S. Seminar on Two-Phase Flow Dynamics 2012 was held at Tokyo University of Marine Science and Technology, Tokyo, Japan from June 7 to 12.

Series of Japan-U.S. Seminar on Two-Phase Flow Dynamics had been held every four years. Since the first seminar was held in Kansai, Japan - 1979, these seminars have alternated between Japan and the U.S. Subsequent seminars have been held at Lake Placid,

New York - 1984; Ohtsu, Japan - 1988; Berkeley, California - 1992; Fukuoka, Japan - 1996; Santa Barbara, California - 2000; Moriyama, Japan - 2004; and Santa Monica, California - 2008. The results of all the previous Japan-U.S. seminars had been disseminated to the world technical community.

The present seminar was the ninth in the series of the Japan-U.S. Seminar on Two-Phase Flow Dynam-

ics, co-sponsored by Faculty of Marine Technology, Tokyo University of Marine Science and Technology, and by US National Science Foundation. In this Seminar, the co-chairmen were Prof. Tomoji Takamasa (Tokyo University of Marine Science and Technology, Japan) and Prof. Masahiro Kawaji (The City University of New York, USA). The advisory board members, Prof. Yutaka Abe (University of Tsukuba, Japan), Prof. Sanjoy Banerjee (The City University of New York, USA), Prof. Yassin A. Hassan (Texas A&M University, USA), Prof. Takashi Hibiki, (Purdue University, USA), Prof. Koichi Hishida (Keio University, Japan), Prof. Mamoru Ishii (Purdue University, USA), Prof. Kaichiro Mishima (Institute of Nuclear Safety System, Japan), Prof. Akio Okayasu (Tokyo University of Marine Science and Technology, Japan), Prof. Akimi Serizawa (Professor Emeritus, Kyoto University, Japan), Prof. Akio Tomiyama (Kobe University, Japan), Prof. Karen Vierow (Texas A&M University, USA) had supported the seminar very actively. The local supporting staffs, Prof. Tatsuya Hazuku (Tokyo University of Marine Science and Technology), Prof. Shigeo Hosokawa (Kobe University), Prof. Hiroshige Kikura (Tokyo Institute of Technology), Prof. Tomio Okawa (The University of Electro-Communications), and Prof. Akira Sou (Kobe University) conducted several cooperative works, such as review process and session programming.

The key objective of the seminar was to provide an opportunity for the attendees to carry out in-depth discussion on the state of the art of the field, current challenges, and the next directions for research in the important and pervasive two-phase flow phenomena in the same manner as the previous seminar. Collectively, the research pursued by the seminar participants had the potential to: improve instrumentation methods, develop reliable constitutive relations, and obtain a better understanding of detailed two-phase flow phenomena.

The major objectives of the seminar were to:

- 1) develop general directions for research;
- 2) focus future research with regard to the recent significant developments in instrumentation technology;
- 3) discuss best approaches for the fully three-dimensional two-phase flow model.

The participation in the seminar was by invitation only. In extending invitations, emphasis was placed

on diversity and inclusion of younger researchers.

In the present seminar, 19 technical papers and following six keynote lectures were presented.

- 1) Pattern Dynamics Approach to Two-Phase Flow Dynamics -In Memory of Professor Seikan Ishigai, the Founder of the First Japan-U.S. Seminar on Two-Phase Flow Dynamics, M. Ozawa (Kansai Univ)
- 2) Effect of Gravity on Flow Characteristics in Bubbly Flow, T. Hazuku (Tokyo Univ Marine S. and T.),
- 3) Assessment of the Upwind First Order Scheme Applied to the One-Dimensional Two-Fluid Model in the Context of the Kelvin-Helmholtz Instability, M. L. Bertodano (Purdue Univ)
- 4) Broad Destruction of Density Stratification Using a Single Bubble Plume, Y. Murai (Hokkaido Univ)
- 5) Results of Recent Nucleate Pool Boiling Experiments on the International Space Station, V. K. Dhir (UCLA)
- 6) Full Eulerian Methods for Fluid-Structure/Membrane Interaction Problems, K. Sugiyama (The Univ of Tokyo)

On the 5th day of the seminar, the topical session "Special Seminar on Two-Phase Flow and Heat Transfer Research Post Fukushima Accident" was conducted co-organized by Prof. K. Okamoto (The University of Tokyo), Prof. A. Yamaguchi (Osaka University), and Prof. M. Kawaji. The panel lectures with the panelists including Prof. Michael Corradini (University of Wisconsin), Dr. Masanori Naito (Institute of Applied Energy), Dr. Hideo Nakamura (Japan Atomic Energy Agency), Prof. Gretar Tryggvason (Worcester Polytechnic Institute), and Mr. Yasunori Yamanaka (Tokyo Electric Power Company), and following discussions addressed lessons learned from the Fukushima Accident, issues and future directions of thermal hydraulic research in nuclear engineering.

There were 75 registrants attending Japan-U.S. Seminar on Two-Phase Flow Dynamics 2012, of which approximately 20 were students. The interactions amongst researchers from the two countries led to development of co-operative research programs beneficial to the advancement of the field and to pooling of intellectual resources of the two countries in charting the direction of the next research.

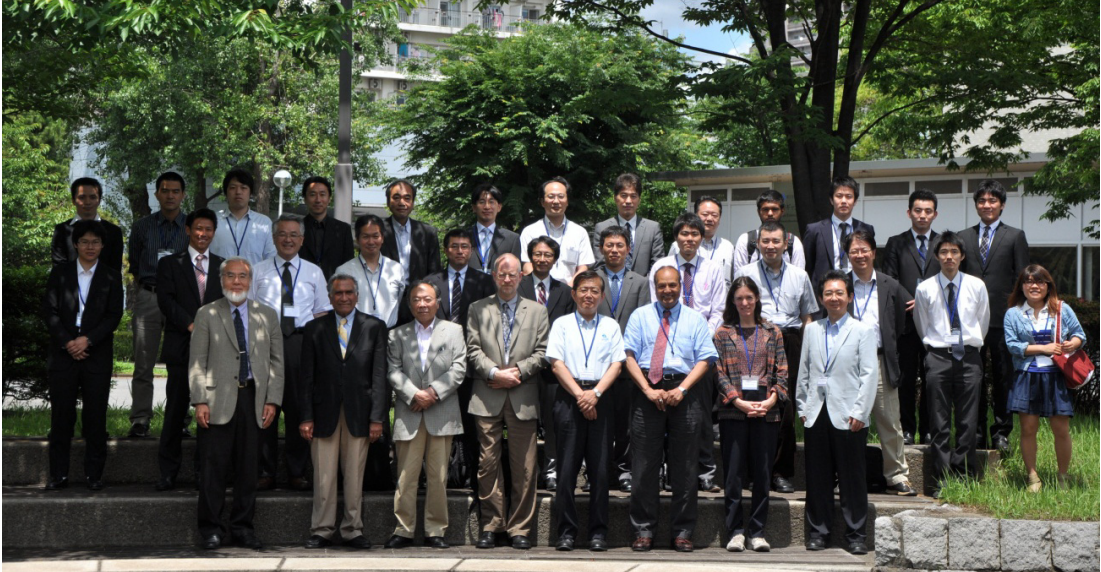
By bringing together well established and younger researchers from the two countries in the

area of two-phase flow and heat transfer, this seminar will contribute greatly to the sustained rapid progress in two-phase flow dynamics during the coming decade.

The next seminar will be held at Purdue University, Indiana, USA, in 2016 co-chaired by Prof.

Martin Lopez-De-Bertodano and Prof. Yutaka Abe.

Prof. Tomoji Takamasa
Tokyo University of Marine Science and
Technology
E-mail: Takamasa@kaiyodai.ac.jp



Future Meetings

Following list includes Conference Name, Place, Date and Contact.

6th European-Japanese Two-Phase Flow Group Meeting

Kumamoto, Japan, September 23 - 28, 2012

Chair:

Prof. Michio Sadatomi

Dept. of Mechanical System Engineering

Kumamoto University

E-mail: sadatomi@mech.kumamoto-u.ac.jp

Co-chair:

Prof. Akio tomiyama, Kobe University, Japan

Dr. Gian Piero Celata, ENEA, Italy

Prof. Iztok Zun, University of Ljubljana, Slovenia

Prof. Paolo di Marco, University of Pisa, Italy

Secretary:

Prof. Akimaro Kawahara,

Kumamoto University, Japan

akimaro@mech.kumamoto-u.ac.jp

<http://www.mech.kumamoto-u.ac.jp/ejtpg12/>

7th International Symposium on Turbulence, Heat and Mass Transfer

Palermo, Italy, September 24 - 27, 2012

Chair:

Prof. Kemal Hanjalic

Organizing Secretary:

Domenico Borello, Ph.D.

E-mail: thmt12@thmt-12.org

<http://www.thmt-12.org/>

2012 AIChE Annual Meeting

Pittsburgh, USA, October 28 - November 2, 2012

Annual Meeting Program Chair:

Lorenz T. Biegler

Department of Chemical Engineering

Carnegie Mellon University

Tel/Fax: 412-268-2232/412-268-7139

E-mail: 2012Annual@aiiche.org

<http://www.aiiche.org/conferences/aiiche-annual-meeting/2012>

ASME 2012 International Mechanical Engineering Congress & Exposition

Houston, Texas, November 9 - 15, 2012
2012 Congress Steering Committee Chair
Pradeep Lall
Auburn University
E-mail: lall@eng.auburn.edu
<http://www.asmeconferences.org/Congress2012/>

2012 ANS Winter Meeting and Nuclear Technology Expo

San Diego, CA, USA, November 11 - 15, 2012
Honorary Chair:
Salomon Levy (Owner, Levy & Associates)
General Chair:
Per Peterson (University of California, Berkeley)
Program Chair:
Xiaodong Sun (The Ohio State University)
Assistant Program Chairs:
Sagit M. Cetiner
(Oak Ridge National Laboratory)
Sedat Goluoglu (University of Florida)
http://www.new.ans.org/meetings/c_1

Third International Forum on Heat Transfer (IFHT2012)

Nagasaki, Japan, November 13 - 15, 2012
Organizing Committee, Chair:
Prof. Y. Takata (Kyushu University, Japan)
Executive Committee, Chair:
Prof. K. Miyazaki (Kyushu Inst. of Tech., Japan)
<http://www.ifht2012.com/>

ISTP-23: International Symposium on Transport Phenomena

New Zealand, November 19 - 22, 2012
Chair:
Prof. Masaru Ishizuka
Toyama Prefectural University, Japan
Contact:
Petiteena McOnie
Conference Management
The University of Auckland
Tel: +64 9 923 9695
E-mail: istp23@auckland.ac.nz
<http://www.istp23.com/>

American Physical Society 65th Annual Fall DFD Meeting

San Diego, California, November 18 - November 20, 2012
Contact:
Harriet Kounaves and Francesco Carusi
E-mail: planmeetconsult@gmail.com
<http://apsdfd2012.ucsd.edu/>

8th Japan-Korea Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS8)

Beppu, Oita, Japan, December 9 - 12, 2012
Honorary Chairs
Hisashi Ninokata (TITech), Hee-Cheon No (KAIST)
General Chairs
Masaya Ohtsuka (Hitachi)
Moo-Hwan Kim (POSTECH)
Contact:
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Prof. Akira Yamaguchi, Osaka Univ.
tpc@nthas8.org
Local Organization Committee
Prof. Koji Morita, Kyushu Univ.
info@nthas8.org
Student Seminar
Dr. Hidemasa Yamano, JAEA
seminar@nthas8.org
<http://www.nthas8.org/>

European Nuclear Conference (ENC 2012)

Manchester, United Kingdom, December 9 -12 2012
Chairman:
Frank Deconinck, SCK-CEN, Belgium
Co-Chair:
Norman Harrison, Babcock, UK
<http://www.euronuclear.org/events/enc/enc2012/>

Ninth International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (CFD2012)

Melbourne, Australia, December 10 - 12, 2012
Chair:
Dr. Peter Witt (CSIRO)
Contact:
Ali Green, Conference Secretary
CSIRO Mathematics, Informatics and Statistics
Tel/Fax: +61 3 9545 8098/+61 3 9544 1128
E-mail: cfid@minerals.csiro.au
<http://www.cfid.com.au/cfidconf/>

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15th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-15)

Pisa, Italy, May 12 - 16, 2013
Conference Chairs:
F. D'Auria (UNIFI, Italy)
Y. Hassan (Texas A&M, USA), Co-Chair
J. H. Kim (KAIST/EPRI, USA), Co-Chair
Contact:
Alessandro Petruzzi
a.petruzzi@ing.unipi.it
Martina Adorni
m.adorni@ing.unipi.it
<http://www.nureth15.org/>

7th International Symposium on Radiative Transfer (RAD-13)

Cesme, Izmir, Turkey, June 2 - 8, 2013
Correspondence:
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E-mail: webb@byu.edu
Dr. Denis Lemonnier (Conference Co-Chair)
Tel/Fax: +33 5 4949 81 16/+33 5 49 49 81 01
E-mail: denis.lemonnier@let.ensma.fr
Prof. Faruk Arınc (ICHMT Secretary-General)
Mechanical Engineering Department
Middle East Technical University
Tel/Fax: +90 312-210-5214/+90 312-210-1429
E-mail: farinc@ichmt.org
<http://www.ichmt.org/rad-13/>

International Conference on Multiphase Flow 2013 (ICMF2013)

Jeju, Korea, May 26 - 31, 2013
Chair:
Prof. Moo Hwan Kim, POSTECH
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Tel/Fax: +82-2-6711-4762/+82-2-325-2095
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3rd Fl. Euihak Bidg., 448-13 Seogyo-dong, Mapo-gu,
Seoul, 121-841 Korea
Postech:
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Division of Advanced Nuclear Engineering
San 31 Hyoja-Dong, Nam-gu, Pohang, Gyeongbuk,
790-784 Korea
<http://www.icmf2013.org/>

2013 ANS Annual Meeting

Atlanta, USA, June 16 - 20, 2013
General Chair:
Stephen Kuczynski (CEO, Southern Nuclear Co.)
Program Chair:
Sedat Goluoglu (University of Florida)
Assistant Program Chairs:
Jeff Brault (Engineer, Shaw Group)
Mark D. DeHart (Distinguished R&D Staff, Idaho
National Laboratory)
http://www.new.ans.org/meetings/c_1

8th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics (ExHFT8)

Lisbon, Portugal, June 24 - 27, 2013
President:
Prof. N. Kasagi (Japan)
Vice-president
Prof. G.P. Celata (Italy)

Contact:
Instituto Superior Tecnico
Rita Maia
E-mail: ritamaia@ist.utl.pt
Tel: +351 21 841 7186
Fax: +351 21 847 5545
<http://www.exhft8.org/>

7th International Conference on Computational and Experimental Methods in Multiphase and Complex Flow (Multiphase flow 2013)

A Coruña, Spain, July 3 - 5, 2013
Conference Chairmen
C. A. Brebbia
Wessex Institute of Technology, UK
P. Vorobieff
University of New Mexico, USA
Contact:
Wessex Institute of Technology
Tel/Fax: 44(0) 23 80293223/44(0) 23 80292853
<http://www.wessex.ac.uk/13-conferences/multiphase-flow-2013.html>

21st International Conference on Nuclear Engineering (ICONE-21)

Chengdu, China, July 29 - August 2, 2013
CHINSES NUCLEAR SOCIETY
P. O. Box 2125, Beijing 100822, China
Address: Sanlihe Nansanxiang No.1, Xicheng District,
Beijing, China
Tel, Fax: 86-10-68555584/59, 86-10-68527188
E-mail: icone21@ns.org.cn
<http://www.icone21.org/>

8th International Symposium on Turbulence and Shear Flow Phenomena

Poitiers, France, August 28 - 30, 2013
Organizing committee:
A. V. Johansson, KTH, Sweden (Chair)
R. Friedrich, Technische Universität München,
Germany
A. J. Smits, Princeton University, USA
H. J. Sung, KAIST, Korea
S. Tavoularis, University of Ottawa, Canada
J.-P. Bonnet, CNRS, University of Poitiers, ENSMA,
France
<http://tsfp8.pprime.fr/>

International Conference on Power Engineering-2013 (ICOPE-2013)

Wuhan, China, October 23-27, 2013
Chair:
Prof. Shuhong Huang (CSPE)
Huazhong University of Science and Technology
Co-Chair:
Dr. Jun Inumaru (JSME)

Mr. George Saxon (ASME)
Contact:
Prof. Xiaobing Luo
Tel/Fax: 86-27-87542618-612/86-27-87540724
E-mail: icope2013@126.com
<http://www.icope-2013.org/>

2013 ANS Winter Meeting and Nuclear Technology Expo

Washington DC, USA, November 10 - 14, 2013
General Chair:
James Rogers (Chairman, President and CEO, Duke Energy)
Program Chair:
Linda Hansen (Argonne National Laboratory)
http://www.new.ans.org/meetings/c_1

The 12th International Symposium on Fluid Control, Measurement and Visualization (FLUCOME 2013)

Nara, Japan, November 18 - 22, 2013

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The 16th International Symposium on Flow Visualization (ISFV16)

Okinawa, Japan, June 24 - 28, 2014

2014 ANS Annual Meeting

Reno, NV, June 15 - 19, 2014
Grand Sierra Resort
http://www.new.ans.org/meetings/c_1

15th International Heat Transfer Conference (IHTC-15)

Kyoto, Japan, August 10 - 16, 2014
Organizing Committee
N. Kasagi, Chairman, Japan Sci. & Tech. Agency
H. Yoshida, Vice Chairman, Kyoto University
S. Maruyama, Vice Chairman, Tohoku University
<http://te.kuaero.kyoto-u.ac.jp/ihtc15/>

2014 ANS Winter Meeting and Nuclear Technology Expo

Anaheim, CA, November 9 - 13, 2014
Disney Resort & Hotel
http://www.new.ans.org/meetings/c_1

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International Conference on Multiphase Flow 2013

www.icmf2013.org

Conference Chair

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POSTECH

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Hyoung-Bum Kim	Gyeongsang National University
Chul-Hwa Song	KAERI

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Seoul, 121-841 Korea

Venue

ICC Jeju - International Convention Center Jeju
Seogwipo City,
Jeju Special Self-Governing Province, Korea
Tel: +82-64-735-1000
Fax: +82-64-738-8922
<http://www.iccjeju.co.kr>

Important Dates

Abstract submission by	October 2, 2012
Full draft paper submission by	December 31, 2012
Final paper submission by	February 28, 2013
Early registration by	March 31, 2013

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University of Florida, USA
Prof. Moo-Hwan Kim (ex-officio),
POSTECH, South Korea

Conference Overview

The study of multiphase flow is ever applied in wider scope as the technological advances are occurring constantly. International Conference on Multiphase Flow (ICMF) is dedicated to introduce recent advances of science and offer opportunity to exchange new ideas, valuable results and techniques in this increasingly important field. The major research topics relevant for the conference are as follows:

- Bio-fluid dynamics
- Boiling and condensation
- Bubbly flows
- Cavitation
- Colloidal and suspension dynamics
- Collision, agglomeration and breakup
- Computational techniques for multiphase flows
- Droplet flows
- Environmental and geophysical flows
- Experimental methods for multiphase flows
- Fluidization and fluidized beds
- Fluid structure interactions
- Fuel cell
- Granular media
- Industrial applications
- Instabilities
- Interfacial flows
- Material processing
- Melting and solidification
- Micro and nano scale multiphase flows
- Microgravity in two phase flow
- Multiphase flow in heat and mass transfer
- Non Newtonian multiphase flows
- Modeling of multiphase flow
- Nuclear application
- Particle-laden flows
- Particle, bubble and drop dynamics
- Reactive multiphase flows
- Refrigeration and air-condition application
- Spray
- Turbulence in multiphase flow

History of ICMF

The International Conference on Multiphase Flow (ICMF) first was held in Tsukuba, Japan in 1991 and the second ICMF took place in Kyoto, Japan in 1995. During this conference, it was decided to establish an International Governing Board which oversees the major aspects of the conference and makes decisions about future conference locations. Due to the great importance of the field, it was furthermore decided to hold the conference every three years successively in Asia including Australia, Europe including Africa, Russia and the Near East and America. Hence, ICMF 1998 was held in Lyon, France, ICMF 2001 in New Orleans, USA, ICMF 2004 in Yokohama, Japan, ICMF 2007 in Leipzig, Germany and ICMF 2010 in Florida in USA.

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Ping Cheng	Isao Kataoka	Neelesh Patankar	Shuang-Feng Wang
Keumnam Cho	Massoud Kaviani	Yoav Peles	George Yadigaroglou
Haecheon Choi	Koju Kawasaki	Michael Z. Podowski	Seung Mun You
Michael Corradini	Jungho Kim	Andrea Prosperetti	Stéphane Zaleski
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