

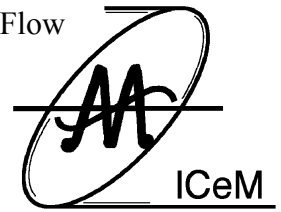


The International Information Center for Multiphase Flow

NEWSLETTER

No. 35, December 2010

The Japanese Society for Multiphase Flow



8th Japan-UK Seminar on Multiphase Flow 2010 September 13-15, 2010, Otaru, Japan

by Yuichi Murai

It has become the 8th edition since 1995! After seven previous alternate holding between Japan and United Kingdom, the 8th Japan-UK Seminar on Multiphase Flows was held in Otaru, Hokkaido, Japan on the 13th-15th of September 2010. The present two-country seminar was chaired by Yuichi Murai, Hokkaido University, and co-chaired by Barry Azzopardi, Nottingham University. The seminar was sponsored and operated by Laboratory for Flow Control (LFC), Hokkaido University. Following the recommendation of the advisory board members, who contributed to a successful organization of the previous seminars, some limited participation from other countries and regions has been added this year.

The Japan-UK Seminar (JUK) or the UK-Japan Seminar was started in 1995 in Nottingham, in order to create a new community of researchers in the field of multiphase flow between the two countries, which was called by Prof. Akimi Serizawa, Kyoto

University, and Prof. Barry Azzopardi, Nottingham University. The seminar has been continuously held every two years in the last 15 years; the 2nd seminar at Kyoto University (1997) chaired by the same two professors, the 3rd at Imperial College London (1999) by Profs. Issa and Serizawa, the 4th at Keio University England Campus in Bary St. Edmund (2001) by Profs. Hishida and Issa, the 5th in Surrey University (2003) by Profs. Hagiwara and Smith, the 6th at Kansai University Osaka (2005) by Profs. Ozawa and Azzopardi, and the 7th at Nottingham University (2007) by the same professors.

The main focus of the seminar is on gas-liquid two-phase flow that shows a variety of flow patterns from micro to macroscopic scale that we need to understand before their engineering applications. In this seminar, seven topics from UK participants and 15 topics from Japanese participants were presented and discussed. In addition to those, the chairs invited

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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Tokyo Institute of Technology
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Dr. Kosuke Hayashi
Kobe University
E-mail: hayashi@mech.kobe-u.ac.jp

two speakers from Korea and Sweden so that the total number of presentations was 24. The topics covered by these presentations include gas-liquid two-phase flow in small to large diameter tubes (Azzopardi, Issa, Sang Yong Lee, Nakamura), their dependence on wall properties (Karayiannis, Takamasa, Ami), their influences on boiling characteristics (Anglart), experimental approaches to turbulent dispersed flow (Hishida, Charalampous, Tasaka, Watamura), prediction of complex phase interfaces (Tomiyama, Hayashi, Denissenko, Kumagai, Oyabu), single and clustered bubble dynamics (Sugiyama, Kaneko, Kobayashi, Sakurai), and also geophysical multiphase flows (Azzopardi, Nambu).

All the topics were presented in oral style sharing about 30 minutes for each through out the three days. On Monday evening, the seminar dinner was held at

Masazushi, which is the top quality sushi restaurant in Hokkaido prefecture. On Tuesday afternoon, all the participants enjoyed mini-excursion on bus to Tenguyama hill vista point and Otamoi cliff, and they relished classic Kaiseki dinner at “Aoyamagoten” a Japanese manor house in Otaru city. After the seminar, the core members decided to continue this two-country seminar for keeping and transfer of the original spirit, and planed the next 9th seminar to be held in Uxbridge London in spring of 2012, the year of London Olympic game.

Prof. Yuichi Murai
Seminar chair of 8th Japan-UK seminar on
multiphase flow
Hokkaido University
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Japan-UK Seminar on Multiphase Flow - Otaru 13th-15th Sept. 2010



Participants on the top of Tenguyama hill

The online version of ICeM Newsletter is available at

<http://www.jsmf.gr.jp/ICeM/newsletter.htm>

**Fifth International Topical Team Workshop on
Two-Phase Systems for Ground and Space Applications
September 26 – 29, 2010, Kyoto, Japan**

by Hitoshi Asano

Fifth International Topical Team Workshop on Two-Phase Systems for Ground and Space Applications was successfully held in Kyoto, Japan, September 26 – 29, 2010. The workshop is organized by Kyushu University, Heat Transfer International Research Institute and Microgravity Research Center of Université Libre de Bruxelles, and Institute of Thermophysics of Siberian Branch of Russian Academy of Sciences, and is supported by European Space Agency (ESA). The meeting has been chaired by Prof. Haruhiko Ohta of Kyushu University, Prof. Oleg. A. Kabov and Prof. Jean-Claude Legros of Université Libre de Bruxelles. One of the objective of the workshop is to promote global cooperation in research on two-phase systems for space application, especially between the topical team in ESA and the working group in Japan Aerospace Exploration Agency (JAXA).

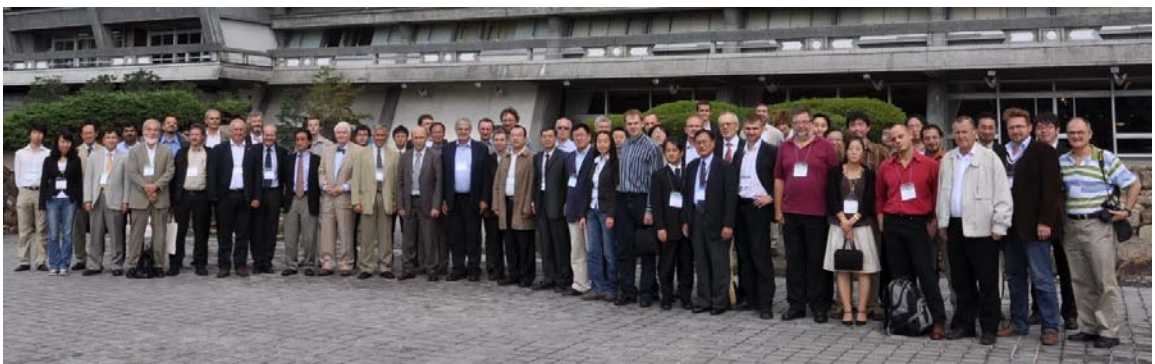
The first and third workshop had been held in Brussels, Belgium in 2006 and 2008, respectively, the second one in Kyoto, Japan in 2007, and the fourth one in Novosibirsk, Russia in 2009.

Topics for the presentations include: Experiments in Microgravity, Boiling, Evaporation and Condensation, Films, Layers and Interfaces, Physics of Contact Line and Wetting, Microchannels and Minichannels, Thermo-capillary flows, Spray, Jets and Two-Phase Flows, Bubbles, Foams and Drops, Electronics Cooling, Properties of Vapor – Liquid – Solid Interfaces.

About 90 researchers and scientists from 18 countries participated this workshop. A total of 10 plenary lectures, 12 keynote lectures, 26 oral presentations and 37 poster presentations had been presented in a single conference room.

In the opening, activities in ESA and JAXA were introduced by Dr. Oliver Minster of ESA and Dr. Masahiro Takayanagi of JAXA, respectively. It was reported by Dr. Oliver Minster that the operation of International Space Station (ISS) would be extended at least to 2020. He also talked that global cooperation to promote projects for realization of two-phase systems in space is required. In the next presentation, Dr. Masahiro Takayanagi introduced experiments in KIBO, Japanese Experimental Module (JEM) of ISS. He also introduced a JAXA project on boiling two-phase flow experiments in KIBO, whose project's name is "Interfacial behaviors and heat transfer characteristics in boiling two-phase flows". Detail of the experiments was shown in the plenary lecture by Dr. Kiyosumi Fujii and Dr. Haruo Kawasaki of JAXA on behalf of Prof. Haruhiko Ohta of Kyushu University.

In the plenary and keynote lectures and general presentations, about half of all presentations were related to gravity effect on gas-liquid two-phase phenomena. In those, 16 presentations were on pool or flow boiling, 8 were on thermocapillary convection. A number of presentations from Europe and the US focused on hydrodynamics, heat flow, and wettability



around vapor-liquid-solid phase contact line at the bottom of a single vapor bubble or a droplet. On the other hand, there were 10 presentations on flows in mini/micro channels. Since the workshop convened in a single room, fruitful discussion was obtained during the workshop. In the closing, the organizers award was conferred on Prof. Yulii D. Shikhmurzaev of University of Birmingham Edgbaston, UK (his presentation title was "Dynamics of wetting and de-wetting: Modelling and key experiments").

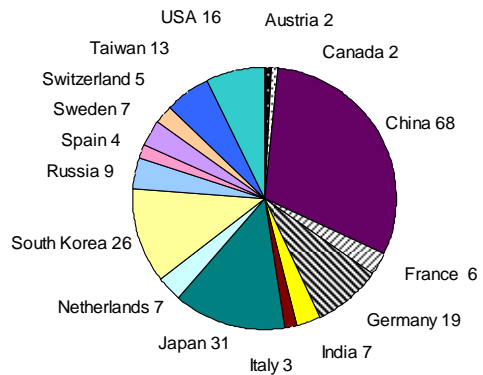
Next sixth workshop will be held in the next year September 2011, the 40th anniversary of the first manned spaceflight into Earth's orbit by Yuri Gagarin in 1961. The detail of the next workshop will be announced in the Web site of Heat Transfer International Research Institute (<http://hti.ulb.ac.be/>).

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NUTHOS-8 Report October 10-14, 2010, Shanghai, China

by Xu Cheng and Xiaojing Liu

The NUTHOS-8 conference was held at the Eton hotel in Shanghai, China, October 10-14, 2010. It was organized by the China Nuclear Society, co-organized Shanghai Jiao Tong University, China Guangdong Nuclear Power Corporation, Nuclear Power Institute of China and State Nuclear Power Technology Corporation. The conference is hosted by Shanghai Jiao Tong University. The conference sponsors are Chinese Nuclear Society, American Nuclear Society, Atomic Energy Society of Japan, Korean Nuclear Society and Canadian Nuclear Society. In attendance were 211 participants from 26 countries, with 240 papers contributed. The following table shows the distribution of participants.



The NUTHOS-8 conference consisted of one plenary session and 50 technical sessions, distributed in 5 parallel session rooms. It included 240 technical papers, 11 keynote lectures and 4 plenary lectures. All sessions were well attended. The 11 invited keynote lectures covers various topics and were conducted by world leading experts in their subjects. The plenary session includes 4 speeches giving overview of nuclear program of 4 various countries, i.e. China, Korea, Japan and US. Two panel sessions were held on "Nuclear Energy Technology Challenges and Status" and "Challenges in Nuclear Safety Research" and achieved large success. The technical papers and invited lectures are divided into 14 topics. They are:

- Thermal/hydraulics of water cooled reactors
- Thermal-hydraulics and safety of liquid metal reactors
- Thermal-hydraulics and safety of fusion systems
- Thermal-hydraulics and safety of gas cooled reactors

Austria	2	Italy	2
Belgium	3	Japan	35
Brazil	2	South Korea	17
Canada	2	Lithuania	2
China	64	Malaysia	1
Czech	1	Netherlands	2
Finland	1	Norway	2
France	7	Russia	2
Germany	20	Spain	3
Hungary	5	Sweden	5
India	2	Switzerland	4
Indonesia	1	Taiwan	10
Iran	1	USA	15

Paper contribution by countries is shown in the following figure.

Thermal-hydraulics and safety of SCWR
Safety of water cooled reactors
Severe accidents
Plant operation, monitoring and control
CFD application
Code coupling and V&V
PSA application
Advanced numerical approach
Experimental studies
Cross-cutting issues

Two technical tours were organized on last day. About 60 participants join the tour to Sanmen NPP construction site with AP 1000, whereas about 40 participants visited the test facilities at Shanghai Jiao Tong University.

The NUTHOS-8 conference was completed successfully with the help of many domestic and international colleagues. The ability to maintain the technical high quality of the NUTHOS-8 conference depended largely on the review process. At least two reviewers were required for each paper and two

months were reserved for the paper review procedure prior the submission of final papers. This was a tough task for all the reviewers who volunteered to help because there were more than 250 papers to review. Therefore, I would like to express my thanks to all those who contributed to the success of the conference in technical issues, organization as well as in financial aspects. My special thanks to the faculty members and students of the School of Nuclear Science and Engineering (SNSE) of SJTU for their enormous efforts in the organization of the conference.

Above all, I hoped and am sure by now that the attendees enjoyed not only the conference but also EXPO 2010 in Shanghai..

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xiaojingliu@sjtu.edu.cn

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 A. Tomiyama (Kobe University)
 T. Kunugi (Kyoto University)

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 H. Kikura (Tokyo Institute of Technology)

Chair of Planning Division
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Chair of International Intercourse Division
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Chair of General Affairs Division
 Y. Saito (Kyoto University)

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[WWW homepage : http://www.jsmf.gr.jp/](http://www.jsmf.gr.jp/)

Future Meetings

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

2nd European Conference on Microfluidics (μFluO10)

Toulouse, France, 8-10 December 2010
<http://www.microfluidique.insa-toulouse.fr/mf10.htm>

----- 2011 -----

International Conference on Fluid Mechanics, Heat Transfer and Thermodynamics (ICFMHTT 2011)

Dubai, United Arab Emirates, January 25-27, 2011
<http://www.waset.org/conferences/2011/dubai/icfmhtt>

Workshop on Interfaces and Interfacial Displacement in Unsaturated Porous Media

Lauterbad, Germany, February 2 - 4, 2011
<http://www.musis-workshop2011.uni-hannover.de/>

International Conference on Energy Systems and Technologies (ICEST 2011)

Cairo, Egypt, February 14 - 17, 2011
E-mail: info@afaqscientific.com
<http://www.afaqscientific.com/icest2011/>

The 8th ASME-JSME Thermal Engineering Joint Conference (AJTEC2011)

Honolulu, Hawaii, USA, March 13-17, 2011
Prof. Koichi Hishida, Keio University
E-mail: hishida@sd.keio.ac.jp
Prof. James Klausner, University of Florida
E-mail: klaus@ufl.edu
Prof. Isao Satoh, Tokyo Institute of Technology,
E-mail: satohi@mep.titech.ac.jp
<https://www.asmeconferences.org/AJTEC2011/>

16th International Conference on Finite Elements in Flow Problems (FET 2011)

Munich, Germany, March 23 - 25, 2011
E-mail: fef2011labs@lnm.mw.tum.de
<http://www.lnm.mw.tum.de/fef2011>

2011 International Conference on Fluid Dynamics and Thermodynamics Technologies (FDTT 2011)

Bali, Indonesia, April 1-3, 2011
E-mail: fdttd@vip.163.com
<http://www.iacsit.org/fdttd/cfp.htm>

International Sorption Heat Pump Conference (ISHPC11)

Padua, Italy, April 6 - 8, 2011
E-mail: info@aicarr.org
<http://www.aicarr.org/Pages/PadovaIIR2011/home.aspx>

Eurotherm Seminar 92: Gravitational Effects on Liquid - Vapor Phase Change

Presquile des Giens, France, April 17 - 21, 2011
Regarding registration:
M. Micheline Leboisne
micheline.leboisne@polytech.univ-mrs.fr
Regarding the abstract or anything:
Dr. David Brutin
eurotherm92@polytech.univ-mrs.fr
<http://eurotherm92.polytech.univ-mrs.fr/>

6th Subrata Chakrabarti International Conference on Fluid Structure Interaction

Orlando, USA, May 9 - 11, 2011
Conference Secretariat
Claire Shiell
Wessex Institute of Technology
Email: cshiell@wessex.ac.uk
<http://www.wessex.ac.uk/11-conferences/fluidstructurainteraction-2011.html>

19th International Conference On Nuclear Engineering (ICONE19)

Makuhari, Chiba, Japan, May 16 - 19, 2011
General information: icone19@jsme.or.jp
Paper information: icone19@jnes.go.jp
<http://www.icone19.org/>

International Conference on Computational Science (ICCS 2011)

Tsukuba, Japan, June 1 - 3, 2011
<http://www.iccs-meeting.org/iccs2011/>

11th Asian Symposium on Visualization (ASV11)

Niigata, Japan, June 5 - 9, 2011
Secretary General
Dr. T. Yamagata
Visualization Research Center, Niigata University
Tel: +81-25-262-6800
E-mail: vrc@eng.niigata-u.ac.jp
<http://tmfujisv.eng.niigata-u.ac.jp/asv11/>

AIChE-DECHEMA Global Conference on Energy Sustainability in the Process Industries (ESPI)

Hong Kong SAR, China, June 5-8, 2011
<http://www.aiche.org/conferences/specialty/ESPI.aspx>

6th International Conference on Computational and Experimental Methods in Multiphase and Complex Flow

Kos, Greece, June 15-17, 2011

Conference Secretariat:
Prof. Irene Moreno Millan
Wessex Institute of Technology
E-mail: imoreno@wessex.ac.uk
<http://www.wessex.ac.uk/11-conferences/multiphaseflow-2011/page-2.html>

15th International Conference on Multiphase Production Technology
Cannes, France, June 15-17, 2011
Tel: +44 (0) 1234 750422
Fax: +44 (0) 1234 750074
Email: confx3@bhrgroup.com
http://www.bhrconferences.com/multiphase_technology_15.aspx

2011 ANS Annual Meeting
Hollywood, USA, June 26 - 30, 2011
Program Chair:
Dr. Charlotta E. Sanders
Principal Nuclear Engineer, Holtec Center
http://www.new.ans.org/meetings/c_1

41st AIAA Fluid Dynamics Conference and Exhibit
20th AIAA Computational Fluid Dynamics Conference
42nd AIAA Thermophysics Conference
Honolulu, Hawaii, USA, June 27 - 30, 2011
<http://www.aiaa.org/content.cfm?pageid=230&lumeetingid=2220>

International Conference on Power Engineering 2011 (ICOPE-11)
Denver, Colorado, USA, July 12 - 14, 2011
Conference Secretariat:
Prof. Hitoshi Asano
Kobe University
E-mail: icope11@mech.kobe-u.ac.jp
http://www.jsme.or.jp/pes/Event/Conference/ICOPE11_Call_for_papers.pdf

International Conference on Fluid Dynamics and Thermodynamics (ICFDT 2011)
Amsterdam, Netherlands, July 13 - 15, 2011
International Scientific Secretariat
Tel: +971559099620
<http://www.waset.org/conferences/2011/amsterdam/icfdt/index.php>

ASME 2011 PVP (Pressure Vessels and Piping) Conference
Baltimore, Maryland, USA, July 17 - 21, 2011
Contact information:
Melissa Torres
E-mail: TorresM@asme.org
<http://www.asmeconferences.org/PVP2011/>

9th International Symposium on Particle Image Velocimetry (PIV'11)
Tsukuba, Japan, July 21 -23, 2011
Symposium Secretariat:
Prof. Jun Sakakibara
University of Tsukuba
E-mail: sakakubara@kz.tsukuba.ac.jp
<http://piv11.org/>

ASME-JSME-KSME Fluids Engineering Conference 2011 (AJK2011)
Hamamatsu, Japan, July 24 - 29, 2011
Contact for general affairs: info@ajk2011-fed.org
Contact for papers: paper@ajk2011-fed.org
<http://www.ajk2011-fed.org/>

7th International Symposium on Turbulent and Shear Flow Phenomena (TSFP-7)
Ottawa, Canada, July 28 - 31, 2011
<http://www.tsfp7.org/>

8th Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-8)
Moscow, Russia, August 21 - 25, 2011
E-mail: psfvip@phys.msu.ru
<http://8psfvip.phys.msu.ru/>

The 23rd IIR International Congress of Refrigeration
Prague, Czech Republic, August 21 - 26, 2011
Contact e-mails:
Romana@icaris.cz (Romana Kočová)
icaris@icaris.cz
Dalibor@icaris.cz (Dalibor Červinka)
Fax: +420 266 312 113
<http://www.icr2011.org/>

3rd International Conference on Micro and Nano Flows (MNF2011)
Thessaloniki, Greece, August 22 - 24, 2011
Prof. Beatriz Lopez
Brunel University
Tel: +44(0)1895 267120
Fax: +44(0)1895 256392
E-mail: Beatriz.Lopez@brunel.ac.uk
<http://www.mnf2011.com/>

Thermodynamics 2011
Athens, Greece, September 1 - 3, 2011
<http://www.thermodynamics2011.org/>

24th European Conference on Liquid Atomization and Spray Systems (ILASS Europe 2011)
Estoril Coast, Portugal, September 5 - 7, 2011
Conference Assistant
Prof. Luís Almeida Moreira
Instituto Superior Técnico

Tel: +351 21 841 77 32
Fax: +351 21 849 61 56
E-mail: ilass2011@dem.ist.utl.pt
<http://www.ilass2011.org/>

15th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2011)

Naples, Italy, September 7 - 9, 2011
Secretariat
M. Vetrano
CREATE Consortium,
E-mail: isem2011@unina.it
http://www.jsm.or.jp/ejam/information/4_ISEM2011.html

The 7th International Symposium on Measurement Techniques for Multiphase Flows

Tianjin, China, September 17 - 19, 2011
Secretary of ISMTMF 2011
Prof. Feng Dong
School of Automation
Tianjin University
Tel: +86-22-27892055
E-mail: ismtmf2011@tju.edu.cn
<http://www.ismtmf.com/> or
<http://www.ismtmf.org.cn/>

12th International Conference: Multiphase Flow in Industrial Plants

Ischia (Napoli), Italy, September 21 - 23, 2011
Scientific Committee Secretariat
Prof. Anna Pastore
Dipartimento di Ingegneria Chimica
Università degli Studi di Napoli Federico II
Tel: +39 0817682258
Fax: +39 0815936936
E-mail: mfp2011@unina.it
<http://www.animp.it/mfp2011/index.aspx>

Asian Symposium on Computational Heat Transfer and Fluid Flow - 2011 (ASCHT2011)

Kyoto, Japan, September 22 - 26, 2011
Secretary General :
Prof. Yasuo Kawaguchi
Tokyo University of Science (TUS)
E-mail : sec@ascht2011.com
<http://www.ascht2011.com/>

14th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-14)

Toronto, Ontario, Canada, September 25-29, 2011
Technical Program Chair:
Jovica Riznic
Canadian Nuclear Safety Commission
Tel: (613) 943-0132
Fax: (613) 943-1292

Email: jovica.riznic@cnsccsn.gc.ca
<http://cns-snc.ca/events/nureth-14/>

The 8th JFPS international Symposium on Fluid Power

Okinawa, Japan, October 25-28, 2011.
Tel: 81-3-3346-8007
Fax: 81-3-3346-8002
Email: jfps2011@jfps.or.jp
<http://www.jfps.jp/net/8thjfps/>

2011ANS Winter Meeting and Nuclear Technology Expo

Washington, DC, USA, Oct. 30 - Nov. 3, 2011
http://www.new.ans.org/meetings/c_1

64th Annual Meeting of the APS Division of Fluid Dynamics

Baltimore, MD, November 20-22, 2011
<http://www.aps.org/units/dfd/meetings/meeting.cfm?name=DFD11>

11th International Conference on Fluid Control, Measurements, and Visualization (FLUCOME 2011)

Keelung, Taiwan, December 5 - 9, 2011
E-mail: flucome2011@gmail.com
<http://flucome2011.ntou.edu.tw/>

----- 2012 -----

11th World Filtration Congress (WFC11)

Graz, Austria, April 14-18, 2012
Prof. Wilhelm Höflinger
Vienna University of Technology
Prof. Gerd Mauschitz,
Vienna University of Technology
E-mail: info@wfc11.at
<http://www.wfc11.at>

2012 ANS Annual Meeting

Chicago, USA, June 24 - 28, 2012
Program Chair:
Ray Klann
Argonne National Laboratory
http://www.new.ans.org/meetings/c_1

15th International Symposium on Flow Visualization (ISFV15)

Minsk, Belarus, July 25 - 28, 2012
<http://www.isfv15.com/>

2012 ANS Winter Meeting and Nuclear Technology Expo

San Diego, CA, USA, November 11 - 15, 2012
http://www.new.ans.org/meetings/c_

Call for Paper ISMTMF'2011-Tianjin

The 7th International Symposium on Measurement Techniques for Multiphase Flows

<http://www.ismtmf.com> or <http://www.ismtmf.org.cn>

September 17-19, 2011, Tianjin, China

Sponsored by

- The Chinese Society for Measurement

Co-sponsored by

- The Japanese Society for Multiphase Flow
- National Natural Science Foundation of China
- The Chinese Academy of Science

Organized by

- Tianjin University, China

Co-organized by

- Southeast University, China
- Zhejiang University, China
- University of Shanghai for Science and Technology, China

Scopes

After an enthusiastic response to the six past ISMTMF held in 1995(Nanjing), 1998(Beijing), 2001(Fukui), 2004(Hangzhou), 2006(Macao), 2008(Okinawa), we are pleased to announce that the 7th International Symposium on Measurement Techniques for Multiphase Flows will be held in Tianjin, China on September 17-19, 2011. The focus of this symposium is to develop measurement techniques for multiphase flows by exchanging new information among scientists and engineers working in universities, industries and other fields.



Topics

- Fundamentals of Multiphase Flow Measurement
- Novel Sensors and Measurement Methods of Multiphase Systems
- Information Technology for Multiphase Flow
- Process Tomography and Flow Visualization
- Intelligent Instruments and Monitoring Systems
- Optical, Non-intrusive and Other Advance
- Measurement Techniques
- Characteristics and Measurement of Nanometer Multiphase Flow
- Measurement of High Temperature Multiphase Flow
- Industrial Applications
- Other Fields on the Measurement of Multiphase Flow

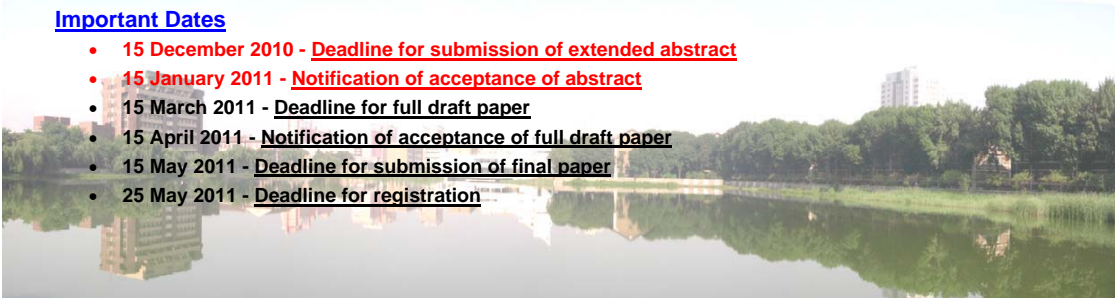
Further Information

Further information about the paper submission, deadline and conference schedule is available on the website: <http://www.ismtmf.com> or <http://www.ismtmf.org.cn>. This information would also be seen on the next conference announcement. Contact Professor Dong (Tianjin University) if you like to get more information by sending e-mail to ismtmf2011@tju.edu.cn.



Important Dates

- 15 December 2010 - Deadline for submission of extended abstract
- 15 January 2011 - Notification of acceptance of abstract
- 15 March 2011 - Deadline for full draft paper
- 15 April 2011 - Notification of acceptance of full draft paper
- 15 May 2011 - Deadline for submission of final paper
- 25 May 2011 - Deadline for registration



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