

The International Information Center for Multiphase Flow

NEWSLETTER

No. 33, December 2009

The Japanese Society for Multiphase Flow



ExHFT-7, 7th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics June 28 – July 3, 2009, Krakow, Poland

by Gian Piero Celata

The 7th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, ExHFT-7, has been held in Krakow during June 28 – July 3, 2009. The ExHFT-7 Conference has been organized by Prof. Janusz Szmyd, Conference chairman, and his Polish colleagues and has been attended by more than 300 delegates, coming from a large number of Countries. About 270 papers have been accepted for presentation at the Conference, starting from 398 abstracts submitted, 350 accepted, 310 final manuscripts submitted and about 270 accepted after review process. The ratio between participants (300+) and papers (270+) has been very good, also considering the international economic crisis.

The Conference format planned 12 keynote (plenary) lectures, and 3-5 parallel stand-up sessions where a total of about 140 papers has been presented. Remaining 130 papers have been presented in two poster session on Tuesday and Thursday. The number of no-show has been quite reduced, mainly in poster sessions. The Conference has been opened by two

plenary lectures given by the Nusselt-Reynolds Prize winners: Dimos Poulikakos (*heat transfer*, Zurich, Switzerland), Katepalli R. Sreenivasan (*fluid mechanics*, President of ICTP, The Abdul Salam International Centre for Theoretical Physics, Trieste, Italy).

The keynote lectures, very well received, have provided an updated state-of-the-art in some of the most important topics of heat transfer, fluid mechanics and thermodynamics, spanning on alternative energies (fusion, hydrogen from solar energy), microsystems and microsensors, heat transfer in the human body, CO₂ capture and storage.

Stand-up sessions have dealt with sixteen different topics, from the classic ones (heat transfer, fluid mechanics) to the most advanced and innovative (micro-nanosystems, fuel cell systems, advance energy and environmental systems, biological systems).

Poster sessions have been well organized, both in terms of time available for discussion and room available for poster display and people around them, and well attended.

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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E-mail: hayashi@mech.kobe-u.ac.jp

Manuscripts have been collected in a CD-ROM distributed to participants at the Conference, along with a volume of abstracts.

All in all, an excellent Conference, with papers of good quality, an outstanding organization, and a lovely city as venue.

The next, 8th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, ExHFT-8, will be held in 2013 in Lisbon, tentatively in late June, organized by the IST, Instituto Superior Técnico of Lisbon, and chaired by Professors Pedro Coelho and Mario Costa.

During the Conference, at the meeting of the As-

sembly of World Conferences on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, AWC, Prof. Nobuhide Kasagi, The University of Tokyo, has been appointed as the new President of the AWC, replacing Dr. Gian Piero Celata, ENEA.

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6th International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion July 11–15, 2009, Xi'an, China

by Liejin Guo

1. General Information

The 6th International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion (ISMF2009) held successfully on July 11-15, 2009 in Xi'an in China, Which was organized by State Key Laboratory of Multiphase Flow in Power Engineering (SKLMF), Xi' an Jiaotong University, China. The conference Chinaman was Prof. Liejin Guo, Director of SKLMF.

More than 300 scientists, researchers, and engineers from 128 institutes, academic communities or university in 24 countries attended this symposium. Eight plenary lectures, eighteen keynoters and about 240 regular papers have presented at this symposium.

The Symposium opening ceremony held in the morning of July 12. Prof. Liejin Guo hosted the opening ceremony. First of all, on behalf of the conference organization, Prof. Guo expressed sincere appreciation for joining of all participants. Next, Prof. Y. Matsumoto, co-chairman of the symposium and vice-president of Tokyo University, Japan, delivered a speech. Prof. Tianjian Lu, vice-present of Xi'an Jiaotong University, gave a welcome speech on behalf of the host university. As one representative of all co-organizers, Dr. Jun Ji, the Director of the Department of Engineering Thermal Physics and Energy Utilization of the Natural Science Foundation of China to give a speech. Next, Prof. Wenquan Tao,

member of scientific council of ICHMT, gave a congratulatory address on behalf of Chinese Society of Engineering Thermophysics. Besides all participants, some members from ICHMT and the Governing Board of ICMF (International Conference of Multiphase Flow) have been invited to present this symposium. Principal chiefs of Societies of Multiphase Flow from USA, Japan, Germany, Israel, which are leaders in the field of multiphase flow and related research, have been presented.

In the morning of July 12 and 13, eight professors were invited to give plenary lectures for all participants. Their lectures have demonstrated the newest progresses and trends on related research fields. After plenary lectures, at six parallel sessions 232 attendants gave oral presentations about their latest research results for their respective fields. Twenty-six professors were invited to give keynote lectures at the parallel sessions.

The financial supports from National Natural Science Foundation of China (NSFC) and Xi'an Jiaotong University (XJTU) were highly appreciated and acknowledged. As co-organizers, the International Council on Heat and Mass Transfer (ICHMT) and International Society of Hydrogen Energy delivered great supports since the very beginning.

2. Conference History

It's well known that research on multiphase flow, heat mass transfer and energy conversion has been going on widely. In order to promote the research and academic exchange in this important field, we have held five international symposiums in Xi'an. Owing to the great efforts of Professor T.N. Veziroglu and Professor Xuejun Chen, the first symposium, originally named China-U.S. Seminar on Two-phase Flows and Heat Transfer, was successfully held in 1984. The second symposium, formally named International Symposium on Multiphase Flow and Heat Transfer, was held in 1989. Following that, the third and the fourth symposiums were held successfully in 1994 and 1999. Considering the environmental protection and the global warming problem, we extended the scope of the conference to include the energy conversion problems, mainly the renewable clean energy and new technologies of energy conversion, such as solar energy, hydrogen energy, fuel cell and so on.

From the fifth symposium, which was held in 2005, it was renamed as its present name – International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion. This extended platform has provided and will provide a further opportunity of exchanging fresh information and experience for the scholars in these fields.

The present symposium is organized by the State Key Laboratory of Multiphase Flow in Power Engineering, with financial supports from National Natural Science Foundation of China and Xi'an Jiaotong University. Since 6th Symposium, the series of conferences came under the aegis of the International Center for Heat and Mass Transfer (ICHMT) and became one of co-organized conferences in ICHMT.

Prof. Liejin Guo Conference Chairman Xi'an Jiaotong University E-mail: lj-guo@mail.xjtu.edu.cn







5th European-Japanese Two-Phase Flow Group Meeting September 20–25, 2009, Spoleto, Italy

by Gian Piero Celata

The 5th Meeting of the European-Japanese Two-Phase Flow Group has been held in Spoleto, Italy on 20-25 September 2009, after the previous editions in Portoroz (June 1998), Tsukuba (September 2000), Certosa di Pontignano (September 2003) and Kyoto (September 2006). The Meeting has been chaired by Gian Piero Celata, and co-chaired by Koichi Hishida, Akio Tomiyama, Iztok Zun and Paolo Di Marco.

A total of 46 papers and 2 keynote lectures, one from Japan and one from Europe, have been presented in oral plenary sessions, with the participation of 51 delegates, 31 from Europe and 20 from Japan, representing major schools in two-phase flow. The meeting has been held in the beautiful city of Spoleto, where participants enjoyed the ancient and artistic sites as well the excellent local food, inside the nice and unusual environment of the former church of *San Lorenzo illuminatore*.

Keynote lectures titles are:

Katsuya Tsuchiya, Dynamic analysis of gas-liquidsolid dispersion – Quest for ultimate bubbles and drops, dealing with multiphase flow reactors applications and confined motion of single and multi-bubbles

Cees van der Geld, Shape oscillations of a boiling bubble, dealing with bubbles generated at an artificial cavity that, under certain conditions, become violently oscillating in shape

The 46 papers have been grouped in fourteen sessions dealing with bubbly flow structure and dynamics, boiling, condensation and flow structure in microscale, gas-liquid flow, measurement techniques, numerical methods, flow boiling and condensation heat transfer, flow pattern, turbulence. Major schools of thought in Japan and European Countries have presented the latest results of their researches in the two-phase flow field, with the spirit typical of this type of meeting: presentation of last minute results, most frequently unpublished, with the aim of the maximum benefit from discussion with colleagues in a friendly atmosphere. Unlikely from conventional Conferences, where papers are submitted months in advance, fresh material is presented at the meeting and outcome from discussion can be easily take back home to work on before writing the final paper to be published in the archival literature.



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Enough time has been allocated for presentation of papers and discussion, always very animated and vivid, as well as for ad hoc meeting and free time.

Papers or powerpoint presentations will be collected in a CD-ROM and distributed to the participants after the meeting. A selection of papers will be published in a special issue of the Journals 'Multiphase Science and Technology', published by Begell House (Guest Editor: Akio Tomiyama).

The 6th meeting of the European-Japanese Two-Phase Flow Group will be held in Kumamoto, Kyushu Island, in September 2012, chaired by Prof. Sadatomi.

Dr. Gian Piero Celata ENEA Casaccia, Institute of Thermal Fluid Dynamics, Via Anguillarese 301, 00060 Santa Maria di Galeria, Rome, Italy

13th International Topical Meeting on Nuclear Reactor Thermal Hydraulics September 27 - October 2, 2009, Kanazawa, Japan

by Hisashi Ninokata and Michio Murase

The 13th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-13) was successfully held in Kanazawa, Japan, September 27 – October 2, 2009. It was attended by about 420 researchers and engineers, more than 350 technical con-tributions. It is noted that 220 out of 420 participants were from overseas.

NURETH is an important series of international topical meetings in nuclear reactor thermal hydraulics and related areas. It covers all aspects of thermal hydraulics assumed in the different types of nuclear re-actors of current and future generations. In particular, the meeting has placed a specific emphasis on understanding fundamental thermal hydraulic phenomena as well as presenting developments and applications of new innovative technologies in experiments and numerical calculations.

Since the first meeting in 1980, the Thermal Hydraulics Division of the American Nuclear Society (ANS-THD) has sponsored NURETH meetings held in the USA and co-sponsored the meetings held outside the USA. Twelve meetings have been held in Saratoga Springs (NY, 1980), Santa Barbara (CA, 1983), Newport (RI, 1985), Karlsruhe (Germany, 1989), Salt Lake City (UT, 1992), Grenoble (France, 1993), Saratoga Springs (NY, 1995), Kyoto (Japan, 1997), San Francisco (CA, 1999), Seoul (Korea, 2003), Avignon (France, 2005) and Pittsburgh (PA,

2007).

NURETH-13 in Kanazawa was organized by the Atomic Energy Society of Japan (AESJ) in cooperation with the ANS-THD, along with many cosponsoring organizations from the international technical community. The meeting was also financially sup-ported by Ishikawa Prefecture and Kanazawa City, many domestic and international organizations including the Federation of Electric Power Companies of Japan, the Commemorative Organization for the Japan World Exposition ('70), and there was cooperation with IAEA.

With the nuclear renaissance upon us, nuclear energy continues to be faced with major challenges such as radioactive waste management, economics, proliferation, and safety. We recognize the heightened importance of plant economy and safety, where thermal hydraulics research and development play significant roles in supporting safe operation of nuclear plants and fostering safety culture. In view of the global nature of these nuclear issues, it is imperative that forums such as NURETH provide a global communications channel to enhance exchange of ideas and in-formation and encourage cross-fertilization of re-search and development efforts among all nuclear countries.

The technical program consisted of about 350 presentations which were delivered in four full days

starting from Monday (Sept. 28, 2009) through Thursday (Oct. 1, 2009). All technical papers that have been accepted for presentation were reviewed by 3 reviewers for each paper. The numbers of session organizers for paper review and reviewers were 107 and 413, respectively. Four plenary lectures were delivered by leading authorities from around the world and 8 keynote lectures were given by professionals in their respective fields on cutting edge science of interest to NURETH-13 participants. The proceedings for full-length papers have been published on a CD-ROM with a complementary bound volume of abstracts. Publication of selected papers in archival journals will also be arranged. On October 2, 2009

(Friday), 76 participants joined the technical tour to visit the prototype fast breeder reactor "Moniu".

The next meeting, NURETH-14, will be held in Toronto, Canada, September 25 – 29, 2011.

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F. Takemura (National Institute of Advanced Industrial Science and Technology)

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K. Tsuchiya (Doshisha University)

Chair of General Affairs Division

K. Tsujimoto (Mie University)

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Future Meetings

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

10th Asian Symposium on Visualization (ASV-10)

Vijayawada, Andhra Pradesh, India, December 7-10, 2009

Prof. E. Rathakrishnan

Department of Aerospace Engineering Indian Institute of Technology Kanpur, India

E-mail: erath@iitk.ac.in

http://www.10asv.org/Home.html

ASME 2009 2nd Micro/Nanoscale Heat & Mass Transfer International Conference

Shanghai, China, December 18-21, 2009 Dr. Ping Cheng, Shanghai Jiaotong University

MNHMT09@sjtu.edu.cn

http://www.asmeconferences.org/MNHMT09/

ICCFD 2009: International Conference on Computational Fluid Dynamics

Bangkok, Thailand, December 25-27, 2009 http://www.waset.org/wcset09/bangkok/iccfd/

----- 2010 -----

9th International ISHMT-ASME Heat and Mass Transfer Conference

Bombay, India, January 4-6, 2010

Prof. S. Srinivasa Murthy IIT Madras, Chennai, India

E-mail: ssmurthy@iitm.ac.in

http://www.me.iitb.ac.in/~ishmt2010/

27th Short Courses on

Modelling and Computation of Multiphase Flows

Part I: Bases

Part IIA: New Reactor Systems and Methods

Part IIB: Computational Multi-Fluid Dynamics (CMFD)

Part III: CMFD with Commercial Codes Zurich, Switzerland, February 15-19, 2010

Prof. G. Yadigaroglu E-mail: yadi@ethz.ch

http://www.ascomp.ch/ShortCourse

2nd International Conference on Energy Conversion and Conservation (CICME10)

Hammamet, Tunisia, April 22 - 25, 2010

H. AGUIR ELALIMI LESTE - TUNISIA

E-mail: contact@cicmenergie.net

Tel: + 216 73 50 15 97 Fax: +216 73 90 79 75 http://www.cicmenergie.net/

Joint International Symposia on 3rd Micro & Nanotechnology and

Micro/Nanoscale Energy Conversion & Transport-2010

Seoul, Korea, March 21 - 24, 2010

Prof. Seung Jin Song Secretary General

School of Mechanical and Aerospace Engineering

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Tel: +82-2-880-1667

Fax: +82-2-883-0179

E-Mail: sjsong@snu.ac.kr http://mnt-mect.snu.ac.kr/

International Conference on Computational & Experimental Engineering and Sciences (IC-CES'10)

Las Vegas, USA, March 28 - April 1, 2010

E-mail: icces@icces.org

http://www.icces.org/index.html

ASME-ATI-UIT 2010 Conference on Thermal and Environmental Issues in Energy Systems

Sorrento, Italy, May 16 - 19, 2010

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http://www.ichmt.org/asme-ati-uit-10/

ASME/JSME 18th International Conference on Nuclear Engineering (ICONE18/2010)

Xi'an, China, May 17 - 21, 2010

ICONE 18 Secretariat

E-mail: icone18@ns.org.cn

http://www.asmeconferences.org/ICONE18/

31st Annual Conference of the Canadian Nuclear Society

Montréal, Canada, May 24 - 27, 2010

Papers and Technical Program

E-mail: cns2010@aecl.ca

General

Denise Rouben, CNS Office Manager

E-mail: cns-snc@on.aibn.com

Tel: +1-416-977-7620

http://www.cns-snc.ca/conf2010.html

European Nuclear Conference (NC 2010)

Barcelona, Spain, May 30 - June 3, 2010

Prof. Frank Deconinck, SCK-CEN, Belgium

Dr. José Emeterio Gutiérrez, Westinghouse Technol-

ogy Services, Spain

Tel: +32 2 505 30 54, Fax: +32 2 502 39 02

E-mail: enc2010@euronuclear.org

http://www.enc2010.org

International Conference on Multiphase Flow 2010 (ICMF-2010)

Tampa, Florida, USA, May 30 - June 4, 2010

E-mail: icmf-2010@ufl.edu

http://conferences.dce.ufl.edu/ICMF2010/

ITherm 2010

Las Vegas, Nevada, USA, June 2-5, 2010

Dr. Tom Lee

E-mail: tleea@tsmc.com Tel: 408-382-8070 (office)

TSMC North America, San Jose, CA

http://www.ithermconference.org/

2010 ANS Annual Meeting

San Diego, CA, USA, June 13 - 17, 2010

General Chair:

Ross T. Ridenoure

Southern California Edison

Program Chair:

Dr. A. Kurshad Muftuoglu

GE-Hitachi Nuclear Energy

http://www.new.ans.org/meetings/c_1

3rd ECI International Conference on Porous Media and its Applications in Science, Engineering and Industry

Tuscany, Italy, June 20-24, 2010

Prof. Kambiz Vafai

Department of Mechanical Engineering, University of

California, Riverside, USA

E-mail: vafai@engr.ucr.edu

http://www.engconfintl.org/10ap.html

The 14th International Symposium on Flow Visualization (ISFV14)

Daegu, Korea, June 21 - 24, 2010

E-mail: info@isfv14.org http://isfv14.org/

15th International Symposium on Application of Laser Techniques to Fluid Mechanics (LISBON 2010)

Lisbon, Portugal, July 5 - 8, 2010

Prof. António Moreira

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E-mail: llaser.editions@dem.ist.utl.pt

http://ltces.dem.ist.utl.pt/lxlaser/lxlaser2010/

7th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HE-FAT2010)

Antalya, Turkey, July 19 - 21, 2010

Prof. Josua P Meyer

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neering, University of Pretoria

Pretoria, South Africa

E-mail: josua.meyer@up.ac.za

http://www.hefat.net

International Heat Transfer Conference (IHTC-14)

Wahington D.C., USA, August 8 -10, 2010 http://www.asmeconferences.org/IHTC14/

23rd European Conference on Liquid Atomization and Spray Systems (ILASS-Europe 2010)

Brno, Czech, September 6 - 8, 2010

Dr. Matej Forman

Energy Intitute

Faculty of Mechanical Engineering

Brno University of Technology

Technická 2896/2

616 69 Brno, Czech Republic

E-mail: info@ilasseurope2010.org

http://www.ilasseurope2010.org/

6th World Congress on Industrial Process Tomography (WCIPT6)

Beijing, China, September 6-9, 2010 E-mail: wcipt6@ncepu.edu.cn http://www.isipt.org/wcipt/

Eighth International Conference on Advances in Fluid Mechanics (Advances in Fluid Mechanics 2010)

Algarve, Portugal, September 15 - 17, 2010 http://www.wessex.ac.uk/10-conferences/afm-2010.ht

Fifth International Topical Team Workshop on Two-Phase Systems for Ground and Space Applications

Kyoto, Japan, September 26 - 29, 2010 Dr. Yulia Kabova Microgravity Research Center Chimie- Physique E.P. CP 165-62 Universite Libre de Bruxelles Av F.D. Roosevelt 50 B-1050 Brussels Belgium

E-mail: hti@ulb.ac.be Tel: +32-26503029 +32-26503143

Fax: +32 2 650 31 26

http://hti.ulb.ac.be/workshop-10/index.html

The 8th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety (NUTHOS-8)

Shanghai, China, October 10 - 14, 2010 NUTHOS-8 Office School of Nuclear Science and Engineering Shanghai Jiao Tong University 800 Dongchuan Road 200240 Shanghai, China

Phone: +86 21 3420 5056 Fax:+ 86 21 34205182 Email: nuthos-8@sjtu.edu.cn http://www.nuthos-8.org

2010 ANS Winter Meeting and Nuclear Technology Expo

Las Vegas, USA, November 7 - 11, 2010 Technical Program Chair: Dr. Charles R. (Chip) Martin Senior Engineer, Defense Nuclear Facilities Safety Board http://www.new.ans.org/meetings/c_1

----- 2011 -----

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

http://www.isme.or.ip/conference/AJTEC2011/

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

ASME-JSME-KSME Fluids Engineering Confer-

ence 2011 (AJK2011) Hamamatsu, Japan, July 24 -29, 2011

Executive committee

E-mail: dajk2011@ipc.shizuoka.ac.jp

2011ANS/ENS International Winter Meeting and Nuclear Technology Expo

Washington, DC, USA, October 30 - December 3, 2011

Program Chair:
David R. Anderson
Electric Boat Corporation
http://www.new.ans.org/meetings/c 1

----- 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 Tech-

nology

E-mail: info@wfc11.at http://www.wfc11.at

2012 ANS Annual Meeting

Chicago, USA, June 24 - 28, 2012

Program Chair: Ray Klann

A N

Argonne National Laboratory

http://www.new.ans.org/meetings/c_1

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