

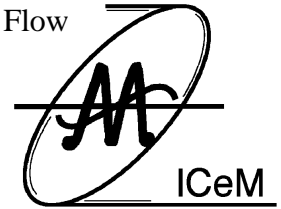


The International Information Center for Multiphase Flow

# NEWSLETTER

No. 43, March 2015

The Japanese Society for Multiphase Flow



**NUTHOS-10 (10th International Topical Meeting on Nuclear Thermal Hydraulics,  
Operation and Safety)  
December 14-18, 2014, Ginowan-shi, Okinawa, Japan**

by Tomio Okawa

NUTHOS-10 (10th International Topical Meeting on Nuclear Thermal Hydraulics, Operation and Safety) was held at Okinawa Convention Center (Ginowan-shi, Okinawa, Japan) on December 14-18, 2014 (Photo 1). The first NUTHOS was held in Taipei in 1984 followed by Tokyo (1986), Seoul (1988), Taipei (1994), Beijing (1997), Nara (2004), Seoul (2008), Shanghai (2010), Kaohsiung (2012), and the present Okinawa (2014) is the tenth of the series. As can be expected from the conference name and the venues, main features of NUTHOS are covering wide range of topics related to nuclear engineering and being held in East Asia.

NUTHOS-10 was sponsored by Atomic Energy Society of Japan, in cooperation with IAEA, and co-sponsored by the nuclear societies of 11 countries (USA, Mexico, Slovenia, Canada, China, Israel, Korea, Taiwan, Brazil, Vietnam, and India) and Japan Atomic



Photo 1 Okinawa Convention Center

Industrial Forum. In addition, NUTHOS-10 was financially supported by Mitsubishi Heavy Industry, Toshiba, and Hitachi. The number of participants was 307 and NUTHOS-10 could be counted as one of the largest NUTHOS conferences. The participants can be broken down by geographical region to 215 from East

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Asia (Japan, Korea, China, Taiwan, India, Vietnam, Thai, Hong Kong), 67 from Europe (Germany, Sweden, Switzerland, France, Italy, Russia, Spain, Belgium, Lithuania, Slovenia, Latvia, Norway, UK), 24 from North and South America (USA, Canada, Mexico, Argentina), and 1 from IAEA. As expected in NUTHOS, we fortunately succeeded to get participants mainly from East Asia but from various 24 countries. The number of regular papers was 238, and 1 opening remark, 2 plenary lectures, 1 panel discussion, and 10 keynote lectures were given.

The opening remark by Ms. Reiko Fujita (President of Atomic Energy Society of Japan) brought the opening of NUTHOS-10 followed by the two plenary lectures by Prof. Nam Dinh (North Carolina State University) and Prof. H. Yamana (Nuclear Damage Compensation and Decommissioning Facilitation Corporation). Prof. Dinh talked about the recent research projects related to nuclear power safety and Prof. Yamana the decommissioning of Fukushima Daiichi Nuclear Power Station. In the second day, the panel discussion “Perspective of Nuclear Thermal Hydraulic and Safety Research in the Post Fukushima Daiichi Accident Era” was held by eight leading researchers. In the second and third days, the ten keynote lectures were given to introduce recent trends of the research in the field of nuclear engineering.

The 238 regular papers were presented in 19 technical tracks. In the tracks including the term “thermal-hydraulics” in their names, 135 papers were presented; these papers formed the core of NUTHOS-10 as in the previous conferences. In the tracks of severe accident, a total of 33 papers was presented (19 in mitigation measures, 4 in AM guidelines, and 10 in licensing issues). In addition to these, 15 papers were presented in the track of PRA application. These papers were a marked feature of NUTHOS-10.

## **2nd International Symposium on Multiscale Multiphase Process Engineering (MMPE2) September 24-27, 2014, Hamburg, Germany**

by Yosuke Matsukuma

The 2nd International Symposium on Multiscale Multiphase Process Engineering (MMPE2) was held at Crowne Plaza hotel (Photo 1) in Hamburg, Germany



Photo 2 “Kachuushii” at the end of banquet

In closing, the banquet held in the third day evening (December 16) in which we enjoyed the flavor of Okinawa is outlined. We used shuttle buses to visit the theme park “Ryukyumura” where the good old days of Okinawa is re-created. There were many impressive things such as fantastic Okinawan dishes (whole roasted pig, Okinawan noodle, etc.) and the Okinawan performances (lion dance, Eisaa (traditional dance using drums), etc.). The highlight of banquet was definitely the Okinawan traditional dance “Kachuushii” that all the participants tried after short instruction (Photo 2).

In conclusion, it can be said that NUTHOS-10 was completed successfully with the participants more than 300. At the end of this article, I would like to introduce that the next NUTHOS is held in 2016 at Gyeongju (Korea) and the next NURETH (maybe a sister-conference of NUTHOS) in 2015 at Chicago.

Tomio Okawa  
Chair, Local Organizing Committee of NUTHOS-10  
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on September 24.-27.2014. It was organized by Hamburg University of Technology and was partially sponsored by Japan Society for the Promotion of

Science. The conference chair was Prof. Michael Schlüter, vice chair Prof. Dieter Bothe.

The MMPE is the symposium in the field of modern nano-, micro- and macro-scale aspects of multiphase process engineering. The first conference was launched in Kanazawa, Japan on 4-7 October 2011 with more than 115 participants from Japan, Germany and other countries, expecting to develop the scientific basis and network built up since 1988 through the former 1<sup>st</sup> to 7<sup>th</sup> Japanese/German Symposium on Bubble Columns (JGSBC) which was held triennially and alternatively in Japan and Germany.

More than 120 researchers from Germany, Japan, Switzerland, Austria, Czech Republic and Canada participated in the MMPE2. The session topics and the corresponding numbers of papers are listed in Table 1. The first keynote lecture was delivered by Prof. Sakai (Tokyo University) with a title of “*Advanced multi-physics modeling for industrial powder processes,*” on Thursday morning, and it was followed up by the 11 oral presentation in one room. On Friday morning, Prof. Khinast (University of Graz) gave us the second keynote lecture with a title of “*Pharmaceutical Engineering: Engineering the manufacturing processes for the drugs of the future.*” The 13 oral presentations were given after the keynote lecture. Short poster presentations (with 79 posters) were introduced on Thursday and Friday afternoon before the poster sessions.

MMPE2 was successfully completed by cooperation with many persons. The next MMPE (MMPE3)



Photo 1 Crowne Plaza hotel and participants

Table 1 Session topics

Session topics	Oral	Poster
Micro-Nanotechnology	3	13
Multiphase reactors	6	15
Experimental technique	2	11
Fundamentals	4	11
Computational fluid dynamics	6	16
Innovative applications	3	13
Total	24	79

symposium will be held in May 2017 in Toyama city, Japan.

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## Future Meetings

Following list includes conference name, place, date and contact information.

**4th Multiphase Flow Journeys (JEM 2015)**  
 Campinas, Brazil, March 23-27, 2015  
<http://www.jem2015.fem.unicamp.br>

**Computational Thermal Radiation in Participating Media V**  
 Albi and Toulouse, France, April 1-3, 2015  
 Chair: Prof. M. el Hafi  
<http://ctrpm5.wp.mines-telecom.fr>

**10th European Conference on Industrial Furnaces and Boilers (INFUB)**  
 Gaia (Porto), Portugal, April 7-10, 2015  
 Chair: Prof. V. Scherer (Ruhr Univ. Bochum)  
<http://www.cenertec.pt/infub>

**8th International Conference on Computational and Experimental Methods in Multiphase and Complex Flow**

València, Spain, April 20-22, 2015  
Chair: Prof. P. Vorobieff (Univ. New Mexico)  
Chair: Prof. C. A. Brebbia (Wessex Inst.)  
<http://www.wessex.ac.uk/15-conferences/multiphase-flow-2015.html>

**9th ECI Conference on Boiling and Condensation Heat Transfer**

Boulder, USA, April 26-30, 2015  
Chair: Prof. J. Kim (UMD)  
<http://www.boiling2015.umd.edu>

**23rd International Conference on Nuclear Engineering (ICONE23)**

Chiba, Japan, May 17-20, 2015  
Chair: Dr. S. Matsuura (Japan Nuclear Safety Inst.)  
<http://www.icone23.org>

**ASME ATI UIT 2015**

Napoli, Italy, May 17-20, 2015  
Chair: Prof. R. Goldstein (Univ. Minnesota)  
Chair: Prof. O. Manca (Seconda Univ. Napoli)  
Chair: Prof. V. Naso (Univ. Napoli Federico II)  
Chair: Prof. T. Simon (Univ. of Minnesota)  
<http://www.asmeatiuit2015.com/public/index.php>

**International Symposium on Micro and Nano Technology (ISMNT-5)**

Calgary, Canada, May 18-20, 2015  
Chair: A.A. Mohamad (SSE, Univ. Calgary)  
Co-Chair: T. Ohara (Tohoku Univ.)  
Co-Chair: X. Zhang (Tsinghua Univ.)  
<http://ismnt.org>

**6th International Symposium on Advances in Computational Heat Transfer (CHT-15)**

Piscataway, USA, May 25-29, 2015  
<http://www.ichmt.org/cht-15>

**10th Pacific Symp Flow Visualization and Image Processing (PSFVIP-10)**

Naples, Italy, June 15-18, 2015  
Chair: G. Cardone (Univ. Naples)  
<http://www.psfvip10.unina.it/ocs2/index.php/2015/index/pages/view/Topics>

**The International Conference on Jets, Wakes and Separated Flows (ICJWSF2015)**

Stockholm, Sweden, June 16-18, 2015  
Chair: L. Fuchs (KTH, Stockholm)  
Co-Chair: E. Gutmark (Univ. Cincinnati)  
Co-Chair: T. Uchiyama (Nagoya Univ.)  
<http://www.icjwsf2015.com>

**7th Baltic Heat Transfer Conference**

Tallinn, Estonia, 24-26 August, 2015  
Chair: Dr. D. Neshumayev  
<http://www.ttu.ee/bhtc2015>

**16th International Topical Meeting on Nuclear Reactor Thermalhydraulics (NURETH-16)**

Chicago from August 30–September 4, 2015  
Chair: Prof. M. Corradini (Univ. Wisconsin)  
Chair: Prof. H. Ninokata (Politecnico Milano)  
<http://nureth16.anl.gov>

**11th International Symposium on Particle Image Velocimetry (PIV 2015)**

Santa Barbara, USA, September 14-16, 2015  
<http://www.piv2015.org>

**Turbulence Heat and Mass Transfer, Symposium 2015**

Sarajevo, Bosnia and Herzegovina, September 15-18, 2015  
Chair: Prof. K. Hanjalic (Delft Univ. Tech.)  
Co-Chair: Prof. T. Miyauchi (Tokyo Inst. Tech.)  
<http://www.thmt-15.org>

**The 13th Asian Symposium on Visualization**

Novosibirsk, Russia, June 22–26, 2015  
Chair: Prof. V.M. Fomin (ITAM SB RAS)  
<http://conf.nsc.ru/13asv/en>

**International Symposium on Heat and Mass Transfer in Biological and Medical Engineering (Biotransport-15)**

Izmir, Turkey, 5-10 July, 2015.  
<http://www.ichmt.org/biotr-15>

**ASME-JSME-KSME Joint Fluids Eng. Conference 2015**

Seoul, Korea, July 26-31, 2015  
Chair: Prof. N. Hur (Sogang Univ.)  
Chair: Prof. K. Walters (Mississippi State Univ.)  
Chair: Prof. C. Kato (Univ. Tokyo)  
<http://www.ajk2015-fed.org>

**9th International Symposium on Measurement Techniques for Multiphase Flows (9th ISMTMF)**

Sapporo, Hokkaido, Japan, September 23-25, 2015  
Chair: Y. Murai (Hokkaido Univ.)  
Co-Chair: S. Hosokawa (Kobe Univ.)  
<http://ring-me.eng.hokudai.ac.jp/ismtmf2015>

**26th International Symposium on Transport Phenomena**

Leoben, Austria, September 27-October 1, 2015  
Chair: Prof. H. Raupenstrauch (Montanuniv. Leoben)  
<http://www.istp26.at>

**2015 European-Japanese Two-Phase Flow Group Meeting**

Zermatt, Switzerland, October 11-15, 2015

Chair: Prof. J. R. Thome (EPFL)

<http://eurojp2phase2015.epfl.ch>

**International Gas Turbine Congress 2015 Tokyo (IGTC2015 Tokyo)**

Tokyo, Japan, November 15-20, 2015

Chair: Prof. T. Watanabe (Univ. Tokyo)

<http://www.gtsj.org/english/igt/IGTC2015>

**12th International Conference on Power Engineering 2015 (ICOPE-15)**

Yokohama, Japan, November 30 - December 3, 2015

Chair: Prof. M. Osakabe (Tokyo Univ. Marine Science and Tech.)

<http://www.jsme.or.jp/pes/ICOPE-15>

**Physical and Chemical Phenomena in Heat Exchangers and Multifunctional Reactors for Sustainable Technology**

Paris, France, Summer 2015

Chair: Prof. H. Peerhossaini

E-mail: [hassan.peerhossaini@univ-paris-diderot.fr](mailto:hassan.peerhossaini@univ-paris-diderot.fr)

**1st European Workshop on Thermoacoustics**

Twente, The Netherlands, Mid/Autumn 2015

Chair: Prof. T. van der Meer (Univ. Twente)

E-mail: [T.H.vanderMeer@utwente.nl](mailto:T.H.vanderMeer@utwente.nl)

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