

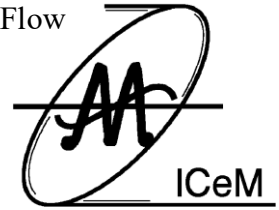


The International Information Center for Multiphase Flow

# NEWSLETTER

No. 46, September 2016

The Japanese Society for Multiphase Flow



## International Conference on Multiphase Flow 2016 (ICMF2016) May 22-27, 2016, Firenze, Italy

by Alfredo Soldati and Cristian Marchioli

The 9th International Conference on Multiphase Flow (ICMF2016) hosted by the University of Udine was held at the Firenze Fiera Conference Center, Firenze, Italy from May 22 to May 27, 2016.

The conference was co-sponsored by the Italian Association of Chemical Engineers (AIDIC), the American Society of Mechanical Engineers, the European Research Community on Flow, Turbulence & Combustion (ERCOFTAC), the Italian Association of Theoretical and Applied Mechanics, the Italian Association of Industrial Plant Engineering (ANIMP), the International Center of Mechanical Sciences (CISM), CINECA and the University of Udine.

ICMF2016 is the premier international conference for multiphase flows, and brought together researchers from many countries, disciplines and applications, facilitating the communication of new ideas and the initiation of new collaborations.

The number of participants who attended the conference was 1052 from more than 50 countries all

over the world: This was the largest number of attendees in the history of ICMF, and reflects the growing interests on multiphase flow phenomena. The multi-disciplinary nature of ICMF2016 was attested by the technical programme, which featured 929 papers (858 oral presentations and 71 posters) distributed over 14 parallel sessions and covering the following scientific topics: Bio-fluids, bubbly flows, boiling, condensation and evaporation, cavitation and nucleation, collision, agglomeration and breakup, colloidal and suspension dynamics, computational techniques for multiphase flows, droplet flows, environmental and geophysical flows, experimental methods for multiphase flows, fiber suspension flows, finite size particles and droplets, fluidization, fluid-structure interactions, granular media, industrial applications, interfacial flows, instabilities, micro- and nano-scale multiphase flows, mixing, modelling of multiphase flows, multiphase flow in heat and mass transfer, non-Newtonian multiphase flows,

### 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:  
takagi@mech.t.u-tokyo.ac.jp

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E-mail:  
wakimoto@mech.eng.osaka-cu.ac.jp

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Kyoto University Research Reactor Institute  
E-mail:  
itod@rri.kyoto-u.ac.jp

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Hokkaido University  
E-mail:  
kobakazu@eng.hokudai.ac.jp

Prof. Yuji Tasaka  
Hokkaido University  
E-mail:  
tasaka@eng.hokudai.ac.jp

particle, bubble and drop dynamics, particle-laden flows, reactive multiphase flows, turbulence in multiphase flows.

The programme of ICMF2016 also included the Poster Competition (the three best posters were awarded with full reimbursement of the registration fee), 5 plenary lectures (given by Professors Christine Hrenya, Joseph Katz, Detlef Lohse, Kazuyasu Sugiyama and Stéphane Zaleski), 10 semi-plenary lectures (given by Professors Yutaka Abe, Dieter Bothe, Mickael Bourgoïn, Joseph Dufek, Ho-Young Kim, Dominique Legendre, Omar Matar, Giovanna Vittori, Evelyn Wang, and Roberto Zenit) and 2 ICMF Award lectures (given by Professor Said Elghobashi, recipient of the Senior Award, and Professor Olivier Desjardins, recipient of the Junior Award).

The conference welcomed delegates in the centuries-old park of the Conference Center on Sunday, May 22. The official opening ceremony of ICMF2016 was held in the Auditorium on Monday, May 23 at 8:30 am. Prof. Alfredo Soldati, the conference chair, delivered the opening address followed by congratulatory messages from Prof. Tomoji Takamasa, president of the Japanese Society for Multiphase Flow, and Prof. Jacques Magnaudet, chairman of the ICMF Governing Board.

The technical programme started on Monday at 9:00 am and ended on Friday, May 27 at 1:00 pm. Each day was opened by a plenary lecture, followed by parallel technical sessions in the morning, semi-plenary lectures followed by parallel technical sessions in the afternoon. The poster session took place at 5:40 pm on Tuesday, followed by a Pizza Show Cocktail. The Senior Award lecture at 5:45 pm on Wednesday, the Junior Award lecture at 6:15 pm on Thursday. The Conference Banquet was held on

Wednesday at the Nuovo Teatro dell'Opera and accommodated 870 delegates. Before the Banquet, delegates had the exclusive chance to attend the Dress Rehearsal of the Orchestra and the Chorus of the Maggio Musicale Fiorentino festival. During the Banquet, the recipients of the Senior and Junior ICMF Awards were announced, along with the six newly-elected members of the Governing Board and the recipients of the Poster Award.

During the Closing Ceremony on Friday, the location for ICMF2019 was announced. The next meeting will take place in Rio de Janeiro, Brasil. Professor Oscar M. H. Rodriguez, from the University of Sao Paulo, will be the conference chair.

The conference was organized with the great help of many individuals and organizations. The 16 members of the Local Organizing Committee (LOC), together with the 12 members of the Governing Board and the 75 members of the International Scientific Committee, reviewed all the submitted abstracts, advertised the conference, and assisted in the selection of invited speakers. In addition, the LOC organized the technical sessions, student assistants, and judging for the Poster Award. Special thanks must be addressed to AIDIC for the outstanding administrative management of the conference, and to the Firenze Convention & Visitors Bureau for the logistics support and conference services provided.

Alfredo Soldati,  
Chairman of ICMF2016  
Cristian Marchioli,  
Scientific Secretary of ICMF2016  
University of Udine  
E-mail: soldati@uniud.it, marchioli@uniud.it

## **The 24<sup>th</sup> International Conference on Nuclear Engineering (ICONE-24) June 26-30, 2016, Charlotte, NC, USA**

by Shuichiro Miwa

The 24<sup>th</sup> International Conference on Nuclear Engineering (ICONE-24) was held from June 26-30, 2016 at Charlotte Convention Center, Charlotte, NC, where it's known as the mid-Atlantic energy hub in

the United States. It was chaired by Prof. Yassin A. Hassan (Texas A&M), and co-sponsored by ASME, JSME, and CNS. The conference was also supported by nearly 100 corporate sponsors and exhibitors, and

co-held with 2016 Power & Energy Conference for the first time. Total attendance was 1,671 (counting both ICONE and Power & Energy) and nearly 600 technical presentations were given for ICONE.



Photo 1 Opening reception at NASCAR Hall of Fame

The ICONE-24 covered wide range of topics comprised of following tracks: (1) Plant Operations, Maintenance and Life Cycle Management; (2) Nuclear Fuel, Fuel Cycle, Reactor Physics and Transport Theory; (3) Plant Systems, Structures and Components and Materials; (4) Instrumentation and Controls (I&C); (5) Smart Grids, Grid Stability; (6) Advanced and Next Generation Reactors, Fusion Technology; (7) Safety, Security and Cyber Security; (8) Codes, Standards, Licensing and Regulatory Issues; (9) Thermal-Hydraulics; (10) CFD and Coupled Codes; (11) Decontamination and Decommissioning, Radiation Protection, Shielding and Waste Management; (12) Workforce Development, Nuclear Education and Public Acceptance; (13) Mitigation Strategies for Beyond Design Basis Events; (14) Risk Management.

In addition, to foster the development of future nuclear professionals, ICONE Student Paper Competition (Track-15) was held hosting more than 100 students from all over the world. Purpose of the track is to provide students an opportunity to gain

technical skills as well as to interact with industrial/academic professionals around the globe through technical sessions. 87 selected students competed for the Akiyama Memorial Award, established by the JSME in memory of the Professor Akiyama. The medal was awarded to Mr. Lambert Fick of Texas A&M based on the quality of technical paper, presentation, and poster session. In addition, paper awards and poster awards were given to selected students from the regional of ASME, JSME and CNS.



Photo 2 Banquet at The Speedway Club at Charlotte Motor Speedway

Year 2016 marked 60<sup>th</sup> anniversary for the ASME Nuclear Engineering Division. To celebrate its anniversary, the reception was held on June 29 along with the Student and Track Leaders Awards Ceremony. Now in its 24<sup>th</sup> year, history of ICONE was presented by Prof. Yasuo Koizumi, and its long-term role and contribution as a voice for global nuclear community was celebrated.

The ICONE-25 will be held in Shanghai, China, May 14-18, 2017.

Shuichiro Miwa, Assistant Professor  
ICONE-24 Student Track Co-Chair  
Hokkaido University  
E-mail: smiwa@eng.hokudai.ac.jp

## Future Meetings

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

### **The 7th International Conference on Vortex Flows and Vortex Models (ICVFVM 2016)**

Rostock, Germany, September 20 - 22, 2016

Chair: N. Kornev (University of Rostock)

<http://www.icvfvm2016.uni-rostock.de/icvfvm-2016/>

### **The 27th International Symposium on Transport Phenomena (ISTP 27)**

Honolulu, USA, September 20 - 23, 2016

Chair: T. Tomimura (Kumamoto University)

Co-Chair: K. Fushinobu (Tokyo Institute of Technology)

Co-Chair: T. Hatakeyama (Toyama Prefectural University)

<http://www.istp27.jp/index.html>

### **The 10th International Symposium on Ultrasonic Doppler Methods for Fluid Mechanics and Fluid Engineering (ISUD 10)**

Tokyo, Japan, September 28 - 30, 2016

Chair: H. Kikura (Tokyo Institute of Technology)

<http://www.nr.titech.ac.jp/isud10/>

### **1st Workshop on Advances in CFD and MD Modelling of Interface Dynamics in Capillary Two-Phase Flows**

Lausanne, Switzerland, October 3 - 7, 2016

Chair: J. R. Thome (EPFL)

Chair: M. Magnini (EPFL)

Chair: A. Ferrari (EPFL)

Chair: B. A. Nichita (EPFL)

Chair: E. Gros (EPFL)

<http://lcm.epfl.ch/page-127462-en.html>

### **The 11th International Topical Meeting on Nuclear Reactor Thermal-Hydraulics, Operation and Safety (NUTHOS-11)**

Gyeongju, Korea, October 9 - 13, 2016

Chair: J. H. Kim (KAIST)

Chair: G. Li (CNS)

Chair: B. R. Sehgal (KTH)

<http://www.nuthos-11.org/>

### **The 13th International Conference on Flow Dynamics (ICFD2016)**

Sendai, Japan, October 10 - 12, 2016

Chair: S. Maruyama (Tohoku University)

<http://www.ifs.tohoku.ac.jp/icfd2016/>

### **The Heat and Mass Transfer in Nuclear Safety Applications: Severe Accident, Environment Contamination, Waste Storage (HMTNS-16)**

Juan les Pins, France, October 25 - 28, 2016

Chair: F. Fichot (IRSN)

Chair: M. Quintard (IMFT)

<http://www.ichmt.org/site/2/hmtns-16>

### **The 11th International Symposium on Advanced Science and Technology in Experimental Mechanics (11th ISEM'16)**

Ho Chi Minh City, Vietnam, November 1 - 4, 2016

Chair: N. M. Tam (Ho Chi Minh University of Technology)

<http://www.jsem.jp/ISEM11/index.html>

### **The Fourth International Forum on Heat Transfer (IFHT2016)**

Sendai, Japan, November 2 - 4, 2016

Chair: T. Ohara (Tohoku University)

<http://ifht2016.org/index.html>

### **The 18th Annual Conference on Liquid Atomization & Spray Systems - Asia (ILASS-Asia 2016)**

Chennai, India, November 6 - 9, 2016

Chair: R. V. Ravikrishna (Indian Institute of Science)

<https://ilass-asia2016.org/index.php>

### **The 15th Asian Congress of Fluid Mechanics (ACFM15)**

Sarawak, Malaysia, November 21 - 23, 2016

Chair: K. Munisamy (UNITEN)

<http://fet.mmu.edu.my/~acfm/>

### **The 10th Japan-Korea Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS10)**

Kyoto, Japan, November 27 - 30, 2016

Chair: T. Kunugi (Kyoto University)

Chair: K.-H. Bang (KMOU)

<http://www.nthas10.org/>

### **International Symposium on Micro-Nano Science and Technology 2016**

Tokyo, Japan, December 16 - 18, 2016

Chair: S. Kawano (Osaka University)

<http://www.iwaselab.amech.waseda.ac.jp/mnm2016/>

----- 2017 -----  
**The 34th Short Courses on Modelling and Computation of Multiphase Flows**  
Zurich, Switzerland, February 13 - 17, 2017  
Contact: Prof.H-M Prasser (ETH Zurich)  
E-mail: shortcourse@lke.mavt.ethz.ch  
URL: <http://www.lke.mavt.ethz.ch/shortcourse>

**The 6th International Symposium on Micro and Nano Technology (ISMNT-6)**  
Fukuoka, Japan, March 19 - 22, 2017  
Chair: K. Takahashi (Kyushu University)  
Chair: X. Zhang (Tsinghua University)  
<http://ismnt-6.org/>

**Asian Conference on Thermal Sciences 2017 (1st ACTS)**  
Jeju, Korea, March 26 - 30, 2017  
Chair: S. J. Kim (KAIST)  
<http://acts2017.org/>

**2nd Thermal and Fluids Engineering Conference (TFEC) and 4th International Workshop on Heat Transfer (IWHT)**  
Las Vegas, Nevada, USA, April 2 - 5, 2017  
Chair: F. Battaglia (Virginia Tech)  
<http://www.astfe.org/tfec2017/>

**The 5th IIR International Conference on Thermophysical Properties and Transfer Processes of Refrigerants (TPTPR2017)**  
Seoul, South Korea, April 23 - 26, 2017  
Chair: Y. T.Kang (Korea University)  
Chair: M.S. Kim (Seoul National University)  
<http://tptpr2017.org/>

**ASME Verification and Validation Symposium (V&V)**  
Las Vegas, NV, USA, May 3 - 5, 2017  
<https://www.asme.org/events/vandv>

**The 3rd International Symposium on Multiscale Multiphase Process Engineering (MMPE2017)**  
Toyama, Japan, May 8 - 11, 2017  
Chair: K. Terasaka (Keio University)  
<http://www.mmpe.jp/>

**The 25th International Conference on Nuclear Engineering (ICONE-25)**  
Shanghai, China, May 14 - 18, 2017  
<https://www.asme.org/events/iconc>

**The 29th Annual Conference on Liquid Atomization and Spray Systems (ILASS-AMERICAS 2017)**  
Atlanta, GA, USA, May 15 - 18, 2017  
<http://www.lass.org/2017/savethedate.htm>

**The 7th International Symposium on Advances in Computational Heat Transfer (CHT-17)**  
Napoli, Italy, May 28 - June 2, 2017  
Chair: N. Bianco (Università degli studi Federico II)  
<http://www.ichmt.org/site/4/cht-17>

**The 9th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics (ExHFT-9)**  
Foz do Iguaçu, Brazil, June 11 - 15, 2017  
Chair: J. Barbosa Jr. (Universidade Federal de Santa Catarina)  
Chair: G. Ribatski (Universidade de São Paulo)  
<http://exhft9.org/>

**2017 ANS Annual Meeting**  
San Francisco, CA, USA, June 11 - 15, 2017  
Chair: J. N. Reyes, Jr. (NuScale Power)  
[http://www.ans.org/meetings/m\\_148](http://www.ans.org/meetings/m_148)

**The 12th International Symposium on Particle Image Velocimetry (ISPIV 2017)**  
Busan, Korea, June 19 - 21, 2017  
Chair: K. C. Kim (Pusan National University)  
<http://www.ispiv2017.org/>

**Japan-U.S. Seminar on Two-Phase Flow Dynamics 2017**  
Sapporo, Hokkaido, Japan, June 22 - 24, 2017  
Chair: M. Mori (Hokkaido University)  
Co-Chair: G. Tryggvason (University of Notre Dame)  
<http://nuclearsafety.eng.hokudai.ac.jp/jus2017/>

**The 3rd International Conference on Numerical Methods in Multiphase Flows (ICNMMF-III)**  
Tokyo, Japan, June 26 - 29, 2017  
Chair: Y. Matsumoto (RIKEN)  
Co-Chair: S. Takagi (University of Tokyo)  
Co-Chair: A. Tomiyama (Kobe University)  
<http://www.jsmf.gr.jp/icnmmf2017/>

**The 10th International Symposium on Turbulence and Shear Flow Phenomena (TSFP10)**  
Chicago, IL, USA, July 7 - 9, 2017  
Chair: L. Smits (Princeton University)  
<http://tsfp10.org/>

**ASME Pressure Vessels & Piping Conference (PVP)**

Hawaii, USA, July 16 - 20, 2017

Chair: M.Y.A. Younan (The American University in Cairo)

<https://www.asme.org/events/pvp>

**International Pipeline Geotechnical Conference (IPG 2017)**

Lima, Peru, July 25 - 26, 2017

<https://www.asme.org/events/ipg>

**The 9th International Conference on Modeling and Diagnostics for Advanced Engine Systems (COMODIA 2017)**

Okayama, Japan, July 25 - 28, 2017

Chair: E. Tomita (Okayama University)

<http://www.jsme.or.jp/conference/comodia2017/>

**The 17th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH 17)**

Xi'an, China, September 3 - 8, 2017

Chair: G. Li (Chinese Nuclear Society)

**The 9th JSME-KSME Thermal and Fluids Engineering Conference (TFEC9)**

Okinawa, Japan, October 28 - 30, 2017

Chair: M. Takei (Chiba University)

<http://www.tfec9.org/>

**2017 ANS Winter Meeting and Nuclear Technology Expo**

Washington, DC, USA, October 29 - November 2, 2017

Chair: T. Troutman (Bechtel Nuclear, Security & Environmental)

[http://www.ans.org/meetings/m\\_149](http://www.ans.org/meetings/m_149)

----- 2018 -----  
**The 14th International Conference on Liquid Atomization and Spray Systems (ICLASS 2018)**

Chicago, IL, USA, July 22 - 26, 2018

<http://www.iclass2018.org/>

**The 16th International Heat Transfer Conference (IHTC-16)**

Beijing, China, August 10 - 16, 2018

<http://www.ihtc16.org/>

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Executive Office of JSMF

Academic Publication & Printings Co.

2-14-9 Kasugadenaka, Konohana-ku, Osaka, 554-0022, JAPAN

Tel : +81-6-6466-1588 Fax : +81-6-6463-2522

E-mail : [office@jsmf.gr.jp](mailto:office@jsmf.gr.jp)

URL: <http://www.jsmf.gr.jp/>

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