



The International Information Center for Multiphase Flow

NEWSLETTER

No.29 October 2007

The Japanese Society for Multiphase Flow



Report on 2007 International Congress on Advances in Nuclear Power Plants "The Nuclear Renaissance at Work" May 13–18, 2007, Nice Acropolis, France

by Hideaki Heki

The 2007 International Congress on Advances in Nuclear Power Plants (ICAPP2007) "The Nuclear Renaissance at Work" was held on May 13-18, 2007, Nice Acropolis, France. This conference was organized by the French nuclear energy society (SFEN) under the auspice of the International Atomic Energy Agency (IAEA) and sponsored by American Nuclear Society (ANS), Atomic Energy Society of Japan (AESJ), Canadian Nuclear Society (CNS), Chinese Nuclear Society (CNS), Korean Nuclear Society (KNS), Nuclear Society of Russia (NSR) and the European Nuclear Society (ENS).

The program covers the full spectrum of Nuclear Power Plant issues from design, deployment and construction of plants to research and development of future designs and advanced systems. The program is expected to cover lessons learned from power, research and demonstration reactors from over 50 years of experience with operation and maintenance, structures, materials, technical specifications, human factors,

system design and reliability.

Over 550 participants from 33 countries participated and 450 technical papers were presented at technical sessions in the conference. In opening session, "Evolutions in the Nuclear Technical Approaches" and "The Nuclear Renaissance at Work" were presented by governments and industries. Five plenary sessions were carried out focused on topical items in nuclear power; The Energy Challenges: the Utilities Point of View, New Plants: Design, Engineering, Safety, Sustainability through Fuel Cycle: Next Steps, Future Nuclear Power Systems -ideas into ready and Public Reactors on Nuclear Power.

Also eight keynote sessions were carried out on Operation and Licensing Trends, Challenges for New NPPs Material and Structures, Long term Reactor Programs, Challenges in Reactor Modeling, Status of National HTR Programs, Deployment and Sustainability of Nuclear Energy, Nuclear Fuel Cycle: Technical Stakes and Lessons Learned for the New

To Join ICeM:

Everybody, who is interested in "multiphase flow", can be a member of ICeM. You are welcome to join ICeM. Please contact one of the following to register as an ICeM member.

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Build.

Following twelve technical sessions were carried out in parallel.

- ◆ Water Cooled Reactor Programs and Issues
- ◆ High Temperature Gas Cooled Reactors
- ◆ LMFBR & Longer Term Reactor Programs
- ◆ Operation, Performance & Reliability Management
- ◆ Plant Safety Assessment and Regulatory Issues
- ◆ Thermal Hydraulics Analysis and Testing
- ◆ Fuel cycle and Waste Management
- ◆ Materials and Structural Issues
- ◆ Nuclear Energy and Sustainability

◆ Near Term Deployment Context Issues Reactor Physics and Analysis

◆ Innovative and Space Reactor Systems

Following the highly successful ICAPP2007, 2008 International Congress on Advances in Nuclear Power Plants (ICAPP'08) will be held June 8-12, 2008 at Anaheim, California, USA. Please visit <http://www.inspi.ufl.edu/icapp08/>.

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Report on 5th Joint ASME/JSME Fluids Engineering Conference July 30 – August 2, 2007, San Diego, California, USA

by Akira Sou

The 5th Joint ASME/JSME Fluids Engineering Conference was held at Sheraton San Diego Hotel & Marina located near San Diego International Airport in San Diego, California, USA on July 30 to August 2, 2007. It was jointly organized by the fluids engineering divisions of the American Society of Mechanical Engineers (ASME) and the Japan Society of Mechanical Engineers (JSME). The participants were from over 30 countries. More than 460 presentations were delivered in the following 15 symposia, 15 fora and three panels:

Symposia:

- (1) 12th Symposium on Algorithmic Developments in CFD
- (2) 8th International Symposium on Fluid-Structure Interaction and Flow-Induced Noise in Industrial
- (3) Symposium on Microbubble and Polymer Friction Drag Reduction
- (4) 7th International Symposium on Cavitation Inception
- (5) 10th International Symposium on Liquid-Solid Flows
- (6) 10th International Symposium on Gas-Liquid Two-Phase Flows
- (7) Symposium on Non-Invasive Measurements in Single and Multiphase Flows
- (8) 11th International Symposium on Gas-Particle Flows

- (9) 3rd Symposium on the Measurement and Modeling of Large-Scale Turbulent Structures
- (10) 3rd Symposium on Fundamental Issues and Perspectives in Fluid Mechanics
- (11) Symposium on DNS, LES and Hybrid RANS/LES Methods
- (12) Symposium on Flow Manipulation and Active Control
- (13) 6th Symposium on Transport Phenomena in Manufacturing Processes
- (14) International Symposium on Flow Applications in Aerospace
- (15) 5th Symposium on Industrial Application of Swirling Flows

Fora:

- (1) Forum on Fluid Measurements and Instrumentation
- (2) Forum on Advanced CFD Applications to Transport Phenomena in Nuclear Engineering
- (3) Open Forum on Multiphase Flows: Work in Progress
- (4) Forum on Advances in Free Surface and Interface Fluid Dynamics
- (5) Forum on Cavitation and Multiphase Flow
- (6) Forum on Advances in Fluids Engineering Education
- (7) 7th Forum on the Transport Phenomena in Mixing
- (8) Forum on Biological Flows
- (9) Forum on Fluid Machinery

- (10) Forum on Fluid Machinery for Natural Energy Conversion
 - (11) Forum on Recent Developments in High-Speed Flow Research
 - (12) Forum on Automotive Flows
 - (13) 15th Forum on Industrial and Environmental Applications of Fluid Mechanics
 - (14) Forum on Applications in Computational Fluid Dynamics
 - (15) General Papers
- Panels:
- (1) Panel on Micro Scale Transport in Lab-on-a-Chip
 - (2) Panel on Role of Fluids Engineering in Industry
 - (3) Panel on Government Funding Trends in Japan and the USA for Fluids Engineering Research
- (2) "From Blended-Wings to Racecars and Back Again"
by Mr. Mark A. Page
Chief Scientist
Swift Engineering, San Clemente, CA
 - (3) "Phase Separation Control and Combined Laser Sensing in a Microchannel"
by Prof. Koichi Hishida
Professor, Department of System Design Engineering
Keio University, Yokohama, JAPAN

In addition, there were three plenary lectures, 15 keynote presentations, a poster session and the Fluids Engineering Award Lecture.

The three plenary lectures were as follows:

- (1) "Japan's 10PetaFLOPS Supercomputer development project and grand challenges in CFD"
by Dr. Ryutaro Himeno
Director, Development Group
Next-Generation Supercomputer R&D Center,
RIKEN, JAPAN

As usual, it was a little pity that ten sessions were run in parallel so that we could not listen to all the presentations of interest.

In the Honors and Awards Luncheon we enjoyed hundreds of beautiful photos of deep sea creatures taken by a navigator and pinch hitter from his own submarine with his (professional?) moving descriptions on their lives.

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18th International Symposium on Transport Phenomena (ISTP-18) August 27–30, 2007, Daejeon, Korea

by Sang Yong Lee

18th International Symposium on Transport Phenomena (ISTP-18) has been held during Aug. 27 – 30, 2007 at Korea Advanced Institute of Science and Technology (KAIST) in Daejeon, Korea. ISTP-18 was organized by the Korean Society of Mechanical Engineers (KSME) under the auspices of the Pacific Center of Thermal-Fluids Engineering (PCTFE).

This multidisciplinary international symposium provided a forum for the researchers, scientists and practitioners from all over the world to exchange information, to present new information, and to discuss the future directions and priorities in the areas of transport phenomena. Transport phenomena include the flow of fluids, heat and mass, electricity, neutrons

and particles. The previous ISTP had been held in Honolulu 1985, Tokyo 1987, Taipei 1988, Sydney 1991, Beijing 1992, Seoul 1993, Acapulco 1994, San Francisco 1995, Singapore 1996, Kyoto 1997, Taipei 1998, Istanbul 2000, Victoria 2002, Bali 2003, Bangkok 2004, Prague 2005, and in Toyama 2006.

Papers dealing with any aspect of transport phenomena in the thermal-fluids engineering from fundamental sciences to applied technologies were solicited. Topics include were as follows: Heat and Mass Transfer, Combustion and Reacting Flows, Chemical Process Systems, Micro- and Nano-scale Transport, Bioengineering and Biothermal Fluid Dynamics, Experimental/Computational Fluid Dynamics,

Advanced Energy Systems, Electronic Equipment Cooling, Environmental Systems, Industrial Aerodynamics and Wind Engineering, Heat Exchangers, Thermal-Fluids Machinery, Turbulence and Flow Instabilities, Thermal Hydraulics of Nuclear Reactors and other topics related to transport phenomena.

Starting with a welcome reception on Aug. 26, Sunday, this symposium lasted for 4 days, and 361 contributed papers including 8 excellent plenary lectures and 29 keynote lectures from 27 countries were presented either in oral or poster sessions. A technical tour to Korea Atomic Energy Research Institute (KAERI), Korea Institute of Machinery and Materials (KIMM) and Korea Institute of Energy Research (KIER) and a special (non-technical) lecture on traditional Korean costume at the banquet were the parts of the symposium program. The total number of

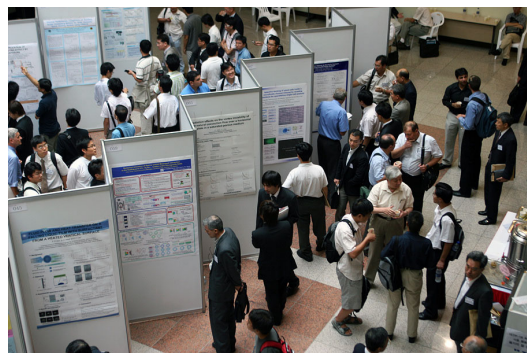
participants was over 400. Some selected papers from this symposium will be published in special issues of Journal of Mechanical Science and Technology (JMST) and International Journal of Transport Phenomena (IJTP) published by KSME and PCTFE, respectively.

The next symposium (ISTP-19) was announced to be held at University of Iceland in Reykjavik, Iceland during Aug. 17-21, 2008 and the symposium website is <http://www.istp-19.org>.

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Welcoming Address by Prof. Sang Yong Lee (KAIST, Symposium Chair) at the Opening Ceremony



A scene of one of the poster sessions



Plenary Lecture by Prof. Ishii (Purdue Univ.) just after the Opening Ceremony



Welcoming words by Prof. Sang Yong Lee (KAIST, Symposium Chair) at the Banquet

**Second International Conference on Porous Media and its Applications
in Science, Engineering and Industry
June 17–21, 2007, Kauai, Hawaii**

by Kambiz Vafai

A very successful Conference on **Porous Media and its Applications in Science, Engineering and Industry** was held from June 17 to 21 of 2007 in Kauai, Hawaii, which was attended by various researchers in porous media worldwide. There were 80 participants from 21 countries. The first of these conferences, which was also very successful, was held in Kona, Hawaii in 1996. NSF and ECI sponsored this conference. There were three keynote addresses and presentations both oral and poster presentations in the conference. Thirteen topical areas were covered in the conference. These were:

- ♦ **Flow Transport in Industrial Applications**
- ♦ **Advances in Numerical Techniques**
- ♦ **Experimental and Measuring Techniques**
- ♦ **Bio Transport in Porous Medium**
- ♦ **Advanced Mathematical Approaches to the Modeling of Porous Medium**
- ♦ **Particle Migration and Deposition in Porous Media**
- ♦ **Industrial and Environmental Heat Transfer and Flow in Porous Media**
- ♦ **Porous Media Applied to Marine and Environmental Problems**
- ♦ **Natural and Forced Convection in Porous Medium**
- ♦ **Conduction in Porous Medium**
- ♦ **Thermo-Hydro-Chemo-Mechanical Coupling in Geomaterials**
- ♦ **Evaporation, Condensation, Capillary Effect, and Reactive Flow in Porous Media**
- ♦ **Multiphase Transport in Porous Media**

The pioneering works in the area of fluid transport as well as some aspects of heat transport in porous media

go back to the beginning of this century. In recent decades transport through porous media has gained considerable attention due to its relevance in a wide range of applications such as thermal insulation engineering, water movements in geothermal reservoirs, heat pipe applications, underground spreading of chemical waste, geothermal engineering, electronic cooling, biological applications, fuel cell applications, chemical catalytic reactors, packed cryogenic microsphere insulation, direct contact heat exchangers, coal combustors, grain storage, nuclear waste repository and enhanced recovery of petroleum reservoirs. Radiative heat transfer and multiphase transport processes in porous media, both with and without phase change, have gained extensive attention in recent decades. This is due to the wide range of applicability of these research areas in contemporary technology. Furthermore, developments in modeling transport phenomena in porous media have advanced in several pertinent areas, such as biology. There was substantial participation of many attendees during each and every presentation. This provided an informative and highly interactive environment for all the participants in the conference. The surveys taken from the attendees as well as the additional unsolicited comments and emails pointed to an extremely well received conference by the participants. There was a strong demand for repeating this conference in couple of years. Tentatively, the next location for this conference is considered to be in Europe. For additional information you can contact the conference chair:

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An Announcement from Editor

The JSMF gives internet-service for ICMF members.
You can read updated ICeM NEWSLETTER by visiting JSMF homepage
<http://www.jsmf.gr.jp/index-en.htm>

**Report on "Fundamentals of Microscale Heat Transfer:
Boiling, Condensation, Single- and Two-Phase Flows",
an International Short Course in Lausanne on June 4-8, 2007**

by John R. Thome

Today there is a significant interest in research and emerging applications involving microscale single-phase and two-phase heat transfer and flow. Our 4-day course has now been successfully given three times (with nearly 90 participants), most recently in Lausanne from June 4-8, 2007. It will be presented in an updated 4th edition in Lausanne, Switzerland on June 2-6, 2008 on the campus of the EPFL. This course provides a broad, fundamental state-of-the-art review with comprehensive treatment of both single-phase flow and heat transfer *and* two-phase flow and heat transfer in microchannels. The course is directed to heat transfer specialists in the computer and electronics cooling industries, the automotive and the air-conditioning industries, the micro-reactor chemical industry, the aerospace avionics industry, and the micro- and compact heat exchanger industries. Furthermore, the course is addressed to Ph.D. students, post-doctoral researchers and senior scientists involved in this area of research.

The four course lecturers are internationally recognized experts in both microscale (and macroscale) research and applications:

John R. Thome (Course Coordinator) is Professor of Heat and Mass Transfer at the Swiss Federal Institute of Technology in Lausanne, Switzerland. He lectures primarily on two-phase flow, heat transfer and pressure drops in microchannels (and macrochannels), on thermal modeling of heat sinks and on CO₂ heat transfer.

Iztok Zun is Professor and Head of the Laboratory for Fluid Dynamics and Thermodynamics, Faculty of Mechanical Engineering, University of Ljubljana, Slovenia. He lectures on the numerical simulation of single-phase microchannel cooling elements and the status of numerical techniques for two-phase flows in micro-channels of simple and complex geometry.

Gian Piero Celata is Director of the Institute of Thermal-Fluid Dynamics at the Italian national research center ENEA and is honorary chair of the European Two-Phase Flow Group among his many international appointments. He focuses his lectures on the state-of-the-art of single-phase heat transfer and fluid flow in

simple and complex geometries and on condensation and boiling heat transfer in microchannels.

Anthony M. Jacobi is Kritzer Distinguished Professor of the Department of Mechanical and Industrial Engineering at the University of Illinois Champaign-Urbana and is Co-director of the Air-Conditioning and Refrigeration Center. He lectures on air-side heat transfer on compact heat exchanger coils (including prediction methods for heat transfer and pressure drop, flow visualization, turbulence promoters, frost formation and condensate retention effects).

Heat Transfer Research Inc. (Host) is a well-known industrial research and development consortium founded in 1962 and located in College Station, Texas with about 700 member companies from around the world and acts as the host for the course.

The *first and third editions* of this course were held at the EPFL in Lausanne in 2006 and 2007 and were attended by participants representing 19 different countries (from Europe, Japan, North America, South America and Turkey).

The *second edition* of this course was held in Dallas, Texas in early 2007 at the Radisson Hotel in a slightly shorten version and was attended by participants from North America, Europe and South America.

The new *fourth edition* of the course will be held in Lausanne from June 2-6, 2008 (*see preliminary program below*). For information to attend the course, contact the course coordinator (John Thome) or one of the other lecturers. The course lectures are updated for each new edition of the course to account for the rapid advances taking place in this new, dynamic discipline.

Professor John R. Thome
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website: <http://ltcm.epfl.ch>

Microscale Heat Transfer Course: Program for Lausanne, June 2-6, 2008

Monday, June 2

- 12.45 – 13.00 Registration
 13.00 – 13.15 Introduction to Course (Thome)
 13.15 – 13.30 Overview of Microscale Heat Transfer and Its Applications (Thome)
 13.30 – 14.15 Differences in Macro- and Micro-Scale Single-Phase Flows and Heat Transfer (Celata)
 14.15 – 15.00 Single-Phase Microscale Heat Transfer Experimental Techniques and Studies (Celata)
 15.00 – 15.15 *Coffee Break*
 15.15 – 17.00 Principles of Air-Side Heat Transfer in Compact Heat Exchangers (Jacobi)
 17.00 – 18.00 Topic to be announced (Jacobi)

Tuesday, June 3

- 08.30 – 09.15 Prediction Methods for Microscale Single-Phase Flows and Heat Transfer (Celata)
 09.15 – 10.00 Topic to be announced (Jacobi)
 10.00 – 10.15 *Coffee Break*
 10.15 – 11.00 Macroscale Two-Phase Flows and Flow Pattern Maps (Thome)
 11.00 – 11.45 Microscale Two-Phase Flows and Flow Pattern Maps (Thome)
 11.45 – 13.15 Topic to be announced (Jacobi)
 13.15 – 14.30 *Lunch Break*
 14.30 – 17.00 *Tour of Two-Phase Flow and Heat Transfer Lab and Discussions*

Wednesday, June 4

- 08.30 – 10.00 Void Fraction Measurements and Models for Macro- and Microchannels (Thome)
 10.00 – 10.15 *Coffee Break*
 10.15 – 11.15 Review of Experimental Work on Condensation in Microchannels (Celata)
 11.15 – 12.00 Prediction Methods for Condensation in Microchannels (Celata)
 12.00 – 13.15 *Lunch Break*

- 13.15 – 14.15 Microchannel Flow Boiling Experimental Studies (Celata)
 14.15 – 14.45 Microchannel Flow Boiling Heat Transfer Models-I (Thome)
 14.45 – 15.15 *Coffee Break*
 15.15 – 16.00 Microchannel Flow Boiling Heat Transfer Models-II (Thome)
 16.00 – 17.00 CHF in Microchannels (Thome)

Thursday, June 5

- 08.30 – 09.15 Numerical Modeling of Microscale Single-Phase Flows (Zun)
 09.15 – 10.00 Transient Characteristics of Phase Interface in Microchannels (Zun)
 10.00 – 10.15 *Coffee Break*
 10.15 – 12.00 Numerical Modeling of Slug Flows in Microchannels (Zun)
 12.00 – 13.15 *Lunch Break*
 13.15 – 14.00 Phenomenological Modeling of Bubble Dynamics in Microchannels (Thome)
 14.00 – 14.45 Principles of Multiscale Modeling of Two-phase Flows (Zun)
 14.45 – 15.15 *Coffee Break*
 15.15 – 16.00 Two-Phase Pressure Drop Models for Macroscale Channels (Thome)
 16.00 – 17.00 Two-Phase Pressure Drop Models and Data for Microscale Channels (Thome)

Friday, June 6

- 08.30 – 09.15 Hierarchical Decomposition and Boundary Conditions in Two-Phase Flow (Zun)
 09.15 – 10.00 Perspectives in Numerical Modeling of Two-Phase Flow in Microchannels (Zun)
 10.00 – 10.15 *Coffee Break*
 10.15 – 11.00 Numerical Simulations of Transient Conduction in Microchannel Heat Sinks (Thome)
 11.00 – 12.00 Two-Phase Flow and Boiling of CO₂ in Macro- and Microchannels (Thome)
 12.00 – 12.15 Closing Remarks/Distribution of Course Certificates (Thome)

**ETC11, EUROMECH European turbulence Conference
June 25–28, 2007, Porto, Portugal**

by José Laginha Palma

The ETC11, European turbulence Conference was organized by the Faculty of Engineering of the University of Porto, Centre for Wind Energy and Atmospheric Flows (FEUP/CEsA), Porto, Portugal. The history of the ETC conference series goes back to 1986, in Lyon, France. Latest editions were held in Barcelona (2000), Southampton (2002) and Trondheim in 2004. The present edition took place after a 3 year gap, in order that in future the two largest EUROMECH conferences in fluid mechanics and turbulence, EFMC and ETC, can occur in different years. ETC is now a well recognized series of conferences on turbulence.

This 4-day conference, Monday to Thursday (25-28 June, 2007), was comprised by 4 parallel sessions and 8 invited plenary lectures by prominent speakers from a wide range of topics in turbulence.

1. Experiments on Lagrangian Statistics in Intense Turbulence
Eberhard Bodenschatz (Germany/USA)
2. LES of Compressible Inert and Reacting Turbulent Shear Flows
Rainer Friedrich (Germany)
3. Turbulent Modification of Upward Bubbly Channel Flow with Surfactant
Yoichiro Matsumoto (Japan)
4. Progress in Large Eddy Simulation Modeling of Temporally and Spatially Complex Land-Atmosphere Interactions
Charles Meneveau (USA)
5. Turbulence of Drag-Reducing Polymer Solutions
Renzo Piva (Italy)
6. Transition and Transition Control in a Square

Cavity

Peter Schmid (France)

7. Wall-Layer Models for Large-Eddy Simulations of High-Reynolds Number Non-Equilibrium Flows

Ugo Piomelli (United States)

8. Two-Dimensional Turbulence on a Confined Domain with No-Slip Walls

GertJan van Heijst (The Netherlands)

A total of 443 abstracts, originated from 39 countries, were submitted for possible presentation at ETC11. A total of 225 oral and 90 poster presentations were selected. A great care was put on the abstract selection, which showed during the 4 days of the conference by high quality presentations and many fruitful meetings and discussions among the participants.

All presentations were published by Springer:

ADVANCES IN TURBULENCE XI
Proceedings of the 11th EUROMECH European Turbulence Conference, June 25-28, 2007, Porto, Portugal

Editors: J.M.L.M. Palma and A.Silva Lopes Springer
Proceedings in Physics 117, Springer, Heidelberg
ISBN 978-3-540-72603-6

Most of the actual files used for presentation, including the invited talks can be downloaded from the conference web page, at etc.fe.up.pt.

Prof. Jose M. Laginha M. Palma

Faculdade de Engenharia da Universidade do Porto

**Participant Statistics of International Conference on Multiphase Flow (ICMF 2007)
July 9–13, 2007, Leipzig, Germany**

Land	all papers	accepted posters	accepted orals	rejected papers					
					Canada	11	3	4	4
					China, Peoples Republic of	29	9	9	11
Algeria	4	0	0	4	Colombia	1	0	1	0
Australia	9	3	5	1	Czech Republic	10	3	4	3
Austria	5	0	5	0	Denmark	7	2	4	1
Bangladesh	1	1	0	0	Estonia	2	1	1	0
Belgium	6	1	4	1	Finland	7	1	6	0
Bosnia and Herzegovina	2	1	0	1	France	90	10	75	5
Brazil	10	3	5	2	Germany	115	22	77	16
Bulgaria	2	0	1	1	United Kingdom	56	17	29	10
					Greece	12	2	9	1

Hong Kong S.A.R. - China					Poland	8	1	4	3
	2	1	1	0	Portugal	4	1	2	1
India	8	0	5	3	Russian Federation	30	8	15	7
Iran (Islamic Republic of)					Serbia and Montenegro	1	1	0	0
	22	6	6	10	Singapore	1	0	1	0
Israel	11	5	5	1	Slovenia	6	1	5	0
Italy	18	2	14	2	Spain	9	3	5	1
Japan	92	22	60	10	Sweden	25	4	14	7
Jordan	1	0	0	1	Switzerland	10	2	6	2
Korea, South (Republic of)					Taiwan	7	1	5	1
	13	3	4	6	Tunisia	1	0	0	1
Latvia	1	1	0	0	Turkey	1	0	1	0
Lithuania	1	1	0	0	United States of America				
Mexico	3	1	1	1		70	13	48	9
Netherlands, The	33	5	27	1	Viet Nam	1	1	0	0
Norway	15	4	8	3		773	166	476	131

Call for the organization of the next ICMF

The International Conference on Multiphase Flow is held on a regular basis of three years interval and rotate among three major regions:

Europe, America, Asia. After Leipzig the 7th ICMF will take place in **2010** in the **American continent**.

The Governing Board of the ICMF solicits proposals from potential organizers and will select the host organization during the Leipzig Conference. The scientists of the American continent who are interested and motivated to organize the 7th ICMF are invited to send:

1) By the end of January 2007 a declaration of intent with the name, position and motivation of the main organizer, the host institution and the location of the conference.

2) By the end of May 2007 a document indicating: the name and affiliation of the chairperson, the location of the conference and a detailed presentation of the facilities, the possible period available for 2010, the accessibility and transportation, the accommodations and the provisional budget.

These informations must be sent by mail and e-mail at the Governing Board Office to:

Prof. Jean Fabre, ICMF Governing Board
 Institut de Mécanique des Fluides
 Allée Camille Soula
 31400 Toulouse, France
 Phone No.: +33 5 61 28 58 48
 Fax No.: +33 5 61 28 59 91
 E-mail address:fabre@imft.fr

Future Meetings

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

International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-12)
 Pittsburgh, Pennsylvania, U.S.A., September 30 - October 4, 2007
 Dr. Novak Zuber, Honorary Chair
 Prof. Lawrence E. Hochreiter
 Prof. Fan-Bill Cheung
 Penn State University
 Tel: 814-863-4261
 E-mail: fxc4@psu.edu
<http://www.nureth12.org/>

E-mail: p.dimarco@ing.unipi.it
<http://termserv.casaccia.enea.it/boiling-course-2007/>

Boiling Heat Transfer and Boiling Equipment
 Pisa, Italy, October 8-12, 2007
 Prof. Paolo Di Marco
 Dipartimento di Energetica, Università di Pisa
 Tel: +39 050 2217107, Fax: +39 050 2217150

International Conference on Power Engineering-2007 (ICOPE-2007)
 Hangzhou, China, October 23-27, 2007
 Prof. Kefa Cen (CSPE), Zhejiang University
 Dr. Mikio Sato (JSME)
 Mr. William C. Stenzel (ASME)
 Email: icope@zju.edu.cn
<http://www.ceu.zju.edu.cn/icope2007.htm>

International Gas Turbine Congress (IGTC '07 Tokyo)
 Tokyo, Japan, December 2-7, 2007
 Prof. Eisuke Outa, Waseda Univ.
 Prof. Shimpei Mizuki, Hosei Univ.

Prof. Toshinori Watanabe, Univ. of Tokyo
E-mail: igtcrainbow@rainbow.dti.ne.jp
<http://www.soc.nii.ac.jp/gtsj/igtcr/>

----- 2008 -----

2008 IEEE Pacific Visualization Symposium

Kyoto Japan, March 5-7, 2008
Prof. Hideki Koike, University of Electro-Communication, Japan
E-mail: koike@acm.org
Prof. Koji Koyamada, Kyoto University, Japan
E-mail: koyamada@mbox.kudpc.kyoto-u.ac.jp
<http://vis.cs.ucdavis.edu/PacificVis08/>

Semiconductor Thermal Measurement, Modeling, and Management Symposium (SEMI-THERM 24)

San Jose, CA, USA, March 16-20, 2008
Dr. Ross Wilcoxon, Rockwell Collins
Tel: 319-295-7139, Fax: 319-295-3751
E-mail: rkwilcox@rockwellcollins.com
<http://www.semi-therm.org/>

10th World Filtration Congress (WFC10)

Leipzig, Germany, April 14-18, 2008
Dr. Harald Anlauf, University of Karlsruhe Secretariat
Filtech Exhibitions Germany
Tel: +49 (0)2132 93 57 60
Fax: +49 (0)2132 93 57 62
E-mail: info@wfc10.com
<http://www.wfc10.com/>

16th International Conference on Nuclear Engineering (ICONE-16)

Orlando, Florida, USA, May 11-15, 2008
Dr. David Torgerson, Atomic Energy of Canada Limited (AECL), Canada
Dr. Masatake Higashi, Central Research Institute of Electric Power Industry, Japan
<http://www.asmeconferences.org/icone16/>

2008 International Congress on Advances in Nuclear Power Plants (ICAPP '08)

Anaheim, California, USA, June 8-12, 2008
Dr. Amir Shahkarami, Exelon Nuclear-USA
Dr. Jean Claude Gauthier, AREVA-France
TBA, Hitachi-Japan
Dr. Myung-Jae Song, KHNP-Korea
E-mail: icapp@ans.org
<http://www.inspi.ufl.edu/icapp08/>

The 4th International Symposium on Energy, Informatics and Cybernetics (EIC 2008)

Orlando, Florida, USA, June 29 - July 2, 2008
Prof. Andrés Tremante
Prof. Nagib Callaos
Tel: +58 (212) 272-9094, Fax: +1 (407) 656-3516
E-mail: eic2008@sciiis.org
<http://sciiis.org/EIC2008>

6th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2008)

University of Pretoria, Pretoria, South Africa, June 30 - July 2, 2008
Prof. J.P. Meyer, University of Pretoria, South Africa
E-mail: hefat2008@mweb.co.za
<http://www.africaspecials.com/hefat2008/>

The 5th International Conference on Transport Phenomena in Multiphase Systems (HEAT 2008)

Bialystok, Poland, June 30 - July 3, 2008
Prof. Teodor Skiepko, Chairman
Bialystok Technical University, Faculty of Mechanical Engineering
Tel: (+48)(85)-746-92-71
Fax: (+48)(85)-746-92-10
E-mail: tskiepko@pb.bialystok.pl
Prof. Dariusz Butrymowicz, Vice-Chairman
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Tel: (+48)(85)-746-92-76
Fax: (+48)(85)-746-92-10
E-mail: butrym@pb.bialystok.pl
<http://www.heat2008.pb.edu.pl/>

The 13th International Symposium on Flow Visualization (ISFV-13)

Nice, French Riviera, France, July 1-4, 2008
Prof. Jean Pierre Prenel, University of Franche-Comté
Prof. Yannick Bailly, University of Franche-Comté
Prof. Jean Claude Champoussin, ECL
Fax: 33 384 57 00 32
E-mail: isfv13@univ-fcomte.fr
<http://isfv13.univ-fcomte.fr/>

19th International Symposium on Transport Phenomena (ISTP-19)

Reykjavik, Iceland, August 17-21, 2008
Prof. Sigurdur Brynjolfsson, University of Iceland
E-mail: sb@hi.is
Prof. Jong H Kim, EPRI International/KAIST, USA
E-mail: jkim@epri.com
<http://www.istp-19.org> or <http://www.hi.is/ISTP-19>

18th European Conference on Thermophysical Properties

Pau, France, August 31 - September 4, 2008
Prof. J.L. Daridon, University of Pau
Fax: +33 559 40 76 95
E-mail: ectp@univ-pau.fr
<http://ectp.univ-pau.fr/>

11th International Conference Multiphase Flow in Industrial Plant (MFIP '08)

Palermo, Italy, September 7-10, 2008
Prof. Alberto Brucato, Università di Palermo
+39 091 6567216

Dr. Gian Piero Celata, Enea Casaccia, Roma
+39 06 3048 3905
E-mail: mfip2008@dicpm.unipa.it
<http://www.animp.it/MFIP2008/index.html>

Experiments and CFD Code Applications to Nuclear Reactor Safety, XCFD4NRS

Grenoble, France, September 10-12, 2008
Dr. Dominique Bestion, General Chair
Commissariat à l'Energie Atomique (CEA), France
E-mail: dominique.bestion@cea.fr

The Second International Forum on Heat Transfer (IFHT2008)

Tokyo, Japan, September 17-19, 2008
Prof. Satoh, I., Tokyo Inst. Tech., Japan
Prof. Ishizuka, M., Toyama Pref. Univ., Japan
E-mail: ifht2008@isc.meiji.ac.jp
<http://www.isc.meiji.ac.jp/~ifht2008/>

The 7th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety (NUTHOS-7)

Grand Intercontinental Hotel, Seoul, Korea, October 5-9, 2008
Dr. Jong H. Kim, KAIST- EPRI WW
Prof. Hisashi Ninokata, TITech
E-mail: info@nuthos7.org
<http://www.nuthos-7.org>

The 16th Pacific Basin Nuclear Conference (16PBNC)

Aomori, Japan, October 13-18, 2008
Dr. Shunsuke Kondo, Atomic Energy Commission of Japan
E-mail: info@pbnc2008.org
<http://www.pbnc2008.org/>

Winter Meeting and Nuclear Technology Expo

Reno, NV, USA, November 9-13, 2008
Dr. David J. Hill, Idaho National Laboratory
<http://www.ans.org/meetings/index.cgi?c=n>

6th Japan-Korea Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-6)

Okinawa, Japan, November 24-27, 2008
Prof. K. Sugiyama, Hokkaido Univ.
Prof. K. Y. Suh, SNU
<http://www.nthas6.org/>

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ANS Annual Meeting

Atlanta, GA, USA, June 14-18, 2009
<http://www.ans.org/meetings/index.cgi?c=n>

ANS Winter Meeting and Nuclear Technology Expo

Washington D.C., USA, November 15-19, 2009
<http://www.ans.org/meetings/index.cgi?c=n>

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