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ICeM



The International Information Center for Multiphase Flow

NEWSLETTER

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The Japanese Society for Multiphase Flow

Successful Outcome of the 10th World Filtration Congress in Leipzig April 14–18, 2008, Leipzig, Germany

by Harald Anlauf

The international particle filtration and separation community met at the new Leipzig Congress Center from 14-18 April 2008 for the 10th World Filtration Congress. This major event was hosted by the VDI Society for Chemical and Process Engineering GVC. The GVC is an member of INDEFI (International Delegates on Filtration and Separation), the international association which awards the WFC and which counts professional associations from Belgium, China, England, France, Japan, Austria, Scandinavia, South Africa, Taiwan, Hungary and the USA in addition to Germany amongst its members. The WFC is held once every four years.

The Congress was attended by 750 delegates from 45 nations, with 2400 visitors attending the related Exhibition that hosted 150 exhibitors. During the week long WFC, participants at both events intensively discussed the latest findings in the field of filtering and separating particles from liquids and gases. Six wellattended short courses were offered the day before the Congress, dealing with topics from the areas of cake and cross-flow filtration, centrifuge technology, gas purification, multi-phase flow simulation, and particle measurement technology. After a welcome address by the Lord Mayor of Leipzig, Burkhard Jung, the Congress was officially opened on 14 April 2008 by Dr. Harald Anlauf from the University of Karlsruhe. The Chairman of the international scientific committee, Prof. Eberhard Schmidt from the University of Wuppertal, provided an overview of the diverse programme featured 370 technical presentations, overview contributions and poster presentations.

The UK's Filtration Society used the platform of the Congress opening to bestow its highest honour, which this year was awarded to the German scientists Dr. Mark Beiser (Pall), Dr. Ates Erk (BASF), Prof. Dietmar Lerche (LUM) and Dr. Titus Sobisch (LUM) for their groundbreaking work in the field of sedimentation analysis. The keynote address, on the topic of "Filtration in the Context of Globalization and Technological Innovation", was given by Prof. Richard Wakeman from the University of Loughborough (UK).

The lectures held in 7 parallel events provided a comprehensive overview of the current status of almost all processes related to mechanical particle separation and filtration. They covered ongoing developments in the fundamental physical understanding of complex and boundary layer-determined separation processes as well as current developments in device and application technology. 6 overview presentations on topics such as

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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.

Chairman (Editor):

Prof. Tomoji Takamasa Faculty of Marine Technology Tokyo University of Marine Science and Technology Etchujima,Tokyo 135-8533, Japan Tel: +81-3-5245-7406 Fax:+81-3-5245-7410 E-mail: takamasa@kaiyodai.ac.jp Vice Chairmen:

Prof. Yutaka Abe Inst. of Eng. Mech. & Sys. University of Tsukuba Tennodai, Tsukuba 305-8573, Japan Tel&Fax: +81-298-53-5266 E-mail: abe@kz.tsukuba.ac.jp Prof. Shigeo Hosokawa Graduate School of Engineering Kobe University Rokkodai, Nada, Kobe 657-8501, Japan Tel: +81-78-803-6132 Fax: +81-78-803-6155 E-mail: hosokawa@mech.kobe-u.ac.jp cake, depth and cross-flow filtration, gas purification, filter media, and numerical simulation techniques enabled delegates to receive a concentrated overview of the cutting edge of technology in the respective area. Contributions focusing on practical aspects of the entire spectrum of filtration and separation technology provided operators of filtration and separation plants with insights into other areas of application beyond the limits of their own specialization. Device manufacturers were exposed to a broad range of existing areas of application for their specific technologies.

In relation to the latest trends, two developments were especially noteworthy. Membrane-based separation processes have become established as a completely normal and mature separation technology on a broad front. In combination with other separation technologies, they often offer ideal process solutions. It has also become clear that the use of numerical flow simulation (CFD) has become an indispensable tool for describing separation processes and designing separation devices in spite of the continuing need for ongoing development. Modern measurement techniques for analyzing or characterizing the systems which are to be separated also play an important role, of course. This became clear from the remarkable number of manufacturers of devices for measuring particles that exhibited at the Exhibition which took place concurrently.

The Society of Austrian Chemists (*Gesellschaft Österreichischer Chemiker*, *GÖCH*) was elected with an absolute majority to host the 11th World Filtration Congress, to be held in Graz April 14-18, 2012. Following the election, the new Congress president, Prof. Wilhelm Höflinger from the Vienna University of Technology, will assume chairmanship of INDEFI for the next four years. Prof. Gerd Mauschitz, also from the Vienna University of Technology, was elected as Chairman of the international scientific committee for WFC11.

The next large international event in the field of mechanical particle separation is the FILTECH 2009 Conference and Exhibition, which will again take place in Wiesbaden from 13-15 October 2009. Interested colleagues are invited to submit abstracts for presentation until December 31, 2008. More information can be found at www.filtech.de

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ISTP-19 August 17–20, 2008, Reykjavik, Iceland

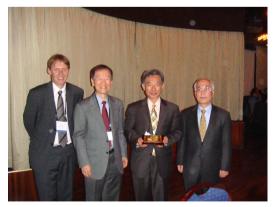
by Jong Kim

The 19th International Symposium on Transport Phenomena (ISTP-19) took place in Reykjavik, Iceland, August 17-20, 2008, organized and sponsored by the University of Iceland under the auspices of the Pacific Center of Thermal-Fluids Engineering.

Thermal and fluids transport phenomena are becoming increasingly important with the renewed interest in energy production, energy efficiency, environment, climate change, sustainability, and applications in emerging areas such as biotechnology.

The ISTP series of conferences is one of the flagship conferences sponsored by the Pacific Center of Thermal-Fluids Engineering. It has established itself as a most popular premier international conference in the areas of thermo-fluids transport phenomena. The previous ISTP conferences were 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, Toyama 2006, and Daejeon 2007.

This highly successful multidisciplinary international conference was intended to provide a forum for the specialists in the fields of thermo-fluids transport phenomena to exchange information, present the results of new developments, review the state-of-the-art, and discuss the future directions and priorities in research and development with focus on thermo-fluids aspects of transport phenomena. The conference covered a wide range of topics in thermo-fluids science and engineering presented in over 200 papers contributed by scientists, engineers, researchers, and practitioners



From left, S. Brynjolfsson (Chair), J.H. Kim (Co-Chair), S.T. Ro (Technical Achievement Award Winner), S. Mochizuki (PCTFE President)

representing 31 different countries. The topics covered at the conference include heat and mass transfer, multiphase flow, micro- and nano-scale transport, thermal hydraulics of nuclear reactors, environmental transport phenomena, gas turbine heat transfer, experimental and computational fluid dynamics, combustion and reacting flows, advanced energy systems, turbulence and flow instabilities, heat exchangers, aerodynamics and wind engineering, manufacturing and materials processing, thermo-fluids visualization and imaging technology, biothermo-fluid dynamics, and transport phenomena in chemical process systems. The conference also featured three plenary lectures and three keynote lectures by an international authority in each area. Prof. Sung Tack Ro of Seoul National University presented the opening plenary lecture on thermodynamics and transport phenomena. Prof. Gretar Tryggvason of Worcester Polytechnic Institute followed with a plenary lecture on direct numerical simulations of multiphase flow and Prof. Sadik Kakac (formerly at the University of Miami) of the TOBB University of Economics and Technology

gave a third plenary lecture on two-phase flow dynamic instabilities. Professor Ro further received the ISTP Technical Achievement Award for his outstanding and sustained contributions to transport phenomena as a researcher, teacher, and mentor. The Conference Chair was Prof. Sigurdur Brynjolfsson of the University of Iceland with Prof. Jong H. Kim of KAIST, Korea as Co-Chair while Prof. Olafur Petur Palsson of the University of Iceland was Technical Program Chair. ISTP-20 will be held in Victoria, British Columbia, Canada, July 7-10, 2009.

Chair

Prof.Sigurdur Brynjolfsson (Iceland) University of Iceland E-mail: sb@hi.is Co-Chair Prof. Jong H Kim (USA) EPRI International/KAIST E-mail: jkim@epri.com

6th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2008) June 30 – July 2, 2008, Pretoria, South Africa

by JP Meyer

The 6th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2008), was held in Pretoria, South Africa as part of the University of Pretoria's 100-year celebrations "A century in the service of knowledge".

For this conference and proceedings, all papers were peer-reviewed by at least two reviewers and almost 150 papers were accepted. The review policy was that only original research papers that were recommended unconditionally by two reviewers who are distinguished subject specialists in the field of the relevant paper were accepted.

A large number of papers were submitted, and it was possible to select only papers of a high standard for publication in the proceedings.

The papers in the proceedings were read in 17 parallel lecture sessions over a period of three days during which five keynote papers were presented. The large number of scheduled presentations contributed without a doubt towards creating a meaningful forum for discussing the latest developments as well as for keeping abreast with the state of the art in heat transfer, fluid mechanics and thermodynamics.

The common objectives of the conference were to bring together scientists and engineers, and for inspiring us to uncover, share and glean more knowledge in order to tackle humankind's future problems. Furthermore, the purpose was to provide a forum for specialists in heat transfer, fluid mechanics and thermodynamics from all corners of the globe to present the latest progress and developments in the field. This not only allowed the dissemination of the state of the art, but will serve as a catalyst for discussions on future directions and priorities in the areas of heat transfer, fluid mechanics and thermodynamics. The additional purposes of this conference were to introduce Africa to the rest of the world and to initiate collaboration in research.

In 2002, the 1st International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2002) was hosted in the Kruger National Park, South Africa. In 2003, the 2nd International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2003) was hosted at the Victoria Falls, Zambia. The 2004 conference (HEFAT2004) was in Cape Town and the 4th conference (HEFAT2005) took place in Cairo, while the 5th conference (HEFAT2007) was at Sun City, South Africa. The 7th conference (HEFAT2009) is planned to be held in Turkey in 2009.

Prof. JP Meyer Conference Chair University of Pretoria, South Africa E-mail: Josua.Meyer@up.ac.za

Meeting Report on "The 5th International Conference on Transport Phenomena in Multiphase Systems (HEAT 2008)" June 30 – July 3, 2008, Bialystok, Poland

by Teodor Skiepko

The 5th International Conference on Transport Phenomena in Multiphase Systems (HEAT 2008) was held in Bialystok, Poland, June 30 - July 3, 2008. This fifth edition of the Conference in series HEAT was organized by Bialystok Technical University (Poland) in cooperation with Gdansk University of Technology (Poland) and the Institute of Fluid-Flow Machinery of Polish Academy of Sciences (Gdansk, Poland). The Organizing Committee of the Conference was commanded by Professor Teodor Skiepko (Poland), and the Scientific Committee was working under chairmanship by Dr. Ramesh K. Shah (India).

While looking in the past, Conferences in series HEAT have a quite long tradition. The first three previous editions held in 1996, in 1999 and in 2002 were very successfully organized by Kielce University of Technology (Poland). The fourth edition (2005) was organized by Gdansk University of Technology and the Institute of Fluid-Flow Machinery of Polish Academy of Sciences Gdansk with cooperation of Kielce University of Technology. Throughout that past time the number of participants and scientific centres they represent have been consecutively growing. Historically, during the first conference 39 papers were presented, during the second, third and fourth editions 35, 67 and 74 papers, respectively. However, interest in the fifth edition (2008) has been outstanding, in fact, the latest edition of the Conference gathered more papers than ever before - 124 accepted papers were presented by delegates from 28 countries: Australia, Australia, Belgium, Brazil, Canada, Croatia, Czech Republic, Germany, India, Indonesia, Iran, Israel, Italy, Japan, Korea, Kuwait, Lithuania, Malaysia, The Netherlands, New Zealand, Poland, Russia, Slovenia, Switzerland, Taiwan, Turkey, United Kingdom, USA. Thanks to a considerably reduced fee we also enabled young PhD students to participate in the Conference.

This 3 and a half day Conference was inaugurated by Dr Ramesh K. Shah (India) who delivered the opening address. Subsequently, the conference program included the distinguished plenary lecture delivered by G. P. Celata (Italy) and keynote lectures delivered by: S.V. Alekseenko (Russia), J. Banaszek (Poland), A.J. Ghajar (USA), T.G. Karayiannis (UK), D. Lakehal (Switzerland), P. Di Marco (Italy), D. Mikielewicz (Poland), A. Podgorski (Poland), M.Z. Podowski (USA), M.E. Poniewski (Poland), M. Sommerfeld (Germany), R.K. Shah (India), J.R. Thome (Switzerland), A. Ullmann (Israel), C-C. Wang (Taiwan). The contributed papers were presented at regular sessions via predominantly poster presentations and a few stand-up oral. On the overall the papers presented cover a broad spectrum of topics ranging from hydrodynamics through boiling and condensation, innovative and advanced experimental techniques, numerical modelling of complex fundamental aspects of multiphase systems to studies of practical problems and their industrial applications. There were discussions, assessments, intense and suggestive critics following many oral and at poster presentations. The number of papers presented and variety of subjects considered confirm the continual progress and grow of research works in the field.

Two-volume book contains the Proceedings¹ of the fifth edition (2008) of the Conference where the plenary lecture paper, all keynote papers and all contributed papers are included. The presentation of all the papers in the Proceedings is in the full text and organized such that at beginning of volume 1 the Keynote papers (15 papers) are given headed by the Plenary Lecture paper. Subsequently the Conference Papers (108 papers) follow by the end of volume 1 and throughout volume 2 categorized into some basic allied fields referenced to topics of the Conference as:

Two- and Multi- Phase Flows Hydrodynamics, (24 papers) Innovative and Advanced Experimental Techniques, (7) Cavitation, (4) Boiling and Condensation, (24) Melting and Solidification, (5) Particulate Flows, Aerosols and Colloids, (13) Heat/mass Exchangers and Industrial Applications, (17) Two Phase Injectors and Ejectors, (7) Miscellaneous, (7).

The Conference papers presented in the Proceedings have been peer-reviewed by appropriate professionalists in the field under the leadership of the members of the Scientific Committee. We are deeply grateful for all the effort that they have put to maintaining high standards of the papers. We would also like to express sincere thanks to all the reviewers who have participated in the review process. We hope that the Proceedings of this Conference can be not only a literature source of references for a selected community of researchers attending the Conference but also for people working on the side of industrial applications or education making multiphase flows as recognized outstanding engineering subject to be taught.

This fifth edition of the Conference was a success not only because of wide international response and quality of papers presented, but also because of the location, organization and social program in which one day tour to Bialowieza National Park Forest, the jewel of both European and world-wide lowland forests, was the most outstanding event.

We truly believe that the Conference via presentations of the most recent achievements and exchanging ideas can contribute to the further development in the subject as well as to promotion of international cooperation in modelling and experimentation on two- and multi- phase flows. *Acknowledgments.* We gratefully acknowledge financial support for this Conference given by the Faculty of Mechanical Engineering, Bialystok Technical University, within framework of funding for statutory R & D activities.

Prof. Teodor Skiepko The Organizing Committee Chairman Bialystok Technical University, Faculty of Mechanical Engineering, Wiejska 45C, 15-351, Bialystok, Poland, email: <u>tskiepko@pb.bialystok.pl</u>

¹ Limited number of *Proceedings* is still available to be purchased, send orders on email address as above.

XCFD4NRS "Experiments and Computational Fluid Dynamics for Nuclear Reactor Safety" September 10–12, 2008, Grenoble, France

by Dominique Bestion

XCFD4NRS, "Experiments and Computational Fluid Dynamics for Nuclear Reactor Safety" is an OECD-NEA & IAEA Workshop, which was hosted and organized by CEA in Grenoble (FRANCE) on September 10-12, 2008. Following CFD4NRS, held in 2006 in Garching (GERMANY), it was a forum for numerical analysts and experimentalists to exchange information in the field of Nuclear Reactor Safety (NRS) related activities relevant to Computational Fluid Dynamics (CFD) validation, with some emphasis placed on new experimental techniques and more focus on two-phase CFD applications.

XCFD4NRS aimed at providing a better evaluation of the maturity of CFD codes for NRS applications. Emphasis was put on the definition and application of Best Practice Guidelines and on an adequate validation using "CFD-grade" experiments. New measurement techniques of interest for this validation have also been presented.

59 papers were presented covering several topics such as Mixing and dilution problems, Containment thermalhydraulics, Boiling flow and CHF investigations, Pressurized Thermal Shock, Advanced Reactors, and various accident analyses. Results of three Working Groups of OECD-CSNI on application of CFD to NRS were also presented by the coordinators. 5 Keynote Lectures were presented by V. Teschendorff (GRS), T. Schulenberg (FZK) and Professors S. Banerjee (Univ. New York, USA), Y. Hassan (Univ. of Texas A&M) and T. Hibiki (Purdue Univ.). More than 140 people attended the workshop, coming from 15 European countries, USA, Japan, Korea, ...

Progress has been noticed on some instrumentation techniques, on BPG application, on the quality of some validation results. Conclusions were drawn on the need to further develop measurement techniques, to define more precise BPG specific to each NRS application, and to develop uncertainty evaluation methods.

A follow up workshop to be held in 2010 will be proposed to OECD-WGAMA, which could be organized in the USA.

Dr. Dominique Bestion General Chair Commissariat a l'Energie Atomique (CEA), France E-mail: dominique.bestion@cea.fr

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

Call for Nominations The Nusselt Reynolds Prize Final Date November 30th, 2008

Sponsored by

Assembly of World Conferences on Experimental Heat Transfer, Fluid Mechanics, and Thermodynamics

The Nusselt-Reynolds Prize has been established by the Assembly of World Conferences to commemorate outstanding contributions by Wilhelm Nusselt and Osborne Reynolds as experimentalists, researchers, educators, and authors. As many as three prizes may be bestowed at every World Conference, one in each of the areas of heat transfer, fluid mechanics, thermodynamics, or any combination of these.

The prize shall be bestowed for outstanding scientific and engineering contributions and eminent achievements in the fields of heat transfer, fluid mechanics, and thermodynamics through (1) experimental studies and analytical/ numerical extension of the measurements, (2) development of experimental techniques, visualization techniques, and/or instrumentation, and/or (3) development of design theory (that needs experimental data) and theory based experimental correlations. These contributions should yield a deeper insight into physical phenomena involved or should yield significant technological advances. In addition to research, the awardee(s) should have made outstanding contributions to the field through teaching, design, or a combination of such activities. The prize is based on *achievement through publications* or through *the application of the science or art*. Nationality, age, sex, and society membership shall not be considered when evaluating qualifications of candidates. A candidate must be living at the time of designation as a recipient of the prize.

The prize consists of a bronze plaque, an engrossed certificate, and an honorarium. The prize is administered by the Prize Board. The deadline for accepting pre-nominations for the Prize is *June 30th*, *2008*, the deadline for nominations in the final format is *November 30th*, *2008*. The prize will be awarded at the Seventh World Conference during June 28 – July 3, 2009 in Kraków, Poland where the prize winners will also present plenary lectures on their subjects.

Nominators can obtain further information and download the nomination form from a webpage at <u>www.ifv.uni-hannover.de</u>

Professor Dieter Mewes, Chairperson The Nusselt-Reynolds Prize Board Leibniz University Hannover Fakultät für Maschinenbau Institut für Mehrphasenprozesse (Verfahrenstechnik) Callinstr. 36, D-30853 Hannover, Germany Tel. +49-511-762-3638; Fax. +49-511-762-3031 mewes@ifv.uni-hannover.de

Future Meetings

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

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 7th JSME-KSME Thermal and Fluids

Engineering Conference (TFEC2008)

Sapporo, Japan, October 13-16, 2008 Prof. Kazuhiho Kudo (JSME) E-mail: myamada@eng.hokudai.ac.jp Prof. Jinho Lee (KSME) E-mail: hhcho@yonsei.ac.kr http://www.tfec2008.jp/

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 E-mail: okamoto@nthas6.org http://www.nthas6.org/

1st European Conference on Microfluidics (mFluâ08)

Bologna, Italy, December 10-12, 2008 Prof. Gian Luca Morini, University of Bologna, Italy E-mail: gianluca.morini@mail.ing.unibo.it Prof. Stephane Colin, University of Toulouse, France E-mail: stephane.colin@insa-toulouse.fr; http://www.microfluidique.insa-toulouse.fr/ mf08.htm

The 6th International Symposium on Measurement Techniques for Multiphase Flows (ISMTMF2008)

Okinawa, Japan, December 15-18, 2008 Prof. Koji Okamoto, University of Tokyo, Japan E-mail: info@ismtmf.net http://www.ismtmf.net/

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The Fourth International Conference on Thermal Engineering Theory and Applications

Abu Dhabi, United Arab Emirates, January 12-14, 2009 Prof. Denis Siginer, The Petroleum Institute

E-mail: dsiginer@pi.ac.ae Tel: +971 2 607 5168, Fax: +971 2 607 5200 Prof. Ziad Saghir, Ryerson University E-mail: zsaghir@ryerson.ca Tel: 1 416-979-5000 Extension 6418 Fax: 1 416-979-5265 http://www.ryerson.ca/~ictea/

Microwave and Flow Chemistry Meeting 2009

Antigua and Barbuda, January 28-31, 2009 Prof. C. Oliver Kappe, University of Graz http://www.zingconferences.com/ index.cfm?page=conference&intConferenceID=46&type=meeting

ICFTE 2009: International Conference on Fluids and Thermal Engineering

Hong Kong, March 25-27, 2009 http://www.waset.org/wcset09/hongkong/icfte/

6th American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Controls, and Human Machine Interface Technology (NPIC&HMIT 2009) Knoxville, Tennessee, USA, April 5-9, 2009

Dr. Richard Wood, ORNL Tel: (865) 574-8541 E-mail: woodrt@ornl.gov http://meetingsandconferences.com/npic-hmit-2009/

International Symposium on Convective Heat and Mass Transfer in Sustainable Energy (CONV-09)

Yasmine Hammamet, Tunisia, April 26 - May 1, 2009 Dr. Mourad Rebay, University of Reims Champagne-Ardenne, France Tel: +33-3-26913448, Fax: +33-3-26913250 E-mail: mourad.rebay@univ-reims.fr http://www.ichmt.org/conv-09/

7th ECI International Conference on Boiling Heat Transfer (BOILING 2009)

Florianópolis-SC, Brazil, May 3-7, 2009 Prof. Júlio César Passos University Federal of Santa Catarina Department of Mechanical Engineering Florianópolis-SC, Brazil Tel: +55 48 3721 9379 (217) Fax: +55 48 3721 7615 E-mail: jpassos@emc.ufsc.br http://www.boiling2009.com.br/

2009 International Congress on Advances in Nuclear Power Plants (ICAPP '09)

Shinjuku Tokyo, Japan, May 10-14, 2009 E-mail: info@icapp09.org http://www.icapp09.org/

6th International Conference on Computational Heat and Mass Transfer

Guangzhou, China, May 18-21, 2009 Prof. A. A. Mohamad Dept. of Mechanical and Manuf. Eng. Schulich School of Engineering The University of Calgary E-mail: mohamad@ucalgary.ca http://www.enme.ucalgary.ca/conferences/6icchmt09/

28th Annual International Conference on Thermal Treatment Technologies (2009 IT3)

Cincinnati, OH, USA, May 18-22, 2009 Dr. Carrie Hartz Air & Waste Management Association Tel: 412-904-6008, Fax: 412-232-3450 E-mail: chartz@awma.org http://www.awma.org/IT3/

FMHT 2009: International Conference on Fluid Mechanics, Heat Transfer and Thermodynamics Tokyo, Japan, May 27-29, 2009 http://www.waset.org/wcset09/tokyo/fmht/

http://www.waset.org/wcset09/to

ANS Annual Meeting

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

Multiphase Flow 2009

New Forest, UK, June 15-17, 2009 Prof. C A Brebbia, Wessex Institute of Technology, UK Prof. A A Mammoli, University of New Mexico, USA Tel: + 44 (0) 238 029 3223 Fax: + 44 (0) 238 029 2853 E-mail: rswinburn@wessex.ac.uk http://www2.wessex.ac.uk/09-conferences/ multiphase-flow-2009.html

The Third Conference on Thermophysical Properties and Transfer Processes of Refrigerants

Boulder, Colorado, USA, June 23-26, 2009 Dr. Piotr A. Domanski, NIST, Gaithersburg, Maryland Dr. Mark O. McLinden, NIST, Boulder, Colorado Tel: 301 975-5868, Fax: 301 975-8973 E-mail: david.yashar@nist.gov http://www.iirboulder2009.org

7th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics (ExHFT-7)

Krakow, Poland, June 28 - July 3, 2009 Prof. Dieter Mewes E-mail: exhft-7@agh.edu.pl http://www.exhft-7.agh.edu.pl/

16th International Conference on Thermal Engineering and Thermogrammetry (THERMO)

Budapest, Hungary, July 1-3, 2009 Dr. Imre Benko Tel/Fax: +361 310-0999 E-mail: ibenko@freestart.hu http://www.mate.mtesz.hu/eng/Pages/2009/ THERMO2009/

6th International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion (ISMF2009)

Xi'an, China, July 11-15, 2009 Prof. L.J. Guo, Xi'an Jiaotong University, China Tel: 86-29-82668767, Fax: 86-29-82669033 E-mail: ismf@mail.xjtu.edu.cn; mfoffice@mail.xjtu.edu.cn http://www.ismf2009.xjtu.edu.cn

17th International Conference on Nuclear Engineering (ICONE17)

Brussels, Belgium, July 12-16, 2009 http://www.asmeconferences.org/ICONE17/

20th International Conference on Structural Mechanics in Reactor Technology (SMiRT20) Espoo, Finland, August 9-14, 2009 Dr. Rauno Rintamaa Dr. Seppo Vuori VTT Technical Research Centre of Finland Tel: +358-20-722 111, Fax: +358-20-722 7053 E-mail: smirt20@vtt.fi http://www.vtt.fi/smirt20

7th International Symposium on Cavitation (CAV2009)

University of Michigan, Ann Arbor, USA, August 17-22, 2009 Program Chairs Prof. Steven Ceccio Prof. Joseph Katz Dr. Georges Chahine http://cavitation.engin.umich.edu/

14th International Conference on Environmental Degradation of Materials in

Nuclear Power Systems Virginia Beach, VA, USA, August 23-27, 2009 Dr. Todd R. Allen University of Wisconsin Madison, Wisconsin Tel: 608-265-4083, Fax: 608-263-7451 E-mail: allen@engr.wisc.edu http://www.ans.org/meetings/envdeg

Conference on Modelling Fluid Flow (CMFF'09) The 14th International Conference on Fluid Flow Technologies

Budapest, Hungary, September 9-12, 2009 Univ. Prof. Dr.-Ing. habil. R. Schilling Prof. T. Lajos Department of Fluid Mechanics Budapest University of Technology and Economics Tel: +36 1 463 40 72, Fax: +36 1 463 34 64 E-mail: conference@ara.bme.hu http://www.cmff.hu

The IV International Conference on Computational Bioengineering (ICCB2009)

Bertinoro (Forli), Italy, September 16-18 2009 Prof. Marco Viceconti, Istituto Ortopedico Rizzoli Prof. Luca Cristofolini, DIEM, University of Bologna Prof. Rita Stagni, DEIS, University of Bologna http://www.iccb2009.org/

13th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-13)

Kanazawa, Japan, September 27 - October 2, 2009 Honorary Chair: Prof. Neil E. Todreas, MIT General Chair: Dr. Hideki Nariai, JNES Co-Chair: Prof. Jong H. Kim, KAIST/EPRI-W.W. E-mail: info@nureth13.org http://www.nureth13.org/

FILTECH 2009

Wiesbaden Germany, October 13-15, 2009 Dr. Harald Anlauf, Karlsruhe, Germany Prof. Eberhard Schmidt, Wuppertal, Germany E-mail: info@filtech.de http://www.filtech.de/

ICFMTE 2009: International Conference on Fluid Mechanics and Thermal Engineering Chicago, USA, October 28-30, 2009 http://www.waset.org/wcset09/chicago/icfmte/

ANS Winter Meeting and Nuclear Technology Expo

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

The 7th Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-7)

Kaohsiung, Taiwan, ROC, November 16-19, 2009 Prof. Liou, T. M., National Tsing Hua Univ. Conference Office Prof. C.H. Tai Academic Vice President National Pingtung University of Science and Technology Tel: +886 8 7740431, Fax: +886 8 7740398 E-mail: chtai@mail.npust.edu.tw http://psfvip7.npust.edu.tw/

International Conference on Power Engineering (ICOPE-09)

Kobe, Japan, November 16-20, 2009 Prof. Mamoru Ozawa, Kansai University E-mail: matumoto@kansai-u.ac.jp http://www.jsme.or.jp/pes/ICOPE-09/

ICCFD 2009: International Conference on Computational Fluid Dynamics Bangkok, Thailand, December 25-27, 2009 http://www.waset.org/wcset09/bangkok/iccfd/

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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/

----- 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

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