

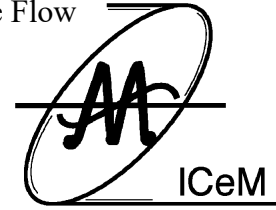


The International Information Center for Multiphase Flow

NEWSLETTER

No. 61, September 2024

The Japanese Society for Multiphase Flow



The Third Asian Conference on Thermal Sciences (ACTS 2024) June 23-27, 2024, Shanghai, China

by Naoki SHIKAZONO

The Third Asian Conference on Thermal Sciences (ACTS 2024) was held from June 23 to 27 at Shanghai Fuyue Hotel, China. This conference is a follow-up conference to the previous two successful conferences which were held in Jeju, Korea (2017), and Fukuoka, Japan (2021). ACTS 2024 is organized by Asian Union of Thermal Science and Engineering (AUTSE) and Chinese Society of Engineering Thermophysics, and supported by Heat Transfer Society of Japan, Korean Society of Mechanical Engineers, Australasian Fluid and Thermal Engineering Society and Indian Society for Heat and Mass Transfer.

Thermal science is crucial in energy devices and equipments for realizing carbon neutrality. The ACTS conference, as an series conference which is held every four years, which was launched by AUTSE and has become one of the largest conferences in the area

of thermal sciences in the Asia Pacific and even around the world. The main objective of ACTS 2024 is to bring together researchers, scientists, and engineers from Asia and also from other parts of the world to share recent advances and research outcomes in thermal sciences. It will provide a platform to facilitate international collaborations and joint efforts.

The conference chairs of ACTS 2024 were Professor ZHAO Chang-Ying (Shanghai Jiao Tong University, China), Professor SHIKAZONO Naoki (The University of Tokyo, Japan), Professor JEONG Ji Hwan (Pusan National University, Korea). Plenary speakers were Professor ALEKSEENKO Sergey (Kutateladze Institute of Thermophysics SB RAS, Russia), Professor CHEN Gang (Massachusetts Institute of Technology, USA), Professor KIM Min Soo (Seoul National University, Korea), Professor

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Total number of presentations were 626 including 8 plenaries, 45 keynotes, 397 oral presentations, 171 poster presentations, 1 AUTSE Outstanding Achievement Award Lecture, 3 AUTSE Young Scientist Award Lecture and 1 Nukiyama Memorial Award Lecture. The total number of participants was 808, including 587 from China, 128 from Japan, 62 from Korea, 4 from Sweden, 4 from Thailand, 4 from the UAE, 4 from the UK, 3 from Australia, 3 from the US, 3 from Russia, 2 from Singapore, 1 from Poland, 1 from India, 1 from Vietnam and 1 from Kazakhstan.

Next ACTS conference will be held in Jeju, Korea in March 2028.



Photo 2 Ceremony at the banquet.



Photo 3 Poster session.



Photo 1 Session room.

Author's information

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21st International Symposium on Applications of Laser and Imaging Techniques to Fluid Mechanics 8 - 11 July 2024, Lisbon, Portugal

by Yuichi Murai

The 21st International Symposium on Applications of Laser and Imaging Techniques to Fluid Mechanics was held at Calouste Gulbenkian, Lisbon, Portugal in 8-11, July 2024. The chair of the symposium was Prof. Miguel Panão, The University of Coimbra, Portugal. The organizers are Prof. Ellen Longmire, University of Minnesota, USA, Prof. Christian J. Kähler, University of the Bundeswehr Munich, Germany, Prof. Ana Moita, Instituto Superior Técnico, University of Lisbon, Portugal, and Prof. Yuichi Murai, Hokkaido University, Japan. The author

Murai working for multiphase flows reports here on behalf of these organizers.



Photo of technical session

The laser is one of the remarkable inventions of the 20th century that provided the most innovative and valuable tool for experimental fluid mechanics. Technological developments in lasers, magnetic resonance imaging, synchrotron and X-ray imaging, detectors, electronics, computers, and, recently, AI tools are the source of new techniques, improved accuracy, higher spatial or temporal resolution, and new applications. Over the past 40 years since 1982, The International Symposia on Applications of Laser and Imaging Techniques to Fluid Mechanics, often referred to simply as the "Lisbon Symposia", have been persistently providing forums for promoting the interchange of new ideas on the development of advanced techniques for flow measurement and on the latest applications in the field.

In this 21st symposium, plenary lectures are made by Prof. Pavlos Vlachos, Purdue University, titled "Flow velocity uncertainty quantification: applications from flow physics to medical diagnostics", Prof. Shigeo Hosokawa, Kansai University, "Spatiotemporal filter velocimetry and its application to interfacial phenomena", and Prof. Cameron Tropea, Technical University of Darmstadt, on "Quantitative hydrodynamics from trajectory imaging."

The number of oral presentations was 205 and the number of participants was 277 in total. The presentations were classified into the following technical sessions: PIV system development; Boundary layers; Biomedical flows; Filtered Rayleigh scattering; Two-phase flows; PTV techniques; Background oriented Schlieren; Heat transfer and thermodynamic phenomena; Volumetric PIV/PTV; Jets and Wakes; Combustion; PIV processing algorithms; Sprays; Novel measurement techniques;

PIV and LIF; PIV data assimilation; Imaging; PIV applications; Micro-scale PIV and microfluidics; LIF/PLIF techniques; Shock and compressible flows; Artificial learning methods; Particle & spray measurement techniques; Event-based imaging; Aerodynamics
Interfacial flows; High-speed velocimetry; and Force and pressure from PIV data.

In the two-phase flow sessions, there were nice presentations such as for fiber mixture imaging, pico-second imaging of high-speed bubbly flows, 3D imaging of droplets in turbulence, ultrasonic droplet levitator, wavelet optical velocimetry of particulate flow, tomo-PIV for paired bubbles, refractive index matching for packed spheres, micro-X-ray tomography for porous flow, and laser measurement of contact line on various surfaces.

The next symposium will be held in the same place in Lisbon city in 2026.

Author's information

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Future Meetings

The following list includes the conference name, place, data, and contact information

The 8th International Conference on Jets, Wakes and Separated Flows (ICJWSF2024)

Firenze, Italy, September 23–25, 2024

Chair: A. Andreini (University of Florence)

<https://icjwsf2024.org/committees/>

24th International Conference on Communication Technology(ICCT2024)

Chengdu, China, October 18–20, 2024

Chair: H. Zhang (Beijing Jiaotong University),

<https://www.icct2024.com/>

The 34th International Symposium on Transport Phenomena (ISTP-34)

Taoyuan, Taiwan, November 10–13, 2024

Chair: C. Yang (National Central University)

<https://istp34.tw/>

13th Japan-Korea Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS13)

Seoul, Korea, November 10–13, 2024

Chair: W. Baek (KAERI), I. Kataoka (Institute of Nuclear Safety System)

<https://www.nthas13.org/>

10TH Thermal and Fluids Engineering Conference (Hybrid)

Washington, USA, March 9–12, 2025

Chair: P. Norris (George Washington University)

<https://www.astfe.org/tfec2025/>

10th World Congress on Momentum, Heat and Mass Transfer (MHMT 2025)

Barcelona, Spain, April 8–10, 2025

Chair: L. Cheng (Sheffield Hallam University), T.

Karayiannis (Brunel University London)

<https://www.mhmtcongress.com/>

10th International Conference on Multiphase Flow and Heat Transfer (ICMFHT 2025)

Barcelona, Spain, April 8–10, 2025

Chair: L. Cheng (Sheffield Hallam University), T.

Karayiannis (Brunel University London)

<https://icmfht.com/>

10th International Conference on Experimental and Numerical Flow and Heat Transfer (ENFHT 2025)

Barcelona, Spain, April 8–10, 2025

Chair: L. Cheng (Sheffield Hallam University), T.

Karayiannis (Brunel University London)

<https://enfht.com/>

The 12th International Conference on Multiphase Flow (ICMF2025)

Toulouse, France, May 12–16, 2025

Chair: E. Climent (Toulouse Institute of Fluid Mechanics)

<https://www.imft.fr/icmf-2025/>

21th International Symposium on Flow Visualization (ISFV21)

Tokyo, Japan, June 21–25, 2025

Chair: S. Someya (Tokyo Denki University)

<https://www.isfv21.org/#:~:text=Welcome%20to%20the%2021st%20International,held%20consecutively%20to%20this%20conference.>

10th International Conference on Discrete Element Methods (DEM10)

Himeji, Japan, July 1–5, 2025

Chair: M. Sakai (The University of Tokyo)

<https://www.sptj.jp/dem10/>

Summer Heat Transfer Conference (SHTC2025)

Westminster, Colorado, July 8–10, 2025

Chair: S. Boetcher (Embry-Riddle Aeronautical University)

<https://event.asme.org/SHTC>

12th International Conference of Fluid Flow, Heat and Mass Transfer (FFHMT 2025)

London, United Kingdom, July 15–17, 2025

Chair: B. Kruczek (University of Ottawa)

<https://ffhmt.com/>

11th International Symposium on Turbulence, Heat and Mass Transfer (THMT25)

Tokyo, Japan, July 21–25, 2025

Chair: K. Suga (Osaka Metropolitan University),

<https://www.thmt-25.org/>

10th World Congress on Particle Technology (WCPT10)

Osaka, Japan, May 11–14, 2026

Chair: T. Matsuyama (Soka University)

<https://www.showsbee.com/fairs/World-Congress-on-Particle-Technology.html>

12th International Conference on Heat Transfer and Fluid Flow (HTFF 2025)

Paris, France, August 19–21, 2025

Chair: H. Qui (The Hong Kong University of Science & Technology)

<https://htffconference.com/>

21th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (Nureth-21)

Busan, Republic of Korea, August 31– September 5, 2025

Chair: C. Song (KAERI, Korea)

<https://www.ans.org/meetings/view-425/>

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