Russia
Member of ICHMT, AIHTC
(1) Overview

National Committee for Heat and Mass Transfer,
Russian Academy of Sciences
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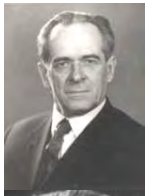
Moscow, 111116, Russia
nchmt@iht.mpei.ac.ru
www.nchmt.ru

(Moscow standard time, MST: UTC+3, Population: 146 million)

The National Committee for Heat and Mass Transfer (NCHMT) was organized on June 10, 1971.
Academician M.A. Styrikovich was elected the first chairman of the NCHMT and remained in his position until 1994.



M.A. Styrikovich

Academicians S.S. Kutateladze, A.V. Luikov and M.A. Styrikovich were among the founders and creators of the International Centre for Heat and Mass Transfer (ICHMT, http://www.ichmt.org/).

S.S. Kutateladze

A.V. Luikov

Since its foundation, the National Committee for Heat and Mass Transfer has been an institutional member of the International Centre for Heat and Mass Transfer.

Michael A. Styrikovich was president of the International Centre of Heat and Mass Transfer from 1972 to 1976, and Alexander I. Leontiev was vice-president of the ICHMT from 2002 to 2006.

Leonid A. Dombrovsky is currently a member of the ICHMT Executive Committee.
Twenty Russian scientists are members of the Scientific Council of the ICHMT. This is the second largest national representation in the Scientific Council after the USA.

From 1971 to 1992, the National Committee for Heat and Mass Transfer provided information and organizational support for the participation of delegations of researchers at more than 89 international scientific events on various problems of heat and mass transfer.

Delegates from Russia to the Assembly of International Conferences on Heat Transfer are Leonid Dombrovsky and Alexander Leontiev.

Alexander I. Leontiev

Leonid A. Dombrovsky

The main goals of the National Committee for Heat and Mass Transfer are:

- Analyze new information in the field of heat and mass transfer from the world's leading universities and research centers;

- Information and organizational support for the participation of Russian scientists in the activities of the International Centre for Heat and Mass Transfer;
- Holding Russian national conferences on heat transfer;
- Organization of Seminar Schools on heat transfer problems for young scientists and engineers;
- Functional support for the Russian journal "Thermal Processes in Engineering" https://mai.ru/science/publish/

Since 1994, the Russian National Heat Transfer Conferences have been held every four years. The total number of papers presented by Russian researchers was about 500 at each conference. In 2022, the 8th Russian National Heat Transfer Conference is scheduled to take place at the Moscow Power Engineering Institute on October 17-22. https://rnhtc.mpei.ru/

School-Seminar of young scientists and specialists under the scientific leadership of Professor A.I. Leontiev "Problems of Heat and Mass Transfer and Gas Dynamics in Power Plants" has been held once every two years since 1977. The School-Seminar brings together young scientists and engineers working in the field of thermal physics and heat transfer, providing an open forum to discuss current and future research directions. As a rule, the School-Seminar is held in different cities of the Russian Federation.

The XXIII school-seminar was held on May 24-28, 2021 in Yekaterinburg on the basis of the Institute of Thermal Physics of the Russian Academy of Sciences. There were about 200 presentations by young researchers and 29 lectures by distinguished professors. www.nchmt.ru; http://itpekb.ru

Memorable photos from various conferences and School-Seminars. Among the participants in a number of School-Seminars were Professors D.B. Spalding, J.R. Lloyd, A. Bar-Cohen, J.R. Howell, and T.W. Simon.

Russia, Member of ICHMT, AIHTC (2)

National Committee for Heat and Mass Transfer, Russian Academy of Sciences (NCHMT, RAS)
1. 8th Russian National Conference on Heat Transfer (RNCHT-8)
2. Thermophysics and Aeromechanics

1. 8th Russian National Conference on Heat Transfer (RNCHT-8), Moscow Power Engineering Institute, October 17-22, 2022. https://rnhtc.mpei.ru/ (in Russian)

Aleksey Dedov, Professor, Corresponding member of the Russian Academy of Sciences, National Research University "Moscow Power Engineering Institute", Moscow, Chairman of RNCHT-8 Organizing Committee, dedovav@mpei.ru or dedovavl@mail.ru

The Eighth Russian National Conference on Heat Transfer (RNCHT-8) is the largest event in Russia that brings together specialists in the field of heat transfer. The conference was held in face-to-face format. The conference was attended by more than 300 researchers - representatives of educational and academic institutions, leading industry research institutes, factories, and joint-stock companies. Leading Russian and foreign scientists presented 11 plenary and 12 keynote lectures on topical issues of heat and mass transfer at the conference:

1) The Kutateladze–Leontiev limit laws of heat transfer. Sixty years later; **2)** Possible mechanisms of climate change; **3)** Russia and the World in the age of global warming and counteracting it; **4)** Heat and mass transfer and its applications at A.V. Luikov Institute of Heat and Mass Transfer – between the past and the future; **5)** Active Brownian motion and quantum turbulence induced by laser radiation in a superfluid helium; **6)** A new generation of high-performance energy; **7)** Trends and achievements in the study of boiling processes; **8)** Direct numerical simulation of turbulent wedges at supersonic velocities; **9)** Active emulsions; **10)** Thermal and physical-chemical processes in hydrogen production in a microstructural heat exchanger reactor; **11)** Prospective directions for hydrodynamics and heat transfer in interconnected fluidized bed reactors for capturing CO_2 and hydrogen production; **12)** Heat transfer and friction in dynamically nonequilibrium turbulent flows; **13)** Comparison of thermophysical characteristics of nanofluids with single-walled and multi-walled carbon tubes; **14)** Investigation of heat transfer during cooling of cylindrical bodies simulating tolerant fuel of nuclear power plants; **15)** Interfacial heat transfer and the ability to control volumetric condensation in a dusty vapor-gas flow; **16)** Influence of vortex formation effects on heat and mass transfer processes in nuclear power plants; **17)** Numerical and experimental study of vortex intensification of heat transfer on structured surfaces with inclined grooves; **18)** Thermocapillary rivulet structure in a locally heated vertical liquid film; **19)** Application of the meshless method for numerical simulation of gas-dynamic interaction of particles with a shock layer; **20)** Registration of the characteristics of the fire source in rooms; **21)** Convective heat transfer in the presence of a heat-insulating body in the liquid volume; **22)** A variation approach to the analysis of mathematical models of heat conduction taking into account spatial nonlocality; **23)** Identification of heat transfer characteristics in coil windings high-temperature superconductors.

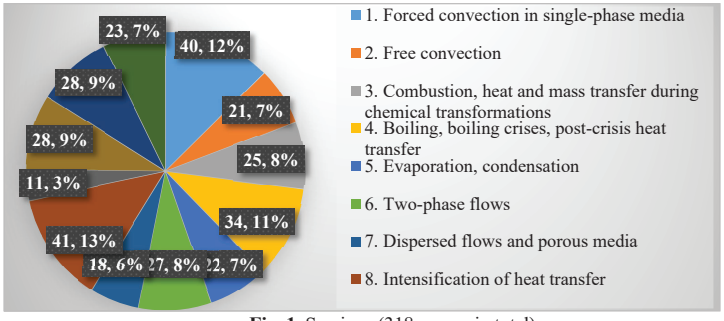


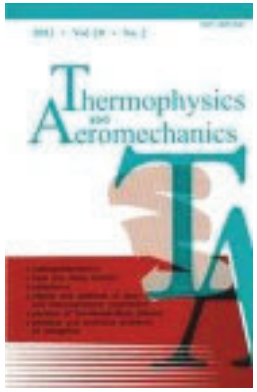
Fig. 1 Sessions (318 papers in total)

The conference programme included 318 papers, divided into 12 sessions (**Fig. 1**) in 12 sections: **1.** Forced convection in single-phase media; **2.** Natural convection; **3.** Combustion, heat and mass transfer during chemical transformations; **4.** Boiling, boiling crises, post-crisis heat transfer; **5.** Evaporation, condensation; **6.** Two-phase flows; **7.** Dispersed flows and porous media; **8.** Intensification of heat transfer; **9.** Radiative and combined heat transfer; **10.** Heat conduction, thermal insulation; **11.** Non-traditional problems of heat transfer; **12.** Youth section.

Each session included both oral presentations and poster sessions. The posters were mainly by young researchers. The authors of the three best posters in each section were awarded diplomas.

The conference included a round table "Thermophysical Problems in Nuclear Power Engineering".

The proceedings of the conference were published in two volumes.



2. ***Thermophysics and Aeromechanics*** is a journal offering original reports, reviews, and discussions on fluid dynamics, heat and mass transfer, turbulence, and other topics. The journal publishes articles of both a fundamental and applied nature, as well as theoretical and numerical modeling, experimental data and descriptions of experimental techniques and new engineering principles. Founded by the Siberian Branch of the Russian Academy of Sciences (SB RAS), Kutateladze Institute of Thermophysics SB RAS, and Khristianovich Institute of Theoretical and Applied Mechanics SB RAS in 1994, the journal "*Thermophysics and Aeromechanics*" welcomes contributions in English from all countries. Currently, the journal has contributors from Australia, Austria, Belarus, Belgium, Canada, China, India, Iran, Italy, Japan, South Korea, etc.

"*Thermophysics and Aeromechanics*" is a peer-reviewed journal. We use a single-blind peer review format. The average period from submission to the first decision is 52 days. The average rejection rate for submitted manuscripts is 42%. The final decision on the acceptance of an article for publication is made by the Editorial Board. Any invited reviewer who feels unqualified or unable to review the manuscript due to a conflict of interests should immediately notify the Editorial Board and decline the invitation. Reviewers should formulate their statements clearly and reasonably so that the authors can use reviewer's arguments to improve the manuscript. Personal criticism of the authors should be avoided. Reviewers should indicate in the review (i) any relevant published work that has not been cited by the authors, (ii) anything reported in previous publications and that has not been referenced or cited appropriately, (iii) any significant similarity or overlap with any other manuscript (published or unpublished) of which they are personally aware.

Since 2006, the English version of the journal "*Thermophysics and Aeromechanics*" (its electronic version) has been available at the Springer website: https://www.springer.com/journal/11510

Email address for contacting the journal: tanda@itp.nsc.ru

- Offers original reports, reviews, and discussions on hydro-gas dynamics, heat and mass transfer, turbulence, and more
- Publishes articles of both a basic and applied character

Editor-in-Chief – Professor Sergey V. Alekseenko