

NIS Scientific Association HEAT PIPES



e Belarusian Republican Foundation for Fundamental Research



## **SECOND ANNOUNCEMENT**

## **International Conference**

8<sup>th</sup> Minsk International Seminar

## Heat Pipes, Heat Pumps, Refrigerators, Power Sources



**September 12–15, 2011** 

Minsk, Belarus

http://www.minskheatpipes.org

## Dear Colleagues, Dear Friends,

We are pleased to announce the 8th event of the Minsk International Seminar Heat Pipes, Heat Pumps, Refrigerators, Power Sources (MIS HEAT PIPES) conference series. MIS HEAT PIPES conferences were successfully realized since 1993. The number of investigations of heat transfer problems multiplies several times year by year. Traditionally heat pipes remain an effective heat transfer devices capable of being used in widest range of applications, from mobile to space systems. New ideas and constructions greatly need to be considered and approved. Contemporary energetic demands force heat pumps and refrigerators to apply high-end technologies. New power sources require more and more attention considering the problem of environment protection. The Conference allows for meeting and making an advisement in the field of interest for specialists from scientific centers all over the world. The Conference will provide keynote lectures, oral and poster sessions, leaving time for in-depth discussions in an informal atmosphere.

## **Organizers**

National Academy of Sciences of Belarus Luikov Heat & Mass Transfer Institute NIS Scientific Association HEAT PIPES

## **Sponsors**

International Centre for Heat and Mass Transfer
Belarusian Republican Foundation for Fundamental Research

## Aims and Scope

The main objective of the Conference is to provide a greater understanding of the fundamentals, principles and technologies associated with the design and operation of heat pipes, heat pumps, refrigerators, and power sources. The Conference is also a means of disseminating information concerned with recent research and development activities in the abovementioned field and related areas such as air conditioning, cryogenics, electronic cooling, etc. It provides a forum for persons involved in research, development, design, and operation of heat pipes, heat pumps, refrigerators, cooling and heating systems, power sources and also can be interesting for scientists and engineers who works in such areas as heat and mass transfer science, energy management and pollution control. Traditionally a special section is devoted to the problems of a thermal control of space vehicles equipment.

## Important dates and Deadlines

Abstract submission January 15, 2011

Notification of abstract acceptance February 20, 2011

Draft paper submission April 20, 2011

Delivery of review papers May 20, 2011

Final paper submission July 1, 2011

Conference event September 12–15, 2011

## Main topics

Physical phenomena in heat pipes, thermosyphons, heat pumps, and refrigerators, solid and liquid sorption heat machines. Fundamental and experimental research

Two-phase flows, interface phenomena, processes of sorption, boiling, evaporation and condensation in the heat transfer devices mentioned

 ${\cal H}\!eat$  and mass transfer in capillary systems and porous media

Modeling of start-up, steady-state, and transient performances in heat pipes and solid sorption devices

Heat pipes for space application (Special session)

*M*ini- and microscale heat transfer in phase changes. Fundamentals, experiments, applications

Heat transfer in nano porous structures; nano fluids; nano technologies

 $\mathcal{H}$ eat transfer in fuel cells

Scientific, space, industrial and domestic applications of heat pipes, heat pumps, refrigerators, and power sources

Materials problem in heat pipes, heat pumps, refrigerators and power sources.

State-of-the-art surveys of heat pipe and sorption machines

#### INTERNATIONAL SCIENTIFIC COMMITTEE

Prof. Vasiliev Leonard L., Chairman	Belarus	Prof. Maydanik Yury F.	Russia
Prof. Kakaç Sadik, Co-Chairman	Turkey	Prof. Mantelli M.	Brazil
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Dr. Goncharov Konstantin A.	Russia	Prof. Stachel Aleksander	Poland
Prof. Groll Manfred	Germany	Dr. A. Torres	Spain
Prof. Kato Yukitaka	Japan	Prof. Ruzhu Wang	China
Prof. Khandekar Sameer	India	Prof. Liejin Guo	China

## Call for Papers and Participation

The purpose of general papers is to report original unpublished findings in the theory and experiment of heat pipes, heat pumps, and refrigeration technologies. All general papers will be reviewed under direction of the International Committee of the Conference. If you plan to attend the Conference, please complete the attached registration form. Detailed information, including registration and hotel accommodation forms, will be sent together with next announcements.

#### Format of the Conference

The format of the Conference will be arranged, with major elements being general papers presented in oral and poster sessions, keynote lectures by invited speakers, equipments and books exhibitions, social and tour activities. Papers will be scheduled for oral presentations on the basis of their content and interest. All papers, presentations, posters, and courses should be prepared in *English*.

#### **KEYNOTE LECTURES**

- 1. **Alyousef Y.** (Energy Research Institute, Riyadh, Saudi Arabia)
  Two-phase Thermal Control Systems for Planetary Base and Surface Systems
- 2. **Aristov Yu. I.** (Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia) Challenging Offers of Materials Science for Adsorption Heat Transformation
- 3. **Farouk B.** (Drexel University Philadelphia, USA) Thermoacoustic Refrigeration for Cryogenic Applications: Recent Advances
- 4. **Goncharov K.A.** (*TAIS Ltd., Russia*) Development and Application of Space Radiators with Loop Heat Pipes
- 5. **Kakaç S.** (TOBB University of Economics and Technology, Ankara, Turkey) Heat Transfer Enhancement with Nanofluids
- 6. **Kato Y.** (Tokyo Institute of Technology, Japan)
  Development of Chemical Heat Pump for Recovery of Waste Heat at Middle-Temperatures of 200–400°C
- 7. **Kriukov A. P.** (Moscow Energy Institute, Russia)
  Pecularities of the Nonequilibrium Heat and Mass Transfer on the Interfaces
- 8. **Maydanik Yu.F.** (Institute of Thermal Physics, Yekaterinburg, Russia) Loop Thermosyphons Development and Application
- 9. **Saha B.B.** (Kyushu University, Fukuoka, Japan) Next Generation Thermally Powered Adsorption Refrigeration Cycles
- 10. **Sunden B.** (Lund Institute of Technology, Sweden)
  On Multiscale and Multiphysics Transport Phenomena in Fuel Cells
- 11. **Prat M.** (Institut de Mécanique des Fluides de Toulouse, France) Heat and Mass Transfer in Capillary Structures. Application to Loop Heat Pipes
- 12. **Thome J.** (École Polytechnique Fédérale de Lausanne, Switzerland) Flow Boiling in Microchannels: Our Recent Advances
- 13. **Vasiliev L.L.** (A.V. Luikov Heat & Mass Transfer Institute, Minsk, Belarus) Heat Transfer Enhancement in Minichannels and Heat Pipes Using Nanotechnology

### **Paper Presentation**

#### **Oral Papers**

The time allowed for keynote lectures is 30 minutes, for oral presentations of individual papers is 15 minutes, and 5 minutes for the questions and discussion after each presentation. Please give the materials of your presentation 15 minutes prior to the start of your session.

#### **Posters**

The suggested lettering size for the title of a paper and author's name is 30mm high (recommended), poster text is need to be plain. Poster board size: 1500 mm high by 900 mm wide.

#### **Conference Rules**

Papers will be assessed for presentation at the conference on the basis of extended abstracts. Abstracts must be submitted in English in MS Word or Adobe PDF format and do not exceed 600 words.

## **Proceedings**

CD and hard copy proceedings will contain the general and keynote papers and will be distributed to the participants at the beginning of the Conference.

#### The Venue

Luikov Heat & Mass Transfer Institute is located in Minsk and is connected with the city center by an extensive transport network. Using underground system and bus transport, you can easily get to the historic, administrative, and cultural center of Minsk and to a wide range of hotels.

Minsk, the capital of the Republic of Belarus, is a modern city having a population of about 2 million inhabitants. It is an important industrial, administrative, and cultural center of Belarus with a more than 940 years-long history.

Minsk meets its guests with splendors of broad avenues and boulevards, spacious squares, green parks, and public gardens. There are a number of theaters, museums, art galleries, and exhibitions.

The Republic of Belarus with the population of about 10 millions is a country of plains, low hills, tranquil rivers, lakes, green woods, and meadows. The climate is mild and moderate. Usually, at the time the Conference will be held, the temperature is comfortable, between 18 and 25 °C.



#### Travel

Minsk is situated 300 km to the east from the border with Poland, and is easily accessible by several modes of transportation. All trains to Moscow starting from Berlin, Bern, Geneva, Warsaw, Vienna, Cologne, Paris, Prague, Copenhagen, Frankfurt on the Main, Brussels, and Oslo pass through Minsk.

Minsk is connected by international airlines with many cities: Frankfurt on the Main, Vienna, and Warsaw and many others. One can also reach Minsk by train or by plane via Moscow or St.-Petersburg. Regular sleeper trains and regular flights connect Minsk with Moscow and St.-Petersburg. If this way of transportation is chosen, it is strongly recommended that the tickets from Moscow and St.-Petersburg to Minsk be also booked at your travel agencies, since such reservations in Moscow or St.-Petersburg may be difficult (as well as reservation in Moscow or St.-Petersburg hotels in case of travel delays). For details the participants are requested to apply to their travel agencies.

#### **Visas**

To participate in the conference you need to have an entry visa. Each participant will get an Official Invitation letter which has to be used for visa support application in the Embassy of the Republic of Belarus. To apply for visas the following paperwork should be submitted to the Consular Division of the Belorussian Embassy.

## **Registration Fee**

Registration fee covers attendance at all technical sessions and workshops, conference proceedings, coffee breaks, lunch refreshments during conference and welcome reception.

General Participant	600 \$
PhD Student	300 \$
Accompanying Person*	300 \$

<sup>\*</sup> This fee covers all above mentioned excepting conference proceedings.

#### Payment options:

#### **BANK OF BENEFICIARY:**

MINSK BELARUS JSC BPS-BANK SWIFT BPSB BY 2X SOVETSKOE BRANCH, SWIFT: BPSB BY 21339

#### **BENEFICIARY CUSTOMER:**

3015603115026/840 MA TEPLOVIE TRUBI MINSK BELARUS

#### **BANK OF CORRESPONDENCE:**

CITIBANK N.A. NEW YORK acc. 36249342 SWIFT CITIUS33

## **Organizing Committee**

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# International Conference

8<sup>th</sup> Minsk International Seminar



## PRELIMINARY REGISTRATION FORM

Surname				
First Name				
Title				
Company/institution				
Post Address				
Zip Code				
City				
Country				
Telephone	Fax	E-mail		
	PARTICII	PATION		
☐ I intend to take part in the Conference				
I will not be able to attend but wish to obtain the Conference proceedings				
Accompanying persons_				
Date		Signature		