

IV International Seminar with elements of scientific school for young scientists (ISHM-IV)

“Topical issues of heat and mass transfer at phase transitions and multiphase flows in modern chemical technology and energy equipment”

April 18-19, 2016

Novosibirsk, Russia

PROGRAM

Kutateladze Institute of Thermophysics SB RAS (IT SB RAS)
Tianjin University (TJU)
Russian Scientific Foundation (RSF)

BRIEF DESCRIPTION:

International Seminar **ISHM-IV** will be held in Novosibirsk at the Kutateladze Institute of Thermophysics SB RAS **18-19 April 2016**. At the seminar the invited topical reports and oral presentations on the key issues of heat and mass transfer at phase transitions and multiphase flows with application to the development and design of modern chemical technology apparatuses and energy equipment will be presented.

The International Seminar with elements of scientific school for young scientists will be held two times in one year at support of the **Russian Science Foundation** of the Project No. 14-49-00010 "*Comprehensive investigation of relationship between self-organization of the flows and non-equilibrium interfacial heat and mass transfer under the conditions of multiscale interaction relating to development of high technologies in distillation and energy equipment*". The first seminar (ISHM-I) held on December 1-2, 2014 in the Kutateladze Institute of Thermophysics.

Organizations:

- [Kutateladze Institute of Thermophysics SB RAS \(Novosibirsk, Russia\)](#)
- [Tianjin University \(TJU, r. Tianjin, China\)](#)
- [Russian Science Foundation \(Moscow, Russia\)](#)

Seminar dates: 18-19 April 2016

Location: Kutateladze Institute of Thermophysics, 630090, Russia, Novosibirsk, Acad. Lavrentiev ave. 1.

TOPICS

The scope of the Seminar covers the following areas:

- Multiscale transfer processes at multiphase flows
- Wave processes and heat and mass transfer at the liquid film flows
- Heat and mass transfer at distillation, including that of the structured packing
- Interface instability in multiphase flows
- Boiling and evaporation of single-component liquids and their mixtures. Heat and mass transfer enhancement methods
- Low-temperature thermophysics
- Contemporary techniques and methods of thermophysical and hydro-gas-dynamic experiment
- Ecological problems in power engineering and chemical technology

LANGUAGES

Working language of the Seminar - English. Presentation of the reports should be prepared in English in format of PowerPoint.

PROCEEDINGS

Abstracts of the ISHM-IV and ISHM-V will be published to the Fifth International Seminar ISHM-V.

REGISTRATION DESK

Registration fee for participants is not provided.

18 April (Monday)	9:00-15:00	Kutateladze Institute of Thermophysics, 3rd floor
19 April (Tuesday)	9:00-12:00	Kutateladze Institute of Thermophysics, 3rd floor

COMMITTEES

Chairs

Academician of RAS Nakoryakov V.E. (IT SB RAS, Novosibirsk, Russia)
Corr. Member of RAS A.N. Pavlenko (IT SB RAS, Novosibirsk, Russia)

Co-Chairs

Prof. V.V. Kuznetsov (IT SB RAS, Novosibirsk, Russia)
Prof. X. Li (Tianjin University, Tianjin, China)

Scientific Secretary

Ph.D A.S. Surtaev (IT SB RAS, Novosibirsk, Russia)

Seminar Secretary

I.V. Gozhenko (IT SB RAS, Novosibirsk, Russia)

CONTACTS

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LIST OF PARTICIPANTS

In total Russian 45 scientists, 26 foreign scientists and 69 young scientists, post-graduates, full-time students of Novosibirsk State University (NSU), Bauman Moscow State Technical University, Siberian State Industrial University and Novosibirsk State Technical University (NSTU) will take part in the Seminar.

Russian scientists

1. V.E. Nakoryakov (Academician of RAS, Consultant, IT SB RAS);
2. A.N. Pavlenko (Corr. Member of RAS, Head of laboratory, IT SB RAS);
3. V.V. Kuznetsov (Professor, Doctor of sciences, Head of department, IT SB RAS);
4. N.N. Zubkov (Professor, Doctor of sciences, Bauman Moscow State Technical University);
5. I.I. Gogonin (Professor, Doctor of sciences, Leading researcher, IT SB RAS);
6. A.V. Vyazmin (Professor, Doctor of sciences, Moscow State University of Mechanical Engineering, Moscow);
7. B.G. Pokusaev (Corr. Member of RAS, Professor, Doctor of sciences, Moscow State University of Mechanical Engineering, Moscow);
8. V.I. Terekhov (Professor, Doctor of sciences, Head of department, IT SB RAS);
9. M.V. Gorbachev (Novosibirsk State Technical University, Novosibirsk);
10. Kashinsky O.N. (Doctor of sciences, Head of laboratory, IT SB RAS);
11. Lobanov P.D. (PhD, Senior researcher, IT SB RAS);
12. Kurdyumov A.S. (Researcher, IT SB RAS);
13. Pribaturin N.A. (Doctor of sciences, Leading researcher, IT SB RAS);
14. S.I. Lezhnin (Doctor of sciences, Leading researcher, IT SB RAS);
15. Yarigin V.N. (Professor, Doctor of sciences, Head of laboratory, IT SB RAS);
16. Yu.N. Vyazov (Kutateladze Institute of Thermophysics, Novosibirsk);
17. A.S. Anshakov (Professor, Doctor of sciences, Leading researcher, IT SB RAS);
18. V.A. Faleev (PhD, Senior researcher, IT SB RAS);
19. V.N. Letushko (Leading engineer, IT SB RAS);
20. V.V. Ostapenko (Doctor of sciences, Leading researcher, Lavrentiev Institute of Hydrodynamics, Novosibirsk);
21. B.V. Perepelitsa (PhD, Leading researcher, IT SB RAS);
22. O.O. Petrova-Bogdanova (Research fellow, Technological Design Institute of Scientific Instrument Engineering, Novosibirsk);
23. A.N. Tsoi (PhD, Research fellow, IT SB RAS);
24. A.D. Polyaniin (Professor, Doctor of sciences, Bauman Moscow State Technical University, Ishlinskii Institute for Problems in Mechanics, Moscow);
25. N. S. Bufetov (PhD, Senior researcher, IT SB RAS);
26. R. A. Dekhtyar (PhD, Senior researcher, IT SB RAS);
27. Yu.I. Aristov (Professor, Doctor of sciences, Boreskov Institute of Catalysis, Novosibirsk State University, Novosibirsk);
28. Dimov S.V. (PhD, Senior researcher, IT SB RAS);
29. V.V. Randin (PhD, Senior researcher, IT SB RAS);
30. A.V. Chinak (PhD, Senior researcher, IT SB RAS);
31. S.V. Konovalov (Prof., Siberian State Industrial University, Novokuznetsk);
32. V.D. Sarychev (Associate professor, Siberian State Industrial University, Novokuznetsk);
33. D.A. Kosinov (Senior researcher, Siberian State Industrial University, Novokuznetsk);
34. A.D. Nazarov (Doctor of sciences, Leading researcher, IT SB RAS);
35. M.I. Nizovtsev (Doctor of sciences, Head of laboratory, IT SB RAS);
36. N.I. Pecherkin (PhD, Senior researcher, IT SB RAS);
37. V.E. Zhukov (PhD, Senior researcher, IT SB RAS);
38. V.I. Zhukov (PhD, Associate professor, NSTU);
39. V.I. Kalita (Doctor of sciences, Head of laboratory, Baikov Institute of Metallurgy and Materials Science);
40. D.I. Komlev (Baikov Institute of Metallurgy and Materials Science, Moscow);
41. A.A. Radyuk (Baikov Institute of Metallurgy and Materials Science, Moscow);
42. A.Yu. Ivannikov (Baikov Institute of Metallurgy and Materials Science, Moscow);
43. A.N. Sterlyagov (PhD, Senior researcher, IT SB RAS);
44. O.A. Volodin (PhD, Research fellow, IT SB RAS);

45. V.Yu. Borodulin (Leading engineer, IT SB RAS).

Foreign scientists

1. X. Li (Professor, Tianjin University, School of Chemical Engineering and Technology, NERCCT Director, "National PeiYang Distillation Tech. Eng. Limited Company" Director, China);
2. B. Jiang (Professor, Tianjin University, School of Chemical Engineering and Technology, NERCCT Deputy Director, China);
3. L. Stoppel (Professor, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany);
4. Th. Wetzel (Professor, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany);
5. H. Sui (Ph.D. in Chemical Engineering, Associate Professor in School of Chemical Engineering and Technology, Tianjin University, China);
6. L. Zhang (PhD in Chemical Engineering, Professor, School of Environmental Science and Engineering, Tianjin-Basic Chemical Experiments Dept., Tianjin University, China);
7. H. Li (Ph.D. in Chemical Engineering, Associate Professor, School of Chemical Engineering and Technology, Tianjin University, China);
8. X. Gao (Ph.D. in Chemical Engineering, Associate Professor, School of Chemical Engineering and Technology, Tianjin University, China);
9. Na Yang (Ph.D. in Chemical Engineering, Associate Professor, School of Chemical Engineering and Technology, Tianjin University, China);
10. Xiaoming Xiao (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
11. Zhijie Li (School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
12. L. He (Associate Professor, School of Chemical Engineering and Technology, Tianjin University, Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, P.R. China);
13. Z. Xu (Senior Engineer, Department of Chemical and Materials Engineering, University of Alberta, Edmonton, Canada);
14. F. Lin (CANMET Energy Technology Centre-Devon, Natural Resources Canada, One Oil Patch Drive, Devon, Canada);
15. Mingfang Luo (Senior Engineer, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, P. R. China);
16. H. Liu (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, P.R. China);
17. P. An (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, P.R. China);
18. A. Min (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
19. Shan Cong (Senior Engineer, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, P. R. China);
20. Peng Yan (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
21. X. P. Xu (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
22. Y. Ma (Senior Engineer, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
23. M.Y. Liu (Professor, School of Chemical Engineering and Technology, Tianjin University, Tianjin, P. R. China);
24. A.L. Ekaid (Senior researcher, Mechanical Engineering Dept., University of Technology, Baghdad, Iraq);
25. H.Q. Khafaji (Senior researcher, Mechanical Engineering Dept., University of Technology, Baghdad, Iraq);
26. K.F. Yassin (Senior researcher, Technical Institute/ Hawija, Northern Technical University, Kirkuk, Iraq).

Young scientists, post-graduates, students

1. Yu. L. Bityutskaya (PhD student, Bauman Moscow State Technical University);
2. I.S. Girmik (Research fellow, Boreskov Institute of Catalysis, Novosibirsk State University, Novosibirsk);
3. V.G. Sorokin (PhD student, Bauman Moscow State Technical University);

4. A.Yu. Granovsky (Research fellow, Siberian State Industrial University, Novokuznetsk);
5. S.S. Shlyapnikov (Student, Siberian State Industrial University, Novokuznetsk);
6. I.A. Komissarova (PhD student, Siberian State Industrial University, Novokuznetsk);
7. Vorobyev M.A. (Post-graduate, Research engineer, IT SB RAS);
8. P.R. Votinov (Student, NSTU);
9. V.S. Naumkin (Post-graduate, Research engineer, IT SB RAS);
10. A.E. Gorelikova (Post-graduate, Research engineer, IT SB RAS);
11. S.I. Radko (Post-graduate, Research engineer, IT SB RAS);
12. S. V. Dvoynishnikov (PhD, Senior Researcher, IT SB RAS);
13. I. K. Kabardin (PhD, Research fellow, IT SB RAS);
14. D. V. Kulikov (Research fellow, IT SB RAS);
15. A.S. Strel'nik (student, NSU);
16. A. V. Klimov (Post-graduate, research engineer, IT SB RAS);
17. I.A. Kozulin (PhD, Research fellow, IT SB RAS);
18. A.S. Surtaev (PhD, Senior Researcher, IT SB RAS);
19. M.V. Bartashevich (PhD, Research fellow, IT SB RAS);
20. M.S. Makarov (PhD, Research fellow, IT SB RAS);
21. M.V. Shestakov (Engineer, IT SB RAS);
22. A.Yu. Sakhnov (PhD, Research fellow, IT SB RAS);
23. S.A. Safonov (Post-graduate, Research engineer, IT SB RAS);
24. M.V. Timoshevskiy (Post-graduate, Research engineer, IT SB RAS);
25. K.S. Pervunin (Research fellow, IT SB RAS);
26. A.Yu. Kravtsova (Post-graduate, Research engineer, IT SB RAS);
27. A.N. Chernyavskiy (Research engineer, IT SB RAS);
28. V.S. Serdyukov (Post-graduate, Research engineer, IT SB RAS);
29. A.V. Meleshkin (PhD, Research engineer, IT SB RAS);
30. D.V. Kuznetsov (Post-graduate, Research engineer, IT SB RAS);
31. A.S. Nebuchinov (Post-graduate, IT SB RAS);
32. M.I. Moiseev (Post-graduate, Research engineer, IT SB RAS);
33. E.N. Shatskiy (Post-graduate, IT SB RAS);
34. A.A. Borisov (Post-graduate, IT SB RAS);
35. V.V. Guzanov (Engineer, IT SB RAS);
36. A.A. Pil'nik (Post-graduate, IT SB RAS);
37. K.I. Stepanov (Research fellow, IT SB RAS);
38. A.S. Agazhanov (Post-graduate, IT SB RAS);
39. O.A. Gobizov (Post-graduate, IT SB RAS);
40. S.V. Starinsky (Post-graduate, IT SB RAS);
41. M.A. Serebryakova (Post-graduate, IT SB RAS);
42. A.O. Zamchiy (PhD, Engineer, IT SB RAS);
43. S.S. Abdurkaripov (Post-graduate, IT SB RAS);
44. E.M. Bochkareva (Post-graduate, IT SB RAS);
45. E.B. Butakov (Post-graduate, IT SB RAS);
46. E.Yu. Slesareva (Post-graduate, IT SB RAS);
47. M.V. Cherdantsev (Post-graduate, IT SB RAS);
48. A.A. Yagodnicina (Post-graduate, IT SB RAS);
49. V.S. Morozov (Post-graduate, IT SB RAS, Research engineer, IT SB RAS);
50. A.S. Mordovskikh (Student, NSU, Laboratory assistant, IT SB RAS);
51. G.V. Bartkus (Student, NSU);
52. S. Arsentyev (Student, NSU);
53. K. Borynyak (Student, NSU);
54. S. Vostrikov (Student, NSU);
55. D. Gluzdov (Student, NSU);
56. I. Poletaev (Student, NSU);
57. G. Sukhorukov (Student, NSU);
58. M. Nichik (Student, NSU);
59. E. Tkachenko (Student, NSU, Laboratory assistant, IT SB RAS);
60. A. Papulov (Student, NSU, Laboratory assistant, IT SB RAS);
61. V. Tumanov (Student, NSU, Laboratory assistant, IT SB RAS);
62. E. Isachenko (Student, NSU, Laboratory assistant, IT SB RAS);
63. V. Ivaschenko (Student, NSU, Laboratory assistant, IT SB RAS);
64. S.E. Spesivtsev (Student, NSU, laboratory assistant, IT SB RAS);
65. R.R. Yusupov (Student, NSU, laboratory assistant, IT SB RAS);
66. F.V. Ronshin (Post-graduate, research engineer, IT SB RAS);

67. I.I. Zapryagaev (Post-graduate, research engineer, IT SB RAS);
68. A.P. Vinokurov (Post-graduate, IT SB RAS);
69. R. Osipov (Student, NSTU);

18 APRIL (MONDAY)
Conference Hall of IT SB RAS

9:00-15:00	REGISTRATION (Location: Kutateladze Institute of Thermophysics, 3rd floor)
9:00-9:15	Welcome speech of the Seminar ISHM-IV Chairman Aleksandr N. Pavlenko
INVITED PRESENTATIONS	
9:15-9:35	<i>Xingang Li, Mingfang Luo, Bin Jiang (School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China)</i> LARGE-SCALE OIL REFINING VACCUM TOWER AND THE APPLICATION IN INDUSTRY IN CHINA
9:35-9:55	<i>Kuznetsov V.V. (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> FLOW BOILING HEAT TRANSFER AND PRESSURE DROP MODELING FOR REFRIGERANTS IN MINICHANNELS
9:55-10:15	<i>A. Min, M.Y. Liu, Y. Ma, X. P. Xu (School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)</i> VIBRATION BEHAVIOR OF A GRAPHITE TUBE WITH AN INTERNAL VAPOR-LIQUID-SOLID BOILING FLOW
10:15-10:35	<i>N.N. Zubkov, Yu. L. Bityutskaya (Bauman Moscow State Technical University, Moscow, Russia)</i> NOVEL SURFACE STRUCTURES FOR THE PHASE TRANSITION
10:35-10:55	COFFEE
10:55-11:15	<i>I.I. Gogonin (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> FURTHER DEVELOPMENT OF HYDRODYNAMIC THEORY OF BOILING CRISIS
11:15-11:35	<i>Xin Gao, Xingang Li, Hong Li (School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China)</i> A POTENTIAL APPLICATION OF CERAMIC FOAM MATERIAL TO DISTILLATION: STRUCTURED CORRUGATION FOAM PACKING
11:35-11:55	<i>A.N. Pavlenko, V.E. Zhukov, N.I. Pecherkin, O.A. Volodin, A.D. Nazarov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), X. Li, X. Gao, H. Li, B. Jiang, L. Zhang, H. Sui (School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China)</i> CONTROLLED IRRIGATION OF THE STRUCTURED PACKING OF THE DISTILLATION COLUMN
11:55-12:15	<i>Luhong Zhang, Zhijie Li, Na Yang, Bin Jiang, Xiaoming Xiao (School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)</i> HYDRODYNAMICS AND MASS-TRANSFER CHARACTERISTICS ANALYSIS OF VAPOR-LIQUID FLOW OF DUAL-FLOW TRAY
12:15-14:00	LUNCH
14:00-14:20	<i>A.V. Vyazmin, B.G. Pokusaev (Moscow State University of Mechanical Engineering, Moscow, Russia)</i> MULTILAYER GELS: THE KINETICS OF THE FORMATION, STRUCTURE AND DIFFUSION PROPERTIES
14:20-14:40	<i>H. Sui, P. An, H. Liu, X. Li, L. He (School of Chemical Engineering and Technology, Tianjin University, Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, China)</i> REMOVAL AND RECOVERY VOCs FROM INDUSTRIAL OFF-GAS
14:40-15:00	<i>L. He (Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, China, School of Chemical Engineering and Technology, Tianjin</i>

	<p><i>University, Tianjin, China.), F. Lin (CANMET Energy Technology Centre-Devon, Natural Resources Canada, One Oil Patch Drive, Devon, Alberta, Canada), X. Li (Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, China, School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China.), H. Sui (Collaborative Innovation Centre of Chemical Science and Engineering, Tianjin, China, School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China.), Z. Xu (Department of Chemical and Materials Engineering, University of Alberta, Edmonton, Canada)</i></p> <p>EFFECT OF DILUTION ON BITUMEN-AIR BUBBLE ATTACHMENT IN OIL SANDS PROCESSING WATER</p>
15:00-15:20	<p><i>V.I. Terekhov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), H.Q. Khafaji (Mechanical Engineering Dept., University of Technology, Baghdad, Iraq), M.V. Gorbachev (Novosibirsk State Technical University, Novosibirsk, Russia)</i></p> <p>NUMERICAL HEAT AND MASS TRANSFER ANALYSIS OF AN INDIRECT EVAPORATIVE COOLER WITH PARTIALLY WETTED PLATES</p>
15:20-15:40	COFFEE
15:40-16:00	<p><i>Xingang Li, Peng Yan, Hong Li, Xin Gao, Shan Cong (School of Chemical Engineering and Technology, National Engineering Research Center of Distillation Technology, Tianjin University, Tianjin, China)</i></p> <p>A FACILE METHOD TO FABRICATE TUNABLE, DURABLE AND PREDICTABLE SUPERHYDROPHOBIC COATINGS ON FOAM CERAMIC MATERIAL</p>
16:00-16:20	<p><i>Kashinsky O.N., Lobanov P.D., Kurdyumov A.S., Pribaturin N.A., Vorobyev M.A. (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i></p> <p>THERMAL MIXING OF LIQUID METAL COOLANT IN A T-JUNCTION</p>
16:20-16:40	<p><i>O.N. Kashinsky, S.I. Lezhnin (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), L. Stoppel, Th. Wetzel (Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany)</i></p> <p>FORMATION OF THE FINE-DISPERSED GAS PHASE IN THE BUBBLE COLUMN REACTOR</p>
16:40-17:00	<p><i>Yarigin V.N., Yu.N. Vyazov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), P.R. Votinov (Novosibirsk State Technical University, Novosibirsk, Russia)</i></p> <p>PHASE TRANSITION UNDER EJECTION OF NEAR-WALL WATER-ETHANOL MIXTURE FILM INTO VACUUM</p>
17:00-17:20	<p><i>A.S. Anshakov, S.I. Radko, and V.A. Faleev (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i></p> <p>FEATURES OF TECHNOGENIC WASTE PROCESSING IN STEAM PLASMA</p>
CONFERENCE RECEPTION	

19 APRIL (TUESDAY)
Conference Hall of IT SB RAS

9:00-12:00	REGISTRATION (Location: Kutateladze Institute of Thermophysics, 3rd floor)
INVITED PRESENTATIONS	
9:00-9:20	<i>M.I. Nizovtsev, V.Yu. Borodulin, V.N. Letushko (Kutateladze Institute of</i>

	<i>Thermophysics, Novosibirsk, Russia)</i> INFLUENCE OF PHASE CHANGES ON HEAT AND MASS TRANSFER IN A REGENERATIVE AIR HEAT EXCHANGER
ORAL PRESENTATIONS	
9:20-9:35	<i>I. I. Gogonin (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> HYDRODINAMICS AND HEAT TRANSFER AT BOILING IN LIQUID FILM FLOWING DOWN ON THE BUNDLE OF THE HORIZONTAL TUBES
9:35-9:50	<i>V.E. Nakoryakov, V.V. Ostapenko, M.V. Bartashevich (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> PERIODIC ROLLING WAVES ON THE SURFACE OF A THIN LIQUID LAYER
9:50-10:05	<i>B.V. Perepelitsa (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> VISUAL STUDY OF THE LIQUID FLOW PATTERN AT JET RUNNING AGAINST THE PACKING
10:05-10:20	<i>Shamirzaev A.S., Kuznetsov V.V. (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> DOWNWARD FLOW BOILING HEAT TRANSFER IN COMPACT HEAT EXCHANGER WITH PLAIN FINS
10:20-10:40	COFFEE
10:40-10:55	<i>O.O. Petrova-Bogdanova (Technological Design Institute of Scientific Instrument Engineering, Novosibirsk, Russia)</i> MODERN METHODS FOR DESIGN THE NUCLEATION RATES SURFACES OVER EQUILIBRIUM PHASE DIAGRAMS
10:55-11:10	<i>R. O. Osipov, V. I. Zhukov (Novosibirsk State Technical University, Novosibirsk, Russia), A. N. Pavlenko (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> INVESTIGATION OF THE STRUCTURES APPEARING DURING THE BOILING AND EVAPORATION OF THE THIN HORIZONTAL LIQUID LAYER
11:10-11:25	<i>A.N. Pavlenko, A.S. Surtaev, A.N. Tsoi, D.V. Kuznetsov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), V.I. Kalita, D.I. Komlev, A.A. Radyuk, A.Yu. Ivannikov (Baikov Institute of Metallurgy and Materials Science, Moscow, Russia)</i> EFFECT OF CAPILLARY-POROUS COATING ON THE REWETTING DYNAMICS OF THE OVERHEATED SURFACE BY A FALLING FILM OF LIQUID NITROGEN
11:25-11:40	<i>M.I. Nizovtsev, A.N. Sterlyagov, V.Yu. Borodulin (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> THE EVAPORATION OF THE LIQUID DROPLETS ON THE SURFACE OF POROUS MATERIALS
11:40-12:00	<i>V. E. Zhukov, M. I. Moiseev, D. V. Kuznetsov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> EXPERIMENTAL STUDY OF STATIONARY AND NONSTATIONARY CRITICAL HEAT FLUXES IN SiO ₂ – FREON 21 NANOFLUID
12:00-14:00	LUNCH
14:00-14:15	<i>A.V. Vyazmin (Moscow State University of Mechanical Engineering, Moscow, Russia), V.G. Sorokin, A.D. Polyanin (Bauman Moscow State Technical University, Ishlinskii Institute for Problems in Mechanics, Moscow, Russia)</i> EXACT SOLUTIONS AND GLOBAL INSTABILITY OF NONLINEAR HYPERBOLIC DELAY REACTION-DIFFUSION EQUATIONS
14:15-14:30	<i>N. S. Bufetov, R. A. Dekhtyar And V. E. Nakoryakov (Kutateladze Institute of</i>

	<i>Thermophysics, Novosibirsk, Russia)</i> ABSORPTION ACCOMPANIED BY THE RELEASE OF A SIGNIFICANT AMOUNT OF HEAT IN A LIMITED LIQUID SURFACE
14:30-14:45	<i>I.S. Girnik, Yu.I. Aristov (Boreskov Institute of Catalysis, Novosibirsk State University, Novosibirsk, Russia)</i> DYNAMIC OPTIMIZATION OF ADSORPTION CHILLERS: THE EFFECT OF BI-DISPERSED ADSORBENT BED
14:45-15:00	<i>V.S. Naumkin, M.I. Nizovtsev (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> NUMERICAL SIMULATION OF HEAT AND MASS TRANSFER INSIDE THE HEAT EXCHANGER WITH SEMIPERMEABLE MEMBRANE
15:00-15:15	<i>Dimov S.V. (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> HEAT TRANSFER IN PACKED - BED REACTORS
15:00-15:15	COFFEE
15:15-15:30	<i>A.E. Gorelikova, V.V. Randin, A.V. Chinak (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> HYDRODYNAMICS AND HEAT TRANSFER OF TWO-PHASE BUBBLE FLOW IN AN INCLINED RECTANGULAR CHANNEL
15:30-15:45	<i>M.A. Vorobyev, O.N. Kashinsky, P.D. Lobanov, A.V. Chinak (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> REGIMES OF FORMATION FINE-DISPERSED GAS PHASE IN LIQUID FLOW
15:45-16:00	<i>Bartkus G.V., Kuznetsov V.V. (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> EXPERIMENTAL STUDY OF UPWARD GAS-LIQUID FLOW IN RECTANGULAR MICROCHANNELS
16:00-16:15	<i>V.I. Terekhov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia), A.L. Ekaid (Mechanical Engineering Dept., University of Technology, Baghdad, Iraq), and K.F. Yassin (Novosibirsk State Technical University, Novosibirsk, Russia, Technical Institute/ Hawija, Northern Technical University, Kirkuk, Iraq)</i> THE EFFECT OF RIB WIDTH ON THE LAMINAR NATURAL CONVECTION BETWEEN VERTICAL PARALLEL PLATES
16:15-16:30	COFFEE
16:30-16:45	<i>S.V. Konovalov, V.D. Sarychev, A.Yu. Granovsky, S.S. Shlyapnikov, I.A. Komissarova, D.A. Kosinov (Siberian State Industrial University, Novokuznetsk, Russia)</i> MATHEMATICAL MODELLING THE EFFECT OF CONCENTRATED ENERGY FLUXES ON MATERIALS
16:45-17:00	<i>S. V. Dvoynishnikov, I. K. Kabardin, D. V. Kulikov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> HIGHT-PERFORMANCE SOTWARE FOR LASER DOPLER VELOCIMETER OF LIQUID AND GAZ FLOWS
17:00-17:15	<i>A.S. Strelnik, S. V. Dvoynishnikov, A. V. Klimov (Kutateladze Institute of Thermophysics, Novosibirsk, Russia)</i> DEVELOPMENT OF HARDWARE AND SOFTWARE FOR ULTRASOUND DIAGNOSTICS OF TWO-PHASE FLOWS IN A LIQUID METAL
17:15-17:30	Closing of the Seminar ISHM-IV. Results and discussion. Planning dates and Program of the next seminar ISHM-V.