

Saturday, July 2	
11.00-20.00	Registration, Check-in at Hotel
Sunday, July 3	
10.00-17.00	Registration, Check-in at Hotel
WELCOME PARTY	
Monday, July 4	
$10^{00}-10^{30}$	<p>Opening ceremony Prof. Dr. sc. Nat. V.I. Mazhukin, Chairman XIV Seminar. The goals and objectives of the Seminar <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> <i>National Research Nuclear University MEPhI, Moscow</i> <i>Photo for memory</i></p>
$10^{30}-11^{00}$	<p>Plenary Presentation B.N. Chetverushkin Kinetic models and algorithms for solution of the magnetogasdynamic problems on the modern supercomputing systems (scientific lecture) <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
$11^{00}-11^{30}$	<p>Plenary Presentation S.V. Garnov 55 years of the laser era. On the 100th anniversary of the A.M. Prokhorov (scientific lecture) <i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i></p>
$11^{30}-12^{00}$	<i>Coffee break</i>
$12^{00}-12^{30}$	<p>Plenary Presentation V.I. Konov Pulsed laser reactive etching of carbon materials (scientific lecture) <i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i> <i>National Research Nuclear University MEPhI, Moscow</i></p>

12 ³⁰ -13 ⁰⁰	<p>Plenary Presentation</p> <p>S.N. Andreev¹, E.V. Barmina¹, V.G. Kalinnikov², A.V. Simakin¹, A.A. Smirnov², V.I. Stegailov², S.I. Tiutiunnikov², G.A. Shafeev^{1,3}, I.A. Shcherbakov¹</p> <p>Nonlinear quenching of Cs-137 radioactivity</p> <p>¹<i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i> ²<i>Joint Institute for Nuclear Research, Moscow</i> ³<i>National Research Nuclear University MEPhI, Moscow</i></p>
13 ⁰⁰ -14 ⁰⁰	<i>Lunch time</i>
14 ⁰⁰ -14 ³⁰	<p>Plenary Presentation</p> <p>N.A. Inogamov^{1,2}, V.V. Zhakhovsky^{1,2}, V.A. Khokhlov¹, Yu.V. Petrov^{1,3}, K.P. Migdal^{2,1}, D.K. Il'nitsky^{2,1}</p> <p>Hydrodynamic phenomena caused by ultrashort laser pulse (scientific lecture)</p> <p>¹<i>Landau Institute for Theoretical Physics of RAS</i> ²<i>Dukhov Research Institute of Automatics (VNIIA), Rosatom, Moscow</i> ³<i>Moscow Institute for Physics and Technology, Moscow</i></p>
14 ³⁰ -15 ⁰⁰	<p>Plenary Presentation</p> <p>V.N. Bagratashvili¹, B.N. Chichkov²</p> <p>Laser fabrication of scaffolds for tissue engineering (scientific lecture)</p> <p>¹<i>FNITS Crystallography and photonics RAS, Moscow</i> ²<i>Laser Zentrum, Hannover, Germany</i></p>
15 ⁰⁰ -15 ³⁰	<p>Plenary Presentation</p> <p>M.P. Galanin, P.V. Gliznutcina, D.L. Sorokin</p> <p>Mathematical modelling of multidimensional quasi-stationary electromagnetic fields in the channel of electrodynamic accelerator (scientific lecture)</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
15 ³⁰ -16 ⁰⁰	<p>Plenary Presentation</p> <p>A.G. Kaptilniy¹, A.A. Karabutov²</p> <p>Thermodynamics of transport processes induced by super-short influence of strong flows of energy on matter (scientific lecture)</p> <p>¹<i>Joint Institute for High Temperatures of RAS, Moscow</i> ²<i>International Laser Center of Lomonosov Moscow State University</i></p>
16 ⁰⁰ -16 ³⁰	<i>Coffee break</i>

16 ³⁰ -17 ⁰⁰	<p>Plenary Presentation K.V. Khishchenko</p> <p>Thermodynamic properties and boundaries of attainable states of matter in laser-plasma processes (scientific lecture)</p> <p><i>Joint Institute for High Temperatures of RAS, Moscow</i></p>
17 ⁰⁰ -17 ³⁰	<p>Plenary Presentation G.K. Borovin, I.S. Ilin, A.G. Tuchin</p> <p>Quasi-periodic orbits in a neighborhood of the L1 point of the system Sun-Earth and their applications in the project "SODA" (scientific lecture)</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
17 ³⁰ -18 ⁰⁰	<p>Plenary Presentation A.I. Aptekarev</p> <p>Discrete D-dimensional electromagnetic Schrodinger operator with a completely integrable potential: radial asymptotics of the potential and scattering problem (scientific lecture)</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
18 ⁰⁰	POSTER SECTION, ROUND TABLE DISCUSSION
Tuesday, July 5	
10 ⁰⁰ -10 ³⁰	<p>Plenary Presentation O.N. Krokhin</p> <p>What is photon? (scientific lecture)</p> <p><i>P.N. Lebedev Physical Institute of RAS, Moscow National Research Nuclear University MEPhI, Moscow</i></p>
10 ³⁰ -11 ⁰⁰	<p>Plenary Presentation Leonid V. Zhigilei</p> <p>Large-scale atomistic simulations of material modification by short laser pulses and optically-induced surface acoustic waves</p> <p><i>University of Virginia, Department of Materials Science and Engineering, USA</i></p>

11 ⁰⁰ -11 ³⁰	<p>Plenary Presentation N. Barbier¹, A.L. Bondareva², C. G. Fiorotto³, T.V. Levchenko⁴, S. Mazzocato³, G. Maino⁵, and G.I. Zmievskaya⁴</p> <p>On the porosity development in cultural heritage materials</p> <p>¹<i>Department de Physique, University of Orsay Paris Sud 11, Paris, France</i> ²<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ³<i>Physics Department, University of Padova, Italy</i> ⁴<i>VNI Geosystem Russian Federal Center, Moscow</i> ⁵<i>Italia University of Bologna, Italy</i></p>
11 ³⁰ -12 ⁰⁰	<p>Plenary Presentation I.N. Zvestovskaya</p> <p>Laser nanostructurization of the materials (scientific lecture)</p> <p><i>P.N. Lebedev Physical Institute of RAS, Moscow</i> <i>National Research Nuclear University MEPhI, Moscow</i></p>
12 ⁰⁰ -12 ³⁰	<i>Coffee break</i>
12 ³⁰ -13 ⁰⁰	<p>Plenary Presentation A.A. Samokhin</p> <p>Laser ablation mechanisms and effects during nanosecond irradiation of absorbing condensed matter. (scientific lecture)</p> <p><i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i></p>
13 ⁰⁰ -13 ³⁰	<p>Plenary Presentation V.I. Mazhukin</p> <p>The morphology of plasma plume at nanosecond laser ablation of Al target in the air (scientific lecture)</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> <i>National Research Nuclear University MEPhI, Moscow</i></p>
13 ³⁰ -14 ⁰⁰	<i>Lunch time</i>
SECTION 1. LASER-PLASMA PROCESSES, LASER ACTION	
1. Laser ablation - experiment, theory statement of the problem, modeling	
14 ⁰⁰ -14 ²⁰	<p>Invited Presentation S.M. Klimentov¹, S. Gizar², A. Muskeftaras², N. Fedorov³, A. Bilde²</p> <p>Characterization technique for ablation mechanisms in optical crystals exposed to ultrashort laser pulses</p> <p>¹<i>A.M.Prokhorov General Physics Institute of RAS, Moscow</i> ²<i>Laboratoire des Solides Irradiés, Ecole Polytechnique, France</i> ³<i>CELIA, Université Bordeaux I, France</i></p>

14 ²⁰ -14 ⁴⁰	<p>Invited Presentation</p> <p>M.P. Galanin¹, M.K. Krylov², A.P. Lototckii², A.S. Rodin¹</p> <p>Investigation of influence of initial liner profile to liner motion near end part of magnetic accelerator</p> <p>¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>Troitsk Institute for Innovation & Fusion Research, Troitsk</i></p>
14 ⁴⁰ -15 ⁰⁰	<p>Invited Presentation</p> <p>S.A. Karpov^{1,2}, I.F. Potapenko^{1,2}, V.Yu. Bychenkov^{1,3}</p> <p>Kinetic simulation of electron heat wave propagation in collisional laser produced plasma</p> <p>¹<i>All-Russia Research Institute of Automatics, Moscow</i> ²<i>Keldysh Institute of Applied Mathematics RAS, Moscow</i> ³<i>P.N. Lebedev Physical Institute RAS, Moscow</i></p>
15 ⁰⁰ -15 ²⁰	<p>Invited Presentation</p> <p>I.F. Potapenko</p> <p>Non equilibrium steady-state distributions for weakly collision plasmas and gases</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
15 ²⁰ -16 ⁰⁰	<p style="text-align: center;"><i>Coffee break</i></p>
16 ⁰⁰ -16 ²⁰	<p>Invited Presentation</p> <p>S.M. Pimenov¹, M.S. Komlenok¹, E.V. Zavedeev¹, V.D. Frolov¹, N.R. Arutyunyan¹, M.L. Shupegin², A.D. Barinov², O.S. Zilova², T. Roch³, H.-J. Scheibe³</p> <p>Laser surface texturing to control friction of diamond-like carbon films</p> <p>¹<i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i> ²<i>National Research University "MPEI", Moscow</i> ³<i>Fraunhofer Institute for Material and Beam Technology, Dresden Germany</i></p>
16 ²⁰ -16 ³⁰	<p>Oral Presentation</p> <p>Zygmunt Szymanski</p> <p>Modelling of the nanosecond laser ablation with the use of Ansys Fluent</p> <p><i>Poland Institute of Fundamental Technological Research Polish Academy of Sciences</i></p>
16 ³⁰ -16 ⁴⁰	<p>Oral Presentation</p> <p>O.G. Proncheva</p> <p>A model study of making choices by individuals during information warfare in polarized society</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> <i>Moscow Institute of Physics and Technology (State University), Dolgoprudny</i></p>

16 ⁴⁰ -16 ⁵⁰	<p>Oral Presentation O.N.Koroleva^{1,2}, A.V.Mazhukin^{1,2}</p> <p>Continual and molecular dynamic approaches in determining the thermal properties of silicon</p> <p>¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>National Research Nuclear University MEPhI, Moscow</i></p>
18 ⁰⁰	POSTER SECTION, ROUND TABLE DISCUSSION
SECTION 2. ADVANCED SCIENCE TECHNOLOGIES	
1. Heterogeneous computational technologies.	
14 ⁰⁰ -14 ²⁰	<p>Oral Presentation A.S. Boldarev, V.A. Bakhtin, M.N. Pritula, D.A. Zaharov</p> <p>Code developing for the high-performance computations: generality versus performance</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
14 ²⁰ -14 ⁴⁰	<p>Oral Presentation B.I. Krasnopolsky¹, A.V. Medvedev²</p> <p>Efficiency analysis of SparseLinSol library for solving large systems of linear algebraic equations</p> <p>¹<i>Institute of Mechanics, Lomonosov Moscow State University, Moscow</i> ²<i>Company "T-Services", Moscow</i></p>
14 ⁴⁰ -15 ⁰⁰	<p>Oral Presentation G. Oyarzun¹, R. Borrell², A.V. Gorobets³</p> <p>Hybrid portable cfd solution for incompressible turbulent flows</p> <p>¹<i>University of Patras, Grece</i> ²<i>Barclona supercomputing center, Spain</i> ³<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
15 ⁰⁰ -15 ²⁰	<p>Oral Presentation P.B. Bogdanov, O.Yu. Sudareva</p> <p>General-purpose computations using Russian specialized CPUs «KOMDIV»</p> <p><i>FSC Scientific Research Institute for System Studies of RAS, Moscow</i></p>
15 ²⁰ -16 ⁰⁰	Coffee break
16 ⁰⁰ -16 ³⁰	<p>Keynote Presentation V.A. Titarev^{1,2}, A.V. Chikitkin², S.V. Utuzhnikov^{3,2}</p> <p>Parallel computational aerodynamics methods in FlowModellium solver</p> <p>¹<i>Institution of Russian Academy of Sciences Dorodnicyn Computing Centre of RAS</i> ²<i>Moscow Institute of Physics and Technology (State University), Dolgoprudny</i> ³<i>University of Manchester, UK, Manchester</i></p>

16 ³⁰ -16 ⁵⁰	<p>Oral Presentation</p> <p>R.V. Uskov, M.E. Zhukovskiy, M.B. Markov, S.V. Podoliako, I.A. Tarakanov Reserching the spectrum of bremsstrahlung generated by the RIUS-5 electron accelerator</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
16 ⁵⁰ -17 ¹⁰	<p>Oral Presentation</p> <p>S.A. Sukov¹, P.B. Bogdanov², A.V. Gorobets¹</p> <p>Modeling of compressible flows on unstructured meshes using hybrid supercomputers of various architectures</p> <p>¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>Institution of Russian Academy of Sciences Dorodnicyn Computing Centre of RAS</i></p>
18 ⁰⁰	POSTER SECTION, ROUND TABLE DISCUSSION
Wednesday, July 6	
SECTION 1. LASER-PLASMA PROCESSES, LASER ACTION	
1. Laser ablation - experiment, theory statement of the problem, modeling	
10 ⁰⁰ -10 ²⁰	<p>Invited Presentation</p> <p>O.G. Tsar'kova</p> <p>Induced "transparency" of CSCM during earthing of ablative torch at laser radiation exposure</p> <p><i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i></p>
10 ²⁰ -10 ³⁰	<p>Oral Presentation</p> <p>A.V. Pento¹, S.S. Alimpiev², S.M. Nikiforov², Ya.O. Simanovsky², A.B. Bukharina¹, R.S. Ablizen¹</p> <p>Laser ablation and VUV laser plasma ionization for direct MS analysis of organic containing samples</p> <p>¹<i>A.M. Prokhorov General Physics Institute RAS, Moscow</i> ²<i>Advanced Energy Technologies, Skolkovo, Russia.</i></p>
10 ³⁰ -10 ⁴⁰	<p>Oral Presentation</p> <p>S.A. Shulyapov, I.N. Tsymbalov, K.A. Ivanov, D.A. Krestovskih, R.V. Volkov, V.Yu. Bychenkov, A.V. Brantov, P.A. Ksenofontov, A.B. Savel'ev</p> <p>Experimental and numerical study of relativistic laser radiation interaction with long pre-plasma</p> <p><i>Lomonosov Moscow State University, Moscow</i> <i>P.N. Lebedev Physical Institute of RAS, Moscow</i></p>

10 ⁴⁰ -10 ⁵⁰	<p style="text-align: center;">Oral Presentation</p> <p style="text-align: center;">M.M. Demin¹, A.V. Shapranov^{1,2}, V.I. Mazhukin^{1,2}, P.V. Breslavskii¹</p> <p style="text-align: center;">Modeling of laser evaporation of Aluminum with explicit tracking of interphase boundaries and shock waves</p> <p style="text-align: center;">¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>National Research Nuclear University, MEPhI, Moscow</i></p>
10 ⁵⁰ -11 ⁰⁰	<p style="text-align: center;">Oral Presentation</p> <p style="text-align: center;">D.N. Mamonov¹, S.M. Klimentov¹, S.I. Derzhavin¹, A.A. Sirotkin¹, P.A. Pivovarov¹, S.V. Podmazov²</p> <p style="text-align: center;">Power scaling of fuel igniting microlasers by means of pulsed conjugated generation in multiple channels</p> <p style="text-align: center;">¹<i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i> ²<i>Moscow Institute of Physics and Technology (State University), Dolgoprudny</i></p>
11 ⁰⁰ -11 ¹⁰	<p style="text-align: center;">Oral Presentation</p> <p style="text-align: center;">N.Yu. Lopanitsyna^{1,2}, A.Yu. Kuksin², S.V. Starikov²</p> <p style="text-align: center;">Atomistic simulation of ablation and formation of nanostructures under the action of subpicosecond laser pulses on the surface of metals</p> <p style="text-align: center;">¹<i>Moscow Institute of Physics and Technology (State University), Moscow</i> ²<i>Joint Institute for High Temperatures of RAS, Moscow</i></p>
11 ¹⁰ -11 ²⁰	<p style="text-align: center;">Oral Presentation</p> <p style="text-align: center;">P.A. Chizhov¹, V.V. Bukin¹, S.V. Garnov¹, A.A. Ushakov^{1,2}</p> <p style="text-align: center;">Laser plasma parameters measurement by transverse interferometry method</p> <p style="text-align: center;">¹<i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i> ²<i>Lomonosov Moscow State University</i></p>
11 ²⁰ -11 ³⁰	<p style="text-align: center;">Oral Presentation</p> <p style="text-align: center;">A.E. Zubko¹, A.A. Samokhin²</p> <p style="text-align: center;">Modeling of thermoacoustic and evaporation pressure signals in absorbing liquids irradiated with nanosecond laser pulses.</p> <p style="text-align: center;">¹<i>Bauman Moscow State Technical University (BMSTU), Moscow</i> ²<i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i></p>
11 ³⁰ -12 ⁰⁰	<p style="text-align: center;"><i>Coffee break</i></p>

2. Models of Mathematical Physics and Computational Methods

12 ⁰⁰ -12 ²⁰	<p>Invited Presentation</p> <p>L. R. Evangelista¹, G. Barbero^{2,3}, M. Rosseto¹, R.S. Zola⁴, I. Lelidis⁵</p> <p>Elastic continuum theory of the twist-bend nematic phases</p> <p>¹<i>Departamento de Física, Universidade Estadual de Maringá, Brazil.</i> ²<i>Department of Applied Science and Technology, Politecnico di Torino, Italy.</i> ³<i>National Research Nuclear University MEPhI, Moscow</i> ⁴<i>Universidade Tecnológica Federal do Paraná, Brazil.</i> ⁵<i>Solid State Section, Department of Physics, University of Athens, Greece.</i></p>
12 ²⁰ -12 ⁴⁰	<p>Invited Presentation</p> <p>G.A. Ummarino^{1,2}</p> <p>Phenomenology of iron-pnictides superconductors explained in the framework of multiband eliashberg theory</p> <p>¹<i>Dipartimento di Scienza Applicata e Tecnologia, Politecnico di Torino, Italy</i> ²<i>National Research Nuclear University, MEPhI, Moscow</i></p>
12 ⁴⁰ -13 ⁰⁰	<p>Invited Presentation</p> <p>A.L. Afendikov</p> <p>Multilevel Cartesian Grids Adaptation by Means of Non-uniform Spline Wavelets</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
13 ⁰⁰ -14 ⁰⁰	Lunch time
14 ⁰⁰ -14 ¹⁰	<p>Oral Presentation</p> <p>V.F. Tiskin, M.E. Ladonkina</p> <p>Godunov method: a generalization using piecewise polynomial approximations in the multidimensional case</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
14 ¹⁰ -14 ²⁰	<p>Oral Presentation</p> <p>A.O. Gusev¹, O.V.Scheritsa², O.S.Mazhorova²</p> <p>Numerical method for solving the problem of phase transitions in multicomponent solutions</p> <p>¹<i>Bauman Moscow State Technical University (BMSTU), Moscow</i> ²<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
14 ²⁰ -14 ³⁰	<p>Oral Presentation</p> <p>Yu.A. Poveschenko</p> <p>Algorithm of competing processes for the Richardson iteration method with the Chebyshev parameters</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>

14 ³⁰ -14 ⁴⁰	<p>Oral Presentation</p> <p>V.T. Zhukov, O.B. Feodoritova, N.D. Novikova.</p> <p>Multigrid method for diffusion equations based on adaptive smoothing.</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
14 ⁴⁰ -15 ⁰⁰	<p>Oral Presentation</p> <p>Zarko Pavicevic</p> <p>Boundary properties of analytic functions along the sequence of a single drive point</p> <p><i>University of Montenegro, Podgorica</i></p>
15 ⁰⁰ -15 ³⁰	<p><i>Coffee break</i></p>
15 ³⁰ -15 ⁴⁰	<p>Oral Presentation</p> <p>A.V.Tolokonnikov¹, K.A. Sveshnikov²</p> <p>Simulation of the dynamics of hydrogen atom in the cavity with third type boundary condition</p> <p>¹<i>Faculty of Physics, Lomonosov Moscow State University, Moscow</i> ²<i>N.N.Bogoliubov Institute for Theoretical Problems of Microphysics, Lomonosov Moscow State University, Moscow</i></p>
15 ⁴⁰ -15 ⁵⁰	<p>Oral Presentation</p> <p>A.V. Berezin, F.N. Voronin, V.A. Gasilov, M.B. Markov, M.E. Zhukovskiy</p> <p>The interference of electric and hydrodynamic effects during electron beam interaction with solid-state barrier</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
15 ⁵⁰ -16 ⁰⁰	<p>Oral Presentation</p> <p>Nguyen Trang Thi Huyen^{1,4}, S.I. Kudryashov^{1,2,3}, Pavel A. Danilov¹, Andrey A. Ionin¹, Roman A. Khmel'nitskii¹, Andrey A. Rudenko¹, Irina N. Saraeva¹, Dmitry A. Zayarny¹</p> <p>Surface-enhanced infrared absorption on diffraction micrograting in thin silver film</p> <p>¹<i>P.N. Lebedev Physical Institute of RAS, Moscow</i> ²<i>National Research Nuclear University MEPhI, Moscow</i> ³<i>ITMO University, St. Petersburg</i> ⁴<i>Moscow Institute of Physics and Technology, Dolgoprudny</i></p>
16 ⁰⁰ -16 ¹⁰	<p>Oral Presentation</p> <p>A.V. Shilkov</p> <p>Spectral momentum method in collisional-radiative modeling of plasmas</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>

$16^{10} - 16^{20}$	<p>Oral Presentation A.V. Kolesnichenko</p> <p>Modification in framework of Tsallis statistics of gravitational instability criterions of astrophysical disks with fractal structure of phase space <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
THE CULTURAL PROGRAM	
SECTION 2. ADVANCED SCIENCE TECHNOLOGIES.	
2. Parallel technology in computational gas dynamics	
$10^{20}-10^{50}$	<p>Keynote Presentation Yu.V. Vasilevskii¹, I.V. Kapyrin^{1,2}, I.N. Konshin^{1,2}</p> <p>Development of GeRa code based on parallel INMOST software platform using distributed meshes of general kind <i>¹Institute of Numerical Mathematics of RAS ²Nuclear Safety Institute of RAS</i></p>
$10^{50}-11^{10}$	<p>Oral Presentation S.V. Podoliako, M.E. Zhukovskii, M.B. Markov, P.V. Uskov, E.G. Lukianova</p> <p>The modeling of neutron transport in complex technical objects using the supercomputers with extra massive parallelism <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
$11^{10}-11^{30}$	<p>Oral Presentation A.I. Simakov, I.G. Lebo</p> <p>The modeling of shock wave passing through area with the whirls <i>Moscow Technological University (MIREA)</i></p>
$11^{30}-12^{00}$	Coffee break
$12^{00}-12^{20}$	<p>Oral Presentation A.V. Berezin, Y.A. Volkov, V.A. Gasilov, M.E. Zhukovsky, A.A. Krukov, M.B. Markov, S.V. Parot'kin, A.V. Sysenko, I.A. Tarakanov</p> <p>Supercomputer modeling of space radiation effect on satellites <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
$12^{20}-12^{40}$	<p>Oral Presentation Svetlana Tokareva</p> <p>Parallel high-order Stochastic Finite Volume method for the uncertainty quantification in CFD problems <i>University of Zurich, Switzerland</i></p>

12 ⁴⁰ -13 ⁰⁰	<p>Oral Presentation M.M. Gorbunov-Posadov Alive publication: the advanced technology of presentation of investigation results <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
13 ⁰⁰ -14 ⁰⁰	<i>Lunch time</i>
14 ⁰⁰ -14 ²⁰	<p>Oral Presentation P.A. Bakhvalov Method of semi-transparent control volumes for constructing vertex-centered schemes on hybrid meshes <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
14 ²⁰ -14 ⁴⁰	<p>Oral Presentation S.V. Polyakov^{1,2}, Yu.N. Karamzin¹, T.A. Kudryashova¹, V.O. Podryga¹ Multiscale simulation of nonlinear processes in gas-metal Microsystems ¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>National Research Nuclear University MEPhI, Moscow</i></p>
14 ³⁰ -14 ⁴⁵	<p>Oral Presentation A.E. Bondarev, V.A. Galaktionov Implementation and Visualization of Parallel Solutions for Optimizing and Parametric Studies in CFD <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
15 ⁰⁰ -15 ³⁰	<i>Coffee break</i>
THE CULTURAL PROGRAM	
Thursday, July 7	
YOUTH SCHOOL-CONFERENCE	
	<p>Opening ceremony Prof. Dr. sc. Nat. V.I. Mazhukin, Chairman The goals and objectives of the Youth school-conference</p>
10 ⁰⁰ -10 ⁴⁰	<p>Academic Lecture G. Barbero Ions in liquids <i>Department of Applied Science and Technology, Politecnico di Torino, Italy.</i> <i>National Research Nuclear University MEPhI, Moscow</i></p>
	Pause

10 ⁴⁵ -11 ²⁵	<p>Academic Lecture Leonid V. Zhigilei Molecular Dynamics Simulations of Laser-Materials Interactions <i>University of Virginia, Department of Materials Science and Engineering, USA</i></p>
	<p>Pause</p>
11 ³⁰ -12 ¹⁰	<p>Academic Lecture G.A. Ummarino The theory and application of superconductivity <i>Dipartimento di Scienza Applicata e Tecnologia, Politecnico di Torino, Italy</i> <i>National Research Nuclear University, MEPhI, Moscow</i></p>
12 ¹⁰ -12 ³⁰	<p><i>Coffee break</i></p>
<p>SECTION 2. ADVANCED SCIENCE TECHNOLOGIES.</p>	
<p>Mathematical methods in biology</p>	
12 ³⁰ -12 ⁴⁵	<p>Oral Presentation M.N. Ustinin Functional structure of the human body reconstructed from multichannel magnetic measurement <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>
12 ⁴⁵ -13 ⁰⁰	<p>Oral Presentation S.A. Makhortykh Generalized spectral-analytical method for biomedical and bioinformatics data processing <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>
13 ⁰⁰ -14 ⁰⁰	<p><i>Lunch time</i></p>
14 ⁰⁰ -14 ¹⁰	<p>Oral Presentation V.D. Lakhno Charge Transfer in the Polynucleotide Chains <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>
14 ¹⁰ -14 ²⁰	<p>Oral Presentation A.V. Moskalenko Cardiophysics as a revision of biophysics of the heart <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>

14 ²⁰ -14 ³⁰	<p>Oral Presentation A.N. Pankratov, R.K. Tetuev, M.I. Piatkov Spectral analytical approach for investigation of repeating structures in bioinformatics <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>
14 ³⁰ -14 ⁴⁰	<p>Oral Presentation S.D. Rykunov, M.N. Ustinin Calculation of the human brain partial spectra from MEG data <i>Institute of Mathematical Problems of Biology – the Branch of Keldysh Institute of Applied Mathematics of RAS, Pushchino</i></p>
14 ⁴⁰ - 14 ⁵⁰	<p>Oral Presentation Tsarkova O. G. The study of the influence of microwave radiation of low intensity on live microorganisms <i>A.M. Prokhorov General Physics Institute of RAS, Moscow</i></p>
14 ⁵⁰ - 15 ⁰⁰	<p>Oral Presentation Nikolić Emilija¹, Brandamajer Tijana², Nikolić Aleksandar³ Mathematical Modeling Application Within Ankylosing Spondylitis Patients ¹<i>Department of physiotherapy, Medicine Faculty, University of Montenegro</i> ²<i>Medicine Faculty, University of Montenegro</i> ³<i>Institute for physical examination Montinspekt, Podgorica, Montenegro</i></p>
15 ⁰⁰ -15 ³⁰	Coffee break
SECTION 1. LASER-PLASMA PROCESSES, LASER ACTION	
2. Models of Mathematical Physics and Computational Methods	
15 ³⁰ -15 ⁴⁰	<p>Oral Presentation M.A. Galchenkova¹, N.V. Smoliakov^{1,2} Dynamics of electrons in the field of the undulator ¹<i>Moscow Institute of Physics and Technology, Dolgoprudny</i> ²<i>NRC “Kurchatov Institute”, Moscow</i></p>
15 ⁴⁰ -15 ⁵⁰	<p>Oral Presentation P.A. Bahvalov¹, O.A. Doronina² Dynamic adaptation of the triangular mesh to the boundary of the moving object, using a predetermined method submerged boundaries based redistribution algorithm ¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>Moscow Institute of Physics and Technology, Dolgoprudny</i></p>

15 ⁵⁰ -16 ⁰⁰	<p>Oral Presentation I.P. Tsygvintsev Three-dimensional modeling in the task of developing EUV-sources based on laser plasma <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
16 ⁰⁰ -16 ¹⁰	<p>Oral Presentation D.S. Boykov^{1,2}, O.G. Olkhovskaya¹, V.A. Gasilov^{1,2} Polymer destruction modeling under action of intensive energy deposition ¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>National Research Nuclear University MEPhI, Moscow</i></p>
16 ¹⁰ -16 ²⁰	<p>Oral Presentation M.E. Ladonkina, O.A. Neklyudova, V.F. Tishkin Utilization of averaging method to smooth solutions in discontinuous Galerkin method <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
16 ²⁰ -16 ³⁰	<p>Oral Presentation P.M. Strusinskii Computer implementation of the cluster network traffic model <i>Moscow State Automobile and Road Technical University (MADI)</i></p>
16 ³⁰ -16 ⁴⁰	<p>Oral Presentation A.A. Chechina, N.G. Churbanova, M.A. Trapeznikova Simulation of multilane vehicular traffic on the basis of cellular automata theory <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
16 ⁴⁰ -16 ⁵⁰	<p>Oral Presentation D.A. Kuchelev The algebra of rational fractions and real-valued pendulums <i>Moscow Technical University of Communications and Informatics (MTUCI)</i></p>
16 ⁵⁰ -17 ⁰⁰	<p>Oral Presentation K.K. Inozemtseva, A.E. Lutsky, M.B. Markov Dynamics of gas in electron beam <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i></p>
YOUTH SCHOOL-CONFERENCE	
13 ³⁰ -15 ⁰⁰	<p>Academic Lecture Oleg Vasilyev Adaptive wavelet paradigm for multiscale modeling and simulation in fluid mechanics <i>Department of Mechanical Engineering University of Colorado, Boulder, USA</i></p>
15 ⁰⁰ -15 ³⁰	<i>Coffee break</i>

15 ³⁰ -16 ¹⁵	<p>Academic Lecture Ricard Borrell Portable and scalable solutions for CFD on modern supercomputers <i>CTTC UPC, Barcelona, Spain</i></p>
16 ¹⁵ -17 ⁰⁰	<p>Academic Lecture Dinshaw S. Balsara Multidimensional, Self-similar, strongly-Interacting, Consistent (MuSIC) Riemann Solvers – Applications to Divergence-Free MHD and ALE Schemes (Path 1) <i>University of Notre Dame, USA</i></p>
Friday, July 8	
YOUTH SCHOOL-CONFERENCE	
10 ⁰⁰ -11 ³⁰	<p>Academic Lecture Dinshaw S. Balsara Multidimensional, Self-similar, strongly-Interacting, Consistent (MuSIC) Riemann Solvers – Applications to Divergence-Free MHD and ALE Schemes (Path 2) <i>University of Notre Dame, USA</i></p>
11 ²⁰ -11 ⁵⁰	<i>Coffee break</i>
11 ⁵⁰ -13 ²⁰	<p>Academic Lecture Sergey Karabasov Introduction to Computational Aeroacoustics <i>Queen Mary University of London, UK</i></p>
13.00-14.00	<i>Lunch time</i>
YOUTH SCHOOL-CONFERENCE	
10 ⁰⁰ -10 ⁴⁰	<p>Academic Lecture Giuseppe Maino Models of mathematical physics and complex analysis in the study of porous materials including experimental techniques such as laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) and inductively coupled plasma atomic emission spectroscopy (ICP-AES) <i>Faculty of Preservation of Cultural Heritage, University of Bologna Bologna, Italy</i></p>
Pause	

10 ⁴⁵ -11 ²⁵	Academic Lecture Zarko Pavicevic Some application of mathematical analysis to the problems of natural science <i>Faculty of Natural Sciences and Mathematics, University of Montenegro</i>
	Pause
11 ²⁰ -11 ⁵⁰	<i>Coffee break</i>
11 ⁵⁰ -12 ³⁰	Academic Lecture Ulrich Semmler Applied research in the German Fraunhofer Gesellschaft (Fraunhofer Society) - in general and the research of cutting technology in the institute IWU in Chemnitz <i>Fraunhofer Institute for Machine Tools and Forming Technology (IWU), Chemnitz, Germany Department of Cutting Technology</i>
	Pause
12 ³⁰ -13 ¹⁰	Academic Lecture A. Savel'ev High field optical physics <i>Lomonosov Moscow State University, Moscow</i>
13.00-14.00	<i>Lunch time</i>
SECTION 2. ADVANCED SCIENCE TECHNOLOGIES.	
Russian space	
14 ⁰⁰ -14 ¹⁰	Oral Presentation V.E. Zolotov, T.E. Fakhrutdinov, V.V. Alekseev, G.K. Borovin, I.E. Molotov New features of ADAPS hardware and software complex <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i>
14 ¹⁰ -14 ²⁰	Oral Presentation I.E. Molotov Increasing of new GEO/HEO space debris discovery rate with ISON optical network <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i>
14 ²⁰ -14 ³⁰	Oral Presentation I.V. Florinsky, S.V. Filippov Global morphometric modeling of Mars and the Moon <i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i>

14 ³⁰ -14 ⁴⁰	<p>Oral Presentation E.V. Strashnov, A.M. Trushin, D.M. Loginov Articulated rigid body simulation in virtual environment systems <i>FSC Scientific Research Institute for System Studies of RAS, Moscow</i></p>
14 ⁴⁰ -14 ⁵⁰	<p>Oral Presentation A.V. Maltcev, P.Yu. Timohin, L.A. Finagin The technology of universal virtual polygon simulation for robotic devices <i>FSC Scientific Research Institute for System Studies of RAS, Moscow</i></p>
14 ⁵⁰ -15 ⁰⁰	<p>Oral Presentation M.V. Mikhailiuk, D.A. Kononov Managing virtual camera using an ergonomic pen computing <i>FSC Scientific Research Institute for System Studies of RAS, Moscow</i></p>
15 ⁰⁰ -15 ³⁰	<i>Coffee break</i>
15 ³⁰ -15 ⁴⁰	<p>Oral Presentation M.G. Nickiforov The investigation of solar activity cycles by analyzing of tree ring chronological scales <i>Sternberg Astronomy Institute of Lomonosov Moscow State University</i></p>
15 ⁴⁰ -15 ⁵⁰	<p>Oral Presentation I.A. Kochetov Modelling of the current layer in the Earth's magnetospheric tail <i>Faculty of Department of Physics, Lomonosov Moscow State University, Moscow</i></p>
15 ⁵⁰ -16 ⁰⁰	<p>Oral Presentation O. Maslova¹, A. Brézard-Oudot², M.-E. Gueunier-Farret², J. Alvarez², J.-P. Kleider² Recent observations on the capacitance-temperature behavior in a-Si:H/c-Si heterojunctions for solar cells applications: modeling and experiment ¹<i>Keldysh Institute of Applied Mathematics of RAS, Moscow</i> ²<i>GeePs; CNRS UMR8507; Centrale Supélec; Univ Paris-Sud; Sorbonne Universités-UPMC Univ Paris 06; France</i></p>
SUMMING. CLOSING of the XIV INTERNATIONAL SEMINAR and YOUTH SCHOOL-CONFERENCE.	
Saturday, July 9	
Departure	