

<b>Saturday, May 31</b>	
11.00-20.00	<b>Registration, Check-in at Hotel “Slovenska plaza”</b>
<b>Sunday, June 1</b>	
10.00-17.00	<b>Registration, Check-in at Hotel “Slovenska plaza”</b>
<b>Monday, June 2</b>	
10 <sup>00</sup> -10 <sup>40</sup>	<b>Opening ceremony</b> <b>Prof. Dr. sc. Nat. V.I. Mazhukin, Chair</b> XII Seminar. The goals and objectives of the Seminar
<b>INVITED PRESENTATION</b>	
10 <sup>40</sup> -11 <sup>10</sup>	Invited Presentation <b>V.I. Mazhukin</b> Continuum and atomistic approaches in mathematical modeling of laser irradiation on materials <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>
11 <sup>10</sup> -11 <sup>40</sup>	Invited Presentation <b>V.P. Veiko</b> Laser thermochemical writing: pursuing the resolution by physical-chemical non-linearities <i>Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia</i>
11 <sup>40</sup> -12 <sup>00</sup>	<b>Coffee break</b>
12 <sup>00</sup> -12 <sup>30</sup>	Invited Presentation <b>N.A. Inogamov</b> Femtosecond ablation: excitation of electrons, thermomechanical disintegration, and surface structuring <i>Landau Institute for Theoretical Physics of RAS, Moscow, Russia</i>
12 <sup>30</sup> -13 <sup>00</sup>	Invited Presentation <b>A.A. Samokhin<sup>1</sup>, V.I. Mazhukin<sup>2</sup>, A.V. Shapranov<sup>2</sup>, M.M. Demin<sup>2</sup></b> Modeling of nanosecond laser vaporization and explosive boiling of metals <sup>1</sup> <i>A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia</i> <sup>2</sup> <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>
13 <sup>00</sup> -14 <sup>00</sup>	<b>Lunch time</b>

14 <sup>00</sup> -14 <sup>30</sup>	<p>Invited Presentation</p> <p><b>M.V. Chechetkin</b></p> <p>Various mechanism of jets in nature</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
14 <sup>30</sup> -15 <sup>00</sup>	<p>Invited Presentation</p> <p><b>M.P. Galanin</b></p> <p>Mathematical simulation of thermoelastic contact interaction</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
15 <sup>00</sup> -15 <sup>30</sup>	<p>Invited Presentation</p> <p><b>O.G. Tsarkova</b></p> <p>Analysis of kevlar laser ablation</p> <p><i>A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia</i></p>
15 <sup>30</sup> -16 <sup>00</sup>	<b>Coffee break</b>
16 <sup>00</sup> -16 <sup>30</sup>	<p>Invited Presentation</p> <p><b>A.G. Kaptilniy</b></p> <p>Supercritical fluids (SCF) – the basis of future generation technological processes</p> <p><i>Joint Institute for High Temperatures of RAS, Moscow, Russia</i></p>
16 <sup>30</sup> -17 <sup>00</sup>	<p>Invited Presentation</p> <p><b>I.F. Potapenko</b></p> <p>Accelerated electron distribution function formation during the heating process</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
17 <sup>00</sup> -20 <sup>00</sup>	<b>POSTER SESSION</b>
<b>Tuesday, June 3</b>	
<b>RUSSIAN SPACE</b>	
10 <sup>00</sup> -10 <sup>30</sup>	<p>Invited Presentation</p> <p><b>M.V. Mikhaylyuk</b></p> <p>Modeling of the anthropomorphic robots in space simulators</p> <p><i>Scientific Research Institute for System Analysis of RAS, Moscow, Russia</i></p>

10 <sup>30</sup> -10 <sup>45</sup>	<p>Oral Presentation</p> <p><b>I. Molotov</b>, V. Zolotov, T. Fakhрутdinov, V. Alexeev, M. Kabanov, V. Voropaev, G. Borovin</p> <p>ADAPS –new software tool for collection, processing and analysing of ISON astrometric measurements</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
10 <sup>45</sup> -11 <sup>00</sup>	<p>Oral Presentation</p> <p><b>A.V. Kolesnichenko</b></p> <p>To the theory of the inverse energy cascade in is mirror-asymmetrical turbulence unmagnetized astrophysical disk</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
11 <sup>00</sup> -11 <sup>15</sup>	<p>Oral Presentation</p> <p><b>L. Elenin</b><sup>1</sup>, I. Molotov<sup>1</sup>, V. Savanevych<sup>2</sup>, Yu. Krugly<sup>3</sup>, A. Bruhovetskiy<sup>4</sup>, Yu. Ivaschenko<sup>5</sup></p> <p>ASPIN - ISON asteroid's research program</p> <p><sup>1</sup><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i> <sup>2</sup><i>Kharkiv National University of Radioelectronics, Kharkiv, Ukraine</i> <sup>3</sup><i>Institute of Astronomy of Kharkiv National University, Ukraine</i> <sup>4</sup><i>National Centre of Space Devices Control and Test</i> <sup>5</sup><i>Andrushivka astronomical observatory, Ukraine</i></p>
11 <sup>15</sup> -11 <sup>45</sup>	<b>Coffee break</b>
11 <sup>45</sup> -12 <sup>15</sup>	<p>Invited Presentation</p> <p><b>M. Zakhvatkin</b>, V. Stepanyants, G. Borovin, A. Tuchin</p> <p>Determination and prediction of orbital parameters of theradioastron mission</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
12 <sup>15</sup> -12 <sup>30</sup>	<p>Oral Presentation</p> <p><b>I. Ilin</b>, A. Tuchin</p> <p>Quasi-periodic orbits in the vicinity of the sun-earth system l2 point and their implementation in "Spectr-RG" and "Millimetron" missions</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
12 <sup>30</sup> -12 <sup>45</sup>	<p>Oral Presentation</p> <p><b>V.I. Mazhukin</b></p> <p>Possibilities of laser radiation to protect space objects from collisions with small-scale debris</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>

13 <sup>00</sup> -14 <sup>00</sup>	<i><b>Lunch time</b></i>
<b>ORAL PRESENTATION</b>	
14 <sup>00</sup> -14 <sup>15</sup>	<p>Oral Presentation</p> <p><b>Zarko Pavicevic</b></p> <p>On P - sequences on curves and their applications <i>University of Montenegro, Podgorica, Montenegro</i></p>
14 <sup>15</sup> -14 <sup>30</sup>	<p>Oral Presentation</p> <p><b>S.B. Korovin, V.I. Pustovoy</b></p> <p>Silicon nanocomposites synthesized under laser pyrolysis of gases <i>A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia</i></p>
14 <sup>30</sup> -14 <sup>45</sup>	<p>Oral Presentation</p> <p><b>A.V. Shapranov, M.M. Demin, V.E. Perezhigin</b></p> <p>Molecular dynamics simulation of metal overheating <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
14 <sup>45</sup> -15 <sup>00</sup>	<p>Oral Presentation</p> <p>A.V. Berezin, <b>A.A. Kryukov</b>, M.B. Markov</p> <p>Local mesh refinement in Maxwell equations solving at heterogeneous cluster system <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
15 <sup>00</sup> -15 <sup>30</sup>	<i><b>Coffee break</b></i>
15 <sup>30</sup> -15 <sup>45</sup>	<p>Oral Presentation</p> <p><b>S. Shulyapov<sup>1</sup></b>, K. Ivanov<sup>1</sup>, I. Tsymbalov<sup>1</sup>, P. Ksenofontov<sup>1,2</sup>, A. Savel'ev<sup>1</sup>, A. Brantov<sup>2</sup>, V. Bychenkov<sup>2</sup>, A. Turinge<sup>3</sup> and V. Nedorezov<sup>3</sup></p> <p>Laser-driven electron acceleration in long pre-plasma layer of a subcritical density</p> <p><sup>1</sup><i>Faculty of Physics and International Laser Center of Lomonosov Moscow State University, Moscow, Russia</i> <sup>2</sup><i>P.N. Lebedev Physical Institute of RAS, Moscow, Russia</i> <sup>3</sup><i>Institute for Nuclear Research of RAS, Moscow, Russia</i></p>
15 <sup>45</sup> -16 <sup>00</sup>	<p>Oral Presentation</p> <p><b>V.O. Podryga<sup>1</sup></b>, S.V. Polyakov<sup>1</sup>, V.V. Zhakhovsky<sup>2</sup></p> <p>Molecular dynamic simulation of gas flow along a metal plate</p> <p><sup>1</sup><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i> <sup>2</sup><i>Joint Institute for High Temperatures of RAS, Moscow, Russia</i></p>

16 <sup>00</sup> -16 <sup>15</sup>	<p>Oral Presentation</p> <p><b>M.E. Zhukovskiy<sup>1</sup></b>, M.B. Markov<sup>2</sup>, S.V. Podoljako<sup>3</sup>, R.V. Uskov<sup>4</sup></p> <p>Mathematical modeling of X-Ray energy release in target</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
16 <sup>15</sup> -16 <sup>30</sup>	<p>Oral Presentation</p> <p>M.P. Galanin<sup>1</sup>, M.K. Krylov<sup>2</sup>, A.P. Lototskiy<sup>2</sup>, <b>A.S. Rodin<sup>1</sup></b></p> <p>Modeling of the magnetic compressor operation in the cases of the accelerator being powered from the capacity and inductive energy storages</p> <p><sup>1</sup><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i> <sup>2</sup><i>State Research Center of Russian Federation, Troitsk Institute for Innovation &amp; Fusion Research, Troitsk, Russia</i></p>
16 <sup>30</sup> -16 <sup>45</sup>	<p>Oral Presentation</p> <p><b>I.N. Zavestovskaya<sup>1,2</sup></b>, A.P. Kanavin<sup>1</sup>, S.D. Makhlysheva<sup>2</sup></p> <p>Modeling of the laser metal nanoparticles fragmentation</p> <p><sup>1</sup><i>P.N. Lebedev Physical Institute of RAS, Moscow, Russia</i> <sup>2</sup><i>National Research Nuclear University (MEPhI), Moscow, Russia</i></p>
16 <sup>45</sup> -18 <sup>00</sup>	<p><b>THEMATIC HEADINGS "ACADEMIC LIFE"</b> <b>ROUND-TABLE DISCUSSION</b></p>
	<p>Invited Presentation</p> <p><b>V.I. Mazhukin</b></p> <p>Russian Crimea</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
	<p>Invited Presentation</p> <p><b>I.E. Molotov</b></p> <p>Crimean potential for space and astronomical research</p> <p><i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
	<p><b>Wednesday, June 4</b></p>
08.00-20.00	<p><b>SOCIAL PROGRAM</b></p>

<b>Thursday, June 5</b>	
<b>INVITED PRESENTATION</b>	
$10^{00}-10^{30}$	Invited Presentation <b>O.G. Tsarkova</b> Oscillations of heat capacity temperature dependence and effect of dimensional resonance at laser ablation of CSCM <i>A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia</i>
$10^{30}-11^{00}$	Invited Presentation <b>K.V. Khishchenko</b> Equation-of-state models for materials under intense laser influences <i>Joint Institute for High Temperatures of RAS, Moscow, Russia</i>
<b>ORAL PRESENTATION</b>	
$11^{15}-11^{30}$	Oral Presentation <b>M.B. Markov, I. A. Tarakanov, Y.A. Volkov</b> Numerical simulation of radiation-induced conductivity in semiconductors and dielectrics <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>
$11^{30}-12^{00}$	<b>Coffee break</b>
$12^{00}-12^{15}$	Oral Presentation <b>Nicola Michaljevic</b> Representation of the characteristic function of the operator of Sturm-Liouville type over the zeros <i>Marine Faculty of University of Montenegro, Kotor, Montenegro</i>
$12^{15}-12^{30}$	Oral Presentation <b>Vanja Vukoslavčević</b> Stability of three-layer difference schemes <i>Faculty of Sciences of University of Montenegro, Montenegro</i>
$12^{30}-12^{45}$	Oral Presentation <b>Marijana Bulatović</b> Generalized convex functions and examples <i>University of Montenegro, Pogdorica, Montenegro</i>

12 <sup>45</sup> -13 <sup>00</sup>	<p>Oral Presentation</p> <p><b>H. Milosevic<sup>1</sup>, S.A.Beisel<sup>2</sup>, A.D.Rychkov<sup>2</sup></b></p> <p>Some results of modeling of tsunami run up using of large particles of shallow water theory</p> <p><sup>1</sup> <i>University of Pristina, Kosovska Mitrovica, Serbia</i> <sup>2</sup> <i>Institute of Computational Technologies of SB RAS, Novosibirsk, Russia</i></p>
13 <sup>00</sup> -14 <sup>00</sup>	<i>Lunch time</i>
14.00-14.15	<p>Oral Presentation</p> <p><b>Marijan Markovic</b></p> <p>A conjecture for harmonic functions</p> <p><i>Faculty of Natural Sciences and Mathematics of University of Montenegro, Podgorica, Montenegro</i></p>
14 <sup>15</sup> -14 <sup>30</sup>	<p>Oral Presentation</p> <p><b>Jelena Dakić</b></p> <p>Hopf bifurcation in reaction diffusion systems</p> <p><i>Faculty of Natural Sciences and Mathematics of University of Montenegro, Podgorica, Montenegro</i></p>
14 <sup>30</sup> -14 <sup>45</sup>	<p>Oral Presentation</p> <p><b>Radoslav V. Milošević</b></p> <p>A logical Burbakijevog model program formalization mathematics</p> <p><i>University of East Sarajevo, Faculty of Pale Aleksa Santic 1, Serbian Republic, Bosnia and Herzegovina</i></p>
14 <sup>45</sup> -15 <sup>00</sup>	<p>Oral Presentation</p> <p><b>Dušan Jokanović, Marina Zirojević</b></p> <p>Automorphism groups of some classes of graphs</p> <p><i>Production and Management Faculty of University of East Sarajevo, Trebinje, Bosnia and Herzegovina</i></p>
15 <sup>00</sup> -15 <sup>15</sup>	<p>Oral Presentation</p> <p><b>Stevan Šćepanović</b></p> <p>Router performance evaluation in the IP networks</p> <p><i>Faculty of Science and Mathematics, University of Montenegro, Podgorica, Montenegro</i></p>

15 <sup>15</sup> -15 <sup>30</sup>	<i>Coffee break</i>
15 <sup>30</sup> -16 <sup>30</sup>	POSTER SESSION
16 <sup>30</sup> -18 <sup>00</sup>	THEMATIC HEADINGS "ACADEMIC LIFE" ROUND-TABLE DISCUSSION
	Invited Presentation <b>A.A.Samokhin</b> , V.P.Makarov About citing and evaluating of scientific publications <i>A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia</i>
	Invited Presentation <b>M.M. Gorbunov-Posadov</b> , T.A. Polilova Life journey of a scientific publication <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>
	<b>Friday, June 6</b>
	<b>SECTION: MATHEMATICAL MODELING IN ADVANCED SCIENCE TECHNOLOGIES</b>
10 <sup>00</sup> -10 <sup>30</sup>	Invited Presentation <b>Z.A. Chekantseva</b> Power in the light of the theory of rhythm: a view from the xxi century <i>Institute of world history of RAS, Moscow, Russia</i>
10 <sup>30</sup> -11 <sup>45</sup>	Oral Presentation <b>T.V. Koroleva</b> Definition of break-even bounds and expected efficiency of investment projects based on risk factors <i>Joint stock company "A.A. Bochvar high-technology research institute of inorganic materials" (JSC "VNIINM"), Moscow, Russia</i>
11.45-12.00	<i>Coffee break</i>
12 <sup>00</sup> -12 <sup>15</sup>	Oral Presentation <b>N.L. Bogush</b> , L.N. Oskolok, G.V. Porjadin, Ju.V. Sharpan', G.P. Shchelkunova Causes and mechanisms of development of the two main types of diabetes. New results on the role of adipose tissue in the development of complications. The mathematical modeling possibilities: the problem, myth or reality? <i>Pirogov Russian National Research Medical University, Moscow, Russia</i>



12 <sup>15</sup> -12 <sup>30</sup>	<p>Oral Presentation  <b>Snežana Jovanović</b>  Free access to information  <i>Biblioteka prirodno-matematičkih i tehničkih nauka, University of Montenegro, Podgorica, Montenegro</i></p>
13.00-14.00	<b>Lunch time</b>
14 <sup>00</sup> -16 <sup>30</sup>	<b>POSTER SESSION</b>
<b>SUMMING. CLOSING OF SEMINAR.</b>	
<b>Saturday, June 7</b>	
10.00-13.00	Departure
<b>POSTERS:</b>	
1.	<p><b>A.A. Samokhvalov, V.P. Veiko</b>  Optoacoustic response at laser ablation of solids by fiber laser irradiation under a thin liquid layer  <i>NRU ITMO, Saint-Petersburg, Russia</i></p>
2.	<p><b>N.S. Smirnova, O.G. Olkhovskaya, G.A. Bagdasarov, E.Yu. Dorofeeva</b>  Investigation of implosion of cylindrical wire assembly using numerical diagnostics on software package MARPLE  <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
3.	<p><b>E.Yu. Dorofeeva<sup>1</sup>, A.S. Boldarev<sup>1</sup>, O.G. Olkhovskaya<sup>1</sup>, I.V. Gasilova<sup>1</sup>, I.M Boyko<sup>2</sup></b>  Elaboration of the numerical methods for fusion energy devices simulation  <sup>1</sup> <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>  <sup>2</sup> <i>Moscow Institute of Physics and Technology, State University, Dolgoprudny, Russia</i></p>
4.	<p><b>I.V. Gasilova, A.S. Boldarev, O.G. Olkhovskaya, E.Yu. Dorofeeva, G.A. Bagdasarov</b>  Predictive modeling of processes in thermonuclear energy devices and quality assessment of developed numerical techniques  <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
5.	<p><b>A. Boldarev<sup>1</sup>, A. Krukovsky<sup>1</sup>, V. Gasilov<sup>1</sup>, V. Novikov<sup>1</sup>, I. Tsygvintsev<sup>1</sup>, E. Dorofeeva<sup>1</sup>, I. Romanov<sup>2</sup></b>  Modeling of a laser-induced discharge through a vacuum diode  <sup>1</sup> <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i>  <sup>2</sup> <i>P.N. Lebedev Physical Institute of RAS, Moscow, Russia</i></p>

6.	<p><b>G.A. Bagdasarov</b>, A.S. Boldarev, E.Yu. Dorofeeva, I.V. Gasilova, N.S. Smirnova</p> <p>Physical diagnostics of 3D simulations in code MAPRLE <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
7.	<p><b>D.A. Sinev</b>, A.M. Kulazhkin, E.A. Shakhno, V.P. Veiko</p> <p>Model of the laser oxidation of thin metal films <i>Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia</i></p>
8.	<p><b>Yu.Yu. Karlagina</b><sup>1</sup>, G.V. Odintsova<sup>1</sup>, V.P. Veiko<sup>1</sup>, E.V. Gorbunova<sup>1</sup>, A.V. Loginov<sup>1</sup>, A.L. Skuratova<sup>1</sup>, S.G.Gorny<sup>2</sup></p> <p>Formation of the oxide films on metal surfaces by local laser heating <sup>1</sup> <i>Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia</i></p>
9.	<p><b>L.I. Galanina</b></p> <p>Study of charge and matter distribution in the light and middle unstable nuclei <i>D.V. Skobel'tsyn Research Institute of Nuclear Physics of Lomonosov Moscow State University, Moscow, Russia</i></p>
10.	<p><b>T.S. Popova</b></p> <p>On the modeling of thin rigid inclusion in the viscoelastic body <i>North-Eastern Federal University, Yakutsk, Russia</i></p>
11.	<p><b>Jancic Rasovic Sanja</b></p> <p>Operations on fuzzy relations: a tool to construct new hyperrings <i>University of Montenegro, Montenegro</i></p>
12.	<p><b>O.N. Koroleva</b>, A.V. Mazhukin</p> <p>Development of a kinetic model of nonequilibrium melting of silicon <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>
13.	<p>N.N. Il'ichev, <b>A.A. Samokhin</b>, P.A. Pivovarov</p> <p>Analysis of photoacoustic pressure response of absorbing condensed matter to intense laser pulses with periodically modulated intensity <i>Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
14.	<p><b>P.V. Breslavsky</b></p> <p>Shock-capturing techniques with dynamically adapting grids for gasdynamic problems <i>Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia</i></p>