

Section 6 **NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS**

MAY 19, MONDAY

Afternoon session

Hall 3

Co-chairs: Alexey A. Bragin

Presentations

6-66 14³⁰ **WAVE TOMOGRAPHY IN MEDICINE: THEORY AND NUMERICAL METHODS**
Maxim A. Shishlenin, N. S. Novikov, S. I. Kabanikhin
Sobolev Institute of Mathematics, Novosibirsk, Russia

6-36 15⁰⁰ **ON PRESERVATION OF SPHERICAL SYMMETRY
ON SPHERICAL GRID IN CARTESIAN COORDINATE SYSTEM
IN COMPUTING GAS-DYNAMIC FLOWS USING EULER
FINITE-VOLUME SCHEMES**

Nikita A. Mikhailov, I. V. Glazyrin, N. L. Frolova, M. N. Chizhkov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

6-50 15²⁰ **MODELING OF AXISYMMETRIC FLOWS BY THE CONTACT SMOOTHED
PARTICLE HYDRODYNAMICS (SPH) METHOD
WITH KERNEL GRADIENT CORRECTION**

Georgy D. Rublev, A. N. Parshikov, S. A. Dyachkov
FSUE «N. L. Dukhov All-Russian Research Institute of Automatics», Moscow, Russia
Joint Institute for High Temperatures of RAS, Moscow, Russia

15⁴⁰ **INTERACTION BETWEEN FLOWVISION AND ZENIT SOFTWARE PACKAGE
IN SOLVING HYDRODYNAMICS AND STRENGTH PROBLEMS**

Philipp A. Sapozhnikov, A. V. Klimov, O. S. Putilin, A. P. Komarov, T. S. Valiullina
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

16⁰⁰ *Coffee-break*

Co-chairs: Oleg V. Zatsepin

6-68 16³⁰ **“DISEASE X” AND MEASURES TO COMBAT THE NEW PANDEMIC**
Eduard V. Karamov, A. S. Turgiev

Gamaleya National Research Center for Epidemiology and Microbiology of the Ministry of Health of
the Russian Federation, Moscow, Russia

6-49 17⁰⁰ **PARAMETERIZATION OF THE DISLOCATION PLASTICITY MODEL
FOR COLD-ROLLED AND ANNEALED COPPER M1T BASED ON DYNAMIC
INDENTATION, 3D MODELING AND MACHINE LEARNING**

Egor S. Rodionov, A. E. Mayer, V. V. Pogorelko, A. Ya. Cherepanov,
V. G. Lupanov, P. N. Mayer
Chelyabinsk State University, Chelyabinsk, Russia

6-52 17²⁰ **A CAPILLARY MODEL OF A POROUS MEDIUM DEVELOPED
USING CORE TOMOGRAPHY DATA**

Oleg A. Simonov, Yu. Yu. Erina
Tyumen Scientific Centre, Siberian Branch of the Russian Academy of Sciences, Tyumen, Russia

Section 6 **NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS**

MAY 20, TUESDAY

Morning session

Hall 3

Co-chairs: Mikhail M. Shatov

Presentations

- 6-19 9⁰⁰ **USING SPHERICAL BLOCK GRIDS IN CALCULATING GAS DYNAMIC FLOWS**
Il'ya N. Zarubin, S. S. Korotaev, Ya. V. Pronin
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-3 9²⁰ **SOME PARALLEL METHODS FOR 2D GRID REFINEMENT**
Vadim O. Anisov, E. M. Vaziev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-45 9⁴⁰ **DETERMINATION OF CRITICAL PARAMETERS OF COMPRESSION FLOW
IN A QUASI-CONSISTENT APPROXIMATION DUE TO GAS DYNAMIC IMPACT
OF A GAS-TIGHT PISTON ON A TWO-DIMENSIONAL TARGET**
Evgeny I. Ponkin
FSUE Mayak Production Association, Ozyorsk, Russia
- 6-6 10⁰⁰ **LINEARIZATION AND NUMERICAL STUDY OF A COMPLETE SYSTEM
OF NAVIER-STOKES EQUATIONS**
Anna A. Bugaenko^{1, 2}, I. Y. Krutova²
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²MEPI National Nuclear Research University's Snezhinsk Physicotechnical Institute, Snezhinsk,
Russia
- 6-14 10²⁰ **COMPARATIVE ANALYSIS OF NUMERICAL METHODS FOR SOLVING
THE INVERSE PROBLEM OF THE SOURCE OF WAVE PROPAGATION**
Alexey V. Guber, M. A. Shishlenin
S. L. Sobolev Institute of Mathematics, SB RAS, Novosibirsk, Russia

10⁴⁵ *Coffee-break*

Co-chairs: Yan V. Pronin

- 6-67 11¹⁵ **COMPUTATIONS OF EXPERIMENTS ON SEISMIC EXPLOSION WAVE IMPACT
ON UNDERGROUND CONSTRUCTIONS USING STEP-BY-STEP PROCEDURE**
Ekaterina V. Shuvalova, A. A. Krayukhin, E. I. Naumova, T. V. Rezvova, D. Yu. Dyanov,
M. V. Ilyina, A. P. Tikhonova, T. E. Sinatova
FSUE «RFNC – VNIIEF», Sarov, Russia
- 6-53 11³⁵ **NUMERICAL SOLUTION OF A MULTIDIMENSIONAL NONLINEAR HEAT
EQUATION USING IMPLICIT AND EXPLICIT POLYNOMIAL DIFFERENCE
SCHEMES ON A BLOCK-STRUCTURED SPATIAL GRID OF A SPECIAL TYPE**
Tatyana E. Sinatova, A. O. Naumov, E. V. Shuvalova
FSUE «RFNC – VNIIEF», Sarov, Russia

- 6-5 11⁵⁵ **HIGH-ORDER BICOMPACT SCHEMES FOR SOLVING CONTINUUM MECHANICS PROBLEMS**
Mikhail D. Bragin
Keldysh Institute of Applied Mathematics RAS, Moscow, Russia
- 6-48 12¹⁵ **MODELING THE INTERACTION OF SOLIDS WITHIN THE LAGRANGIAN APPROACH IN A WIDE RANGE OF STRAIN RATES**
Andrey V. Radchenko, P. A. Radchenko, S. P. Batuev, A. V. Kanutkin
Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia
- 6-35 12³⁵ **DEVELOPMENT OF MONITORING DATA COMPRESSION METHOD WITH PRESERVATION OF REPRESENTATIVITY**
Alexander F. Mikhailov
Federal State Autonomous Educational Institution of Higher Education «Snezhinsk Physical-Technical Institute (SPhTI) – National Research Nuclear University MEPhI», Snezhinsk, Russia
- 13⁰⁰ *Lunch*

Afternoon session

Co-chairs: Semyon V. Senchukov

- 6-31 14³⁰ **MODIFICATION OF THE DISCONTINUOUS GALERKIN METHOD WITH TIME-DEPENDENT BASIS FUNCTIONS**
Marina E. Ladonkina, В. Ф. Тишкин
Keldysh Institute of Applied Mathematics RAS, Moscow, Russia
- 6-34 14⁵⁰ **STUDY OF CRITICAL EXPONENTS FOR THE CAUCHY PROBLEM FOR NONLINEAR EQUATION OF THEORY OF WAVES IN SEMICONDUCTORS**
Alexandra K. Matveeva¹, M. O. Korpusov^{1,2}
¹Moscow State University named after M. V. Lomonosov, Moscow, Russia
²Peoples' Friendship University of Russia, Moscow, Russia
- 6-65 15¹⁰ **LAGRANGIAN-EULERIAN APPROACH TO MODELING THE CYLINDER-TEST EXPERIMENT FOR VALIDATION OF THE PARAMETERS OF THE EQUATION OF STATE OF DETONATION PRODUCTS**
Elena S. Shestakovskaya², M. A. Biryukova¹, N. L. Klinacheva², E. B. Smirnov^{1,2}, Ya. E. Starikov², S. V. Shakhmaev¹, O. A. Shershneva², A. P. Yalovets²
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²South Ural State University (National Research University), Chelyabinsk, Russia
- 6-20 15³⁰ **EXACT SOLUTIONS FOR HIGH-INTENSITY COSMIC GAMMA-RAY BURSTS AND PULSES IN ARTIFICIAL INTELLIGENCE NEURAL NETWORKS**
Mikhail Ya. Ivanov, V. A. Levin, V. V. Markov
Research Institute of Mechanics, Moscow State University, Moscow, Russia
- 16⁰⁰ *Coffee-break*

Co-chairs: El'dar M. Vaziev

- 6-51 16³⁰ **APPLICATION OF THE EXTENDED KALMAN FILTER TO IDENTIFY PARAMETERS OF EXTERNAL HEAT EXCHANGE OF EQUIPMENT UNDER AERODYNAMIC HEATING**
Maxim F. Sattarov, V. V. Tashlanov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

- 6-11 16⁵⁰ **RECONSTRUCTION OF THE INTERNAL STRUCTURE
OF AN OBJECT USING THE ART METHOD
WITH A MULTI-REGIONAL SPHERICAL GRID MODEL**
Andrey M. Ganeev, A. N. Kiselev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-4 17¹⁰ **FLOWS OF COMPRESSIBLE VISCOUS HEAT-CONDUCTING GAS,
DETERMINED USING TRIGONOMETRIC SERIES**
Sergey P. Bautin¹, A. G. Obukhov²
¹Snezhinsky Institute of Physics and Technology of the National Research Nuclear University
MEPhI, Snezhinsk, Russia
²Tyumen Industrial University, Tyumen, Russia
- 6-29 17³⁰ **STUDY OF CURRENTS IN THE BOTTOM PARTS
OF ASCENDING TWISTED TORNADO-TYPE FLOWS TAKING
INTO ACCOUNT THE EFFECTS OF GRAVITY AND CORIOLIS FORCES**
Irina Yu. Krutova
Snezhinsky Institute of Physics and Technology National Research Nuclear University “MEPhI”,
Snezhinsk, Russia

Section 6 **NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS**

MAY 21, WEDNESDAY

Afternoon session

Зал № 2

Co-chairs: Artyom V. Karpeev

Presentations

- 6-1 14³⁰ **PARTICLE-FLUID HYBRID SIMULATION OF ACCELERATION
AND PINCH DYNAMICS IN DENSE PLASMA FOCUS**
 Qiang Sun, Wei Yang, Ye Dong, Hantian Zhang, Qianhong Zhou
Institute of Applied Physics and Computational Mathematics, Beijing, China
- 6-16 15¹⁰ **STABILITY OF A LAYER OF FLUID WITH HEAVY SOLID IMPURITY**
 Oleg N. Dementev
Chelyabinsk State University, Chelyabinsk, Russia
- 16⁰⁰ *Coffee-break*
- Co-chairs: Philipp A. Sapozhnikov
- 6-18 16³⁰ **THE DEPENDENCE OF VELOCITY AND PRESSURE DURING
THE MOVEMENT OF BULK MATERIAL IN A VERTICAL TUBE
OF SQUARE AND CIRCULAR CROSS-SECTION**
Egor A. Zhuravlev, R. N. Sadykov, M. A. Zakharov, K. E. Bartosh, N. R. Sadykov
Federal State Autonomous Educational Institution of Higher Professional Education «Snezhinsk
Physical-Technology Institute (SPhTI) –National Research Nuclear University MEPhI», Snezhinsk,
Russia
- 6-41 16⁵⁰ **NEW CAE TECHNOLOGIES CADFLO ON EXAMPLES
OF NUCLEAR ENERGY PROBLEMS**
Gennady S. Novakovsky
ООО «TS Integration», Moscow, Russia
- 6-2 17¹⁰ **FLOWVISION – CAE-SYSTEM FOR SIMULATING NUCLEAR INDUSTRY
TASKS**
Andrey A. Aksenov
«TESIS», Moscow, Russia
JIHT RAS, Moscow, Russia

Section 6 **NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS**

MAY 22, THURSDAY

Morning session

Зал № 3

Co-chairs: Nikolay G. Karlykhanov

Presentations

- 6-47 9⁰⁰ **CLASSES OF EXACT SOLUTIONS WITH NONLINEAR DEPENDENCE
ON SPATIAL COORDINATES FOR DESCRIBING THE MOTIONS
OF COMPRESSIBLE MEDIA**
Evgeny Yu. Prosviryakov, N. V. Burmasheva
Ural Federal University, Yekaterinburg, Russia
Institute of Mechanical Engineering, Ural Branch of the Russian Academy of Sciences, Yekaterinburg,
Russia
- 6-24 9²⁰ **PDEVELOPMENT OF A METHOD TO DETERMINE
THE COEFFICIENT VALUES OF HEAT TRANSFER
AND EQUIVALENT THERMAL CONDUCTIVITY FOR SIMULATION
OF A THERMAL FLOW THROUGH THE IN-STRUCTURE GAS CAVITIES USING
THE RESULTS OF PRELIMINARY AND DESIGN CALCULATIONS
OF THE TEMPERATURE FIELDS IN DIFFERENT STRUCTURES**
Oleg V. Koinov, M. V. Nikulshin, E. P. Isaeva
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-26 9⁴⁰ **EFFECTS OF THE ANISOTROPIC SCATTERING
ON THE DOPPLER SPECTRUM OF WAVES BACKSCATTERED
FROM AN EXPANDING CLOUD OF MICROPARTICLES**
Arseny N. Kondratev, A. V. Andriyash, S. E. Kuratov, D. B. Rogozkin
FSUE Dukhov Research Institute of Automatics (VNIIA), Moscow, Russia
- 6-9 10⁰⁰ **THE USE OF THE PRIZMA CODE FOR MODELING THE
LINEAR-ACCELERATOR-BASED PHOTONEUTRON SOURCES**
Kseniya S. Volosenko, O. V. Zatsepin, I. V. Penzin, S. I. Samarin, V. M. Shmakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

10⁴⁵ *Coffee-break*

Co-chairs: Alexander A. Shestakov

11¹⁵ **PRESENTATION OF POSTERS**

13⁰⁰ *Lunch*

Section 6P NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS

MAY 20, TUESDAY C 14³⁰ DO 18⁰⁰
MAY 21, WEDNESDAY C 8⁴⁰ DO 13⁰⁰

Foyer

Posters

- 6-7 **APPLICATION OF TRIGONOMETRIC SERIES TO OBTAIN A SOLUTION TO THE NONLINEAR HEAT EQUATION IN THE ONE-DIMENSIONAL CASE**
Irina A. Vazieva, S. P. Bautin
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Snezhinsk, Russia
- 6-8 **A DIFFERENCE SCHEME FOR SOLVING RADIATIVE HEAT TRANSFER ON ADAPTIVE MESHES WITH USE OF MARCHING FOR SLAE**
Nataliya N. Veselova, S. N. Lebedev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-10 **THE STUDY OF MODIFICATIONS OF THE PARTICLE-IN-CELL NUMERICAL METHOD FOR SIMULATING GAS DYNAMIC FLOWS**
Alexey Yu. Vydrin^{1,2}, S. V. Senchukov¹
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²NRNU MEPhI, Snezhinsk, Russia
- 6-12 **SIMULATION OF A LAYERED SPHERICAL SYSTEM UNDER SHOCK COMPRESSION WITH ACCOUNT FOR RADIATIVE HEAT TRANSFER IN DIFFERENT APPROXIMATIONS**
Svetlana A. Grabovenskaya, V. V. Zavialov, A. A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-13 **STRENGTH OF SEALED-CONNECTOR SOLDERED JOINT**
Ekaterina N. Grebyonkina, A. A. Tabatchikov, I. V. Minaev, N. N. Tulaeva, E. V. Glushchenko
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-17 **NUMERICAL SOLUTION OF RADIATION TRANSPORT WITH A TEMPERATURE DISCONTINUITY**
Anastasiya R. Dolgopolova, A. A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-21 **ANALYTICAL AND NUMERICAL SOLUTION OF THE CHARACTERISTIC CAUCHY PROBLEM WITH INITIAL DATA, DESCRIBING GAS SWIRLING IN THE BOTTOM PART OF AN UPWARD SWIRLING FLOW**
Alexey O. Kazachinsky, I. Yu. Krutova
Snezhinsky Institute of Physics and Technology National Research Nuclear University “MEPhI”, Snezhinsk, Russia
- 6-22 **INVESTIGATION OF THE BEHAVIOUR OF UNSTEADY TWO-DIMENSIONAL PERIODIC FLOWS DEFINED BY THE EQUATIONS OF MOTION**
Olga A. Karelina
MEPhI National Nuclear Research University’s Snezhinsk Physicotechnical Institute, Snezhinsk, Russia
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

- 6-23 **NUMERICAL SIMULATION OF AN EXPERIMENT ON PLATE THROWING BY DETONATION PRODUCTS**
Nataliya L. Klinacheva, M. S. Aetpaeva, E. S. Shestakovskaya, A. P. Yalovets
South Ural State University (National Research University), Chelyabinsk, Russia
- 6-27 **THE APPEARANCE OF AN UPWARD SWIRLING GAS FLOW IN THE MODEL ON A SPARSE GRID**
Sergey N. Kononov^{1, 2}, E. S. Levunina^{1, 3}
¹MEPhI, Snezhinsk, Russia
²SUSU, Ozersk, Russia
³FSUE «PO «Mayak», Ozersk, Russia
- 6-30 **PROBABILISTIC ANALYSIS OF HEAT FLUX DISTRIBUTION IN OCEAN**
Andrey A. Kuleshov¹, K. P. Belyaev²
¹Keldysh Institute of Applied Mathematics, Russian Academy of Science, Moscow, Russia
²Shirshov Institute of Oceanology of Russian Academy of Sciences, Moscow, Russia
- 6-32 **RESEARCH OF THE MODEL OF LASER RADIATION ABSORPTION IN POSTCRITICAL ZONE WITH USE OF FINITE-ANALYTICAL METHOD TO HELMHOLTZ EQUATION**
Anton A. Latypov, S. N. Lebedev, A. A. Ovechkin
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-37 **MATHEMATICAL MODELING OF SOLID FUEL COMBUSTION UNDER THE ACTION OF ALTERNATING PERIODIC PRESSURE ABOVE THE FUEL SURFACE**
Kseniya M. Moiseeva, A. Y. Krainov, A. A. Mitrofanov
Tomsk State University, Tomsk, Russia
- 6-38 **SIMULATION OF NONSTATIONARY FLOWS IN MULTICOMPONENT MEDIA BASED ON A THERMOMECHANICAL EQUILIBRIUM MODEL IMPLEMENTED IN THE SINARA CODE PACKAGE**
Artyom M. Mustafin, S. N. Lebedev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-39 **ON THE AVERAGING OF THE ABSORPTION COEFFICIENT IN RADIATIVE HEAT TRANSFER PROBLEMS**
Dmitry S. Netsvetayev, A. A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-40 **COUPLING OF SMOOTHED PARTICLES HYDRODYNAMICS AND FINITE VOLUME METHODS**
Andrey N. Nimakov, G. D. Rublev, S. A. Dyachkov
FSUE “Dukhov Automatics Research Institute” (VNIIA), Moscow, Russia
- 6-42 **SOLUTION OF PHOTON TRANSPORT PROBLEM IN SPHERICAL AND CYLINDRICAL SYSTEMS BY THE MONTE-CARLO METHOD**
Yuliya A. Petrova, A. P. Ponomarev
Federal State Autonomous Educational Institution of Higher Professional Education «Snezhinsk Physical-Technology Institute (SPhTI) – National Research Nuclear University MEPhI», Snezhinsk, Russia
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-46 **ALGORITHM FOR SOFTWARE PROCESSING OF OPTICAL ABLATION SPECTRA OF METEORIDS**
Alexander A. Popov, A. F. Kokorin
Yeltsin Ural Federal University, Ekaterinburg, Russia

- 6-54 **DEVELOPMENT OF TRAINING MONTE-CARLO CODE FOR 2D AXISYMMETRIC SIMULATION OF NEUTRON TRANSPORT**
Mariya A. Polozkova, A. V. Sokolov, A. A. Pikhulya
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-55 **DYNAMICAL LOAD BALANCING DURING SIMULATIONS OF INSTABILITY FLOWS**
Alexandra M. Titova, N. A. Mikhaylov, Yu. F. Yusupov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-57 **EXPERIMENTAL VALIDATION OF GAS-GUN BALLISTIC CALCULATION**
Ekaterina A. Chernoguzova¹, O. V. Ushakova², A. N. Ischenko²
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²Federal State Autonomous Educational Establishment of Higher Education «National Research Tomsk State University», Tomsk, Russia
- 6-58 **SIMULATION OF X RADIATION TRANSFER IN A SPHERICAL BOX-CONVERTER BY A CODE TIGR**
Ilya S. Chubareshko, A. A. Shestakov, V. A. Lykov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-43 **TEDY 2.0 – SOFTWARE FOR THERMODYNAMIC MODELING OF REACTIVE MULTICOMPONENT SYSTEMS**
Igor V. Peshkichev, O. V. Shults
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-33 **ASCENDING SWIRLING STREAMS: THEORY, EXPERIMENTS**
Alexey Y. Latyshev, S. P. Bautin, V. G. Mazhitov
Snezhinsky Institute of Physics and Technology of the National Research Nuclear University MEPhI, Snezhinsk, Russia
- 6-28 **NUMERICAL SIMULATION OF HIGH-SPEED LOADING OF AN UNDERWATER PIPELINE FILLED WITH LIQUID**
Mikhail A. Kochetkov
Research Institute of Mechanics of the Lobachevsky National Research Nizhny Novgorod State University, Nizhny Novgorod, Russia

Section 6P NUMERICAL METHODS, ALGORITHMS, CODES AND ACCURATE SOLUTIONS

MAY 21, WEDNESDAY C 14³⁰ ДО 18⁰⁰

MAY 22, THURSDAY C 8⁴⁰ ДО 13⁰⁰

Foyer

Posters

- 6-63 **A TEST PROBLEM WITH THE ANALYTICAL SOLUTION OF RADIATIVE
AND ENERGY TRANSFER EQUATIONS IN 2D AXIALLY SYMMETRIC GEOMETRY**
Alexander A. Shestakov, A. N. Startsev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-64 **EXACT SOLUTIONS FOR RADIATION TRANSPORT**
Alexander A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-59 **UNRESOLVED PROBLEMS IN THE NUMERICAL SOLUTION
OF RADIATION TRANSPORT EQUATIONS**
Alexander A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-62 **APPLICATION OF HOLO ALGORITHMS IN RADIATIVE HEAT TRANSFER**
Alexander A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-60 **ON BICOMPACTNESS OF THE TVDR DIFFERENCE SCHEMES**
Alexander A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-61 **RAISING THE ORDER OF APPROXIMATION IN BICOMPACT SCHEMES**
Alexander A. Shestakov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 6-56 **APPLYING THE USACHEV–GURVICH METHOD TO ESTIMATE
THE ADJOINT-WEIGHTED TALLIES VIA THE MONTE CARLO METHOD**
Alexander V. Kcharitonov^{1,2}, V. A. Adarchenko¹
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²Chelyabinsk State University, Chelyabinsk, Russia
- 6-44 **APPROXIMATION OF THE POTENTIAL IN SHORT NANOTUBES LOCATED
ON A METAL CATHODE TO FIND THE TRANSMISSION COEFFICIENT
AND FIELD EMISSION CURRENT USING THE LANDAUER FORMULA**
Irina A. Pilipenko¹, N. R. Sadykov²
¹FSUE «RFNC – VNIITF named after academic E. I. Zababakhin», Snezhinsk, Russia
²SPTI NRNU MEPhI, Snezhinsk, Russia