Sunday, 02 July, 2017

17.00-20.00 Registration at the "DUBNA" Hotel

Monday, 03 July, 2017, LIT Conference Hall

9.00-10.00	**Registration at the LIT Conference Hall**

Plenary, LIT Conference Hall

10.00-10.30	Opening Welcome from JINR. Welcome from sponsor Scientific Program of JINR Matveev V.A.
10.30-11.00	Multiscale simulations of targets for pharmacological relevance Carloni P.
11.00-11.30	Supercomputing Co-Design Technology Voevodin V.
11.30-12.00	**Coffee**
12.00-12.30	Solution of magnetogasdynamics problems with the help of High Performance Computer systems Chetverushkin B.N.
12.30-13.00	Petrov-Galerkin Finite Element Method for Fractional Advection-Dispersion Equations Lazarov R., Jin B., Zhou Z.

13.00-14.30	**Lunch**

Mathematical methods and application software for modeling complex systems and engineering (I)

LIT Conference Hall

14.30-15.00	Contemporary Problems of Numerical Modeling of Unique Structures, Buildings and Complexes Belostotsky A., Akimov P., Afanasyeva I.
15.00-15.15	Numerical simulation of Aerohydrodynamic and aerohydroelasticity problems Belostotsky A., Afanasyeva I.
15.15-15.30	The Disrete-Continual Finite Element Method in Engineering Akimov P., Negrozov O.
15.30-15.45	Wavelet-Based Numerical and Semianalytical Methods of Local Structural Analysis in Engineering Akimov P., Mozgaleva M.
15.45-16.00	Simulating fluid flow with complex physics in arbitrary shaped domains by CFD code FlowVision Aksenov A.
16.00-16.30	**Coffee**
16.30-16.45	Numerical damping of oscillations of beams by using multiple point actuators Atamuratov A.G., Mikhailov I.E., Taran N.A.
16.45-17.00	Methods of investigation of equations that describe waves in tubes with elastic walls and application of the theory of reversible and weak dissipative shocks Bakholdin I.

17.00-17.15	Algorithm of the explicit type for porous medium flow simulation Churbanova N., Lyupa A. Trapeznikova M.
17.15-17.30	Multilane traffic flow modelling using cellular automata theory Chechina A., Churbanova N., Trapeznikova M., German M., Ermakov A.
17.30-17.45	Modeling of Static Electric Field Effect on Nematic Liquid Crystal Director Orientation in Side-Electrode Cell Egorov A.
17.45-18.00	Periodic solutions in isothermal problems filtration of hydrocarbon mixtures Sokotushchenko V.N., Torchinsky V.M., Zaichenko V.M., Pazyuk Yu.V., Molchanov D.A.

Physical processes modeling and related computational methods (I)

Room 406A

14.30-14.45	Extrapolation of functions of many variables by means of metric analysis Kryanev A., Ivanov V., Sevastianov L., Udumyan D.
14.45-15.00	The Boundary Value Problem for Elliptic Equation in the Corner Domain in the Numerical Simulation of Magnetic Systems Perepelkin E., Polyakova R., Kovalenko A., Sadovnikova M.B., Sysoev P.N., Tarelkin A.A., Yudin I.
15.00-15.15	Estimation of Magnetic Field Growth and Constraction of Adaptive Mesh in Corner Domain for Magnetostatic Problem in 3-Dimensional Space Perepelkin E., Tarelkin A.
15.15-15.30	Investigation of the entropy of a system of many particles with gravitational interaction Perepelkin E.1, Suchkov D.
15.30-15.45	Parallel implementation of numerical solution of few-body problem using Feynman's continual integrals Naumenko M., Samarin V.
15.45-16.00	Molecular dynamic simulation of water vapor interaction with blind pore of dead-end and saccate type Nikonov E., Pavluš M., Popovičová M.
16.00-16.30	**Coffee**
16.30-16.45	Finite-difference splitting scheme for three-dimensional Schroedinger equation, describing tunneling from anharmonic atomic traps Ishmukhamedov I., Melezhik V.
16.45-17.00	Application of harmonic oscillator basis with different size parameters for calculation of ground state energy of Coulomb three-body systems Deveikis A.
17.00-17.15	Modeling the quarks' helicity flipping stimulated by their confinement potential Kostenko B.
17.15-17.30	On Interpolational Approximation of Nonlinear Differential Operators of the Second Order in Partial Derivatives Yanovich L.A., Ignatenko M.V.
17.30-17.45	Numerical Simulation of the Hydrated Electron States Formation Volokhova A.V., Zemlyanaya E.V., Lakhno V.D., Amirkhanov I.V., Bashashin M.V., Puzynin I.V., Puzynina T.P.
17.45-18.00	Spectral Multi Exponential Approximation as a Robust Tool for Analysis of Complex Systems Khruschev S., Plyusnina T.

Mathematical methods for complex systems

Room 310

14.30-14.45	Interpolation environment of tensor mathematics at corpuscular stage of computational experiment in hydrodynamics Bogdanov A., Degtyarev A., Khramushin V., Shichkina Y.
14.45-15.00	Approximate formulae for evaluation of expectations of random functionals based on chaotic development with respect to multiple Ito integrals Egorov A.
15.00-15.15	Nonlinear spinor field in non-diagonal Bianchi type space-time Saha B
15.15-15.30	Lattice study of effective gluon mass at various boundary conditions Bogolubsky I., Bogolubskaya A.
15.30-15.45	Quasicrossings of the energy terms in the Two-Coulomb-Centre problem Hnatič M., Khmara V.M., Lazur V.Yu., Reity O.K.
15.45-16.00	Finite size effects in the thermodynamics of a free neutral scalar field on the lattice and in the continuum Parvan A.
16.00-16.30	**Coffee**
16.30-16.45	Anomalous Scaling in Compressible Kazantsev-Kraichnan Model with Spatial Parity Violation Menkyna M., Jurčišin M., Jurčišinová E
16.45-17.00	Percolation process in the Presence of Velocity Fluctuations: Two-loop Approximation Birnsteinova S., Mizisin L., Lucivjansky T., Hnatič M.
17.00-17.15	The Numerical Evaluation of Universal Quantities of Directed Bond Percolation:Three-loop Approximation Mizisin L., Lucivjansky T., Hnatič M., Dančo M.
17.15-17.30	Renormdynamics (RD) and Generalized Analytic Functions (GAF) Makhaldiani N.
17.30-17.45	Elastic form factors from separable kernel Bekzhanov A., Bondarenko S.
17.45-18.00	Turbulent mixing of a critical fluid: the exact renormalization Hnatič M., Kalagov G., Nalimov M.

18.00 – 18.30	**Poster Session**
	Development of swarm optimization methods for the structural bioinformatics problems on the basis of the model problem of graph drawing Bystrov M., Poluyan S., Ershov N.
	Simulation of transport traffic at urban crossroads using extended Petri nets Martynova I., Ershov N.
	Adaptation of swarm optimization algorithms to the swarm robotics control problems Raportirenko M., Ershov N.
	Using of machine learning algorithms to the problem of recognition of vehicles tracks Puchkova N., Ershov N.
	The problem of optimal motion control for dynamical systems of fractional order Postnova E.
	On a method of investigation nonlinear self-consistent eigenvalue problem with the growing potentials Sarker N.R., Amirkhanov I.

	New methods for calculation of complicated functional integrals Khavtgai N., Munkhbaatar P., Batgerel M.
	Prediction of Oscillations of the Thermodynamic Parameters of the Cooling System of the IBR-2M Reactor Using Neural Nets Pepelyshev Yu., Tsolmon T.
	GPU simulations of blood flow in CT based domains Georgiev I.
	Nonlinear wave simulation on the Xeon Phi Knights Landing Processor Hristov I., Goranov G., Hristova R.
	Generating functions method for constructing new iterations Tugal Zh., Chuluunbaatar O., Vandandoo U.
	File system access speed test Belyakov D., Matveyev M., Streltsova O., Popkov S.
	Stability analysis of the IBR-2M pulsed reactor in an automatic regulated regime at the different level of average power Pepelyshev Yu., Popov A., Davaasuren S.
	Updates of the information-software environment of the heterogeneous cluster HybriLIT Adam G., Fyodorov K.V., Valova L., Vala M., Zaikina T., Kirakosyan M., Kutovskiy N.A., Podgainy D., Streltsov A., Streltsova O., Torosyan Sh.
	Comparison of optimal control properties for linear fractional-order systems described by equations with different type of fractional derivative Postnov S.
	Spectral photosensitization of optical anisotropy in poly(vinyl cinnamate) solid films Chausov D.
	Effective Methods for Solving Band SLE after Parabolic Nonlinear PDEs. Veneva M., Ayriyan A.
	Model of phase transition mimicking cold quark-hadron mixed phase A. Ayriyan, H. Grigorian
	Short-range interaction impact on two dimensional dipolar scattering Koval Eu.

18.30-19.30	**Welcome Party**

Tuesday 04 July, 2017, LIT Conference Hall

Plenary

9.00-9.30	Precise Frequency-Pattern Analysis Reveals the Functional Structure of Complex Systems Ustinin M., Rykunov S.
9.30-10.00	Dynamical and Thermodynamic Electronic Properties of DNA Lakhno V.
10.00-10.30	Quantum dynamics of a hole migration through DNA. Shirmovsky S.
10.30-11.00	Advanced computing in radiation biophysics Belov O.
11.00-11.30	**Coffee**
11.30-12.00	Machine learning and complex networks for precision and systems biomedicine Cannistraci C.
12.00-12.30	Monte Carlo simulation of early biological damage induced by ionizing radiation at the DNA scale: overview of the Geant4-DNA project Incerti S.
12.30-13.00	Computational methods in relativistic atomic physics A. Surzhikov

13.00-14.30	**Lunch**

Bioinformatics and computational biophysics (I)

LIT Conference Hall

14.30-14.45	Radiation damage to nervous system: designing of optimal models for realistic neuron morphology Munkhbaatar B., Bugay A., Lkhagvaa B. Oidov L.
14.45-15.00	Simulation of radiation damage to neural cells Munkhbaatar B., Belov O., Lkhagvaa B., Oidov L.
15.00-15.15	Fractional Langevin equation model for characterization of anomalous Brownian motion from NMR signals Lisy V.1., Tothova J.
15.15-15.30	Modeling of T-Cell polarization Hornak I., Rieger H.
15.30-15.45	Parallel evolutionary optimization algorithms for peptide-protein docking Poluyan S.1, Ershov N.
15.45-16.00	Modeling of charge dynamics in homogeneous chain with defect Fialko N., Lakhno V., Pyatkov M
16.00-16.30	**Coffee**
16.30-16.45	Partial spectroscopy of alpha-rhythm and pathological activity of the human brain Rykunov S.1, Ustinin M.
16.45-17.00	SaaS platform for time series data handling Oplachko E., Rykunov S., Ustinin M.
17.00-17.15	Reduced model of electron transfer in photosystem II inhibited by DCMU Plyusnina T., Degtereva N., Khruschev S.
17.15-17.30	Density Based Clustering of Brownian Dynamics Trajectories Reveals Predominant Energetically Favorable Orientations in Protein-Protein Interactions Khruschev S., Fedorov V., Kovalenko I.

17.30-17.45	Roadmap for computer-aided modeling of theranostics and related nanosystems Kozar T., Ulicny J.

Physical processes modeling and related computational methods (II)

Room 406A

14.30-14.45	A computational algorithm for covariant series expansions in general relativity Potashov I.M., Tsirulev A.N.
14.45-15.00	Minimum period of rotation of millisecond pulsars and equations of pulsar matter state Mikheyev S.A., Tsvetkov V.P.
15.00-15.15	Optimal approximation of biquartic polynomials by bicubic splines Kačala V.1, Török C.
15.15-15.30	Algorithm for the orthogonal fast discrete spherical Bessel transform on a uniform grid Serov V.
15.30-15.45	Ground state of the electron–hole liquid in quantum wells Vasilchenko A., Kopytov G.
15.45-16.00	Joint analytical and numerical investigation of blow-up in some mathematical models Panin A., Lukyanenko D., Korpusov M.
16.00-16.30	**Coffee**
16.30-16.45	The calculation of multicomponent mixture phase diagram, using the equations of state of the van der Waals type Molchanov D., Zaichenko V., Sokotushchenko V., Torchinsky V.
16.45-17.00	Asymptotics for penalized splines Lyubin P., Schetinin E.
17.00-17.15	Modelling of the High Temperature Superconductors at Nonequilibrium Conditions Kulikov K., Shukrinov Yu., Nashaat M., Dawood R., El Samman H., El Sherbini Th.
17.15-17.30	Variational solution of the Schrödinger equation in an inhomogeneous central field as applied to emission problems. Tolstov I., Freinkman B., Polyakov S.
17.30-17.45	Fully differential cross sections for single ionizing 1-MeV p+He collisions at small momentum transfer Chuluunbaatar O., Kouzakov K., Galstyan A., Popov Yu., and Schöffler M.
17.45-18.00	Modern approaches to synthesis, stability analysis and verification of nonlinear stochastic models of natural science Druzhinina O., Demidova A., Masina O.

Mathematical methods and application software for modeling complex systems and engineering (II)

Room 310

14.30-14.45	Modeling thermal effects in metals irradiated by copper nanoclusters Tukhliev Z., Sharipov Z., Hristov I., Hristova R., Batgerel B., Dimova S., Kupenova T., Puzynin I., Puzynina T.
14.45-15.00	Evolution of continuum-atomistic approach for the modeling of Irradiation of metals by heavy ions Sharipov Z., Batgerel B., Dimova S., Puzynin I., Puzynina T., Hristov I. Hristova R., Tukhliev Z.
15.00-15.15	Quasi-vector model of propagation of polarized light in a thin-film waveguide lens Divakov D.V., Malykh M.D., Sevastianov A.L., Sevastianov L.A.
15.15-15.30	Time discretization impact on the target localization precision using UWB radar Buša J.

15.30-15.45	Diffusion processes in A model of vector admixture: Turbulent Prandtl number Remecky R., Jurčišin M., Jurčišinová E.
15.45-16.00	Intel® Performance Library is the fastest and most– used math library for Intel® -based Systems Fedorov G.
16.00-16.30	**Coffee**
16.30-16.45	High precision computer simulation of cyclotrons Karamysheva T., Amirkhanov I., Malinin V., Popov D.
16.45-17.00	Optimisation of air pollution dispersion and deposition models Bitta J., Svozilík V., Jančík P.
17.00-17.15	Mathematical Modeling Of Air Prolusion And Approach To Estimating And Forecasting Health Indicators Of Population Of Ulaanbaatar City Sanjaa B.
17.15-17.30	Application of artificial neural networks and singular-spectral analysis in forecasting the daily passenger's traffic in the Moscow Metro Osetrov E., Ivanov V.
17.30-17.45	Reduction of network traffic to point images for the analysis of its behavioral structure Repin D., Nikol'skii D., Krasnov A., Bokov D.
17.45-18.00	New methods of detection in Computer Vision A.V.Stadnik, P.S. Sazhin, S. Hnatic
18.00-18.15	One principle for the identification of shape of an object Gostev I., Sevastyanov L.

Distributed and parallel computing and tools for scientific computing (I)

Room 406B

14.30-14.45	Tests of different MPI implementations in HPC/KVM cluster Alexandrov E.I., Bashashin M.V., Belyakov D.V., Podgainy D.V., Streltsova O.I., Zuev M.I.
14.45-15.00	Showers Simulation Study over Caucasus Region by WRF Model Based on Grid Computing Davitashvili T., Modebadze Z., Jiadze N.
15.00-15.15	Computer Modeling of a Dispersed Storage System for Private Data on Public Resources in P2P Networks for Determining the Optimal Values of its Parameters Polyakov S., Kryukov A., Demichev A.
15.15-15.30	Web Platform for Sharing Modeling Software in the Field of Nonlinear Optics Dubenskaya Y., Kryukov A., Demichev A.
15.30-15.45	Concept of a cloud service for data preparation and computational control on custom HPC systems in application to molecular dynamics. Markizov S., Puzyrkov D., Polyakov S., Podryga V.
15.45-16.00	Web service for analysis of experimental data on HPC platforms using package ROOT Mayorov A., Vala M.
16.00-16.30	**Coffee**
16.30-16.45	Application of SLURM, BOINC and GlusterFS as Software Complex for Sustainable Modeling and Data Analytics Kashansky V., Kaftannikov I.
16.45-17.00	New HybriLIT cluster module devoted to graphical applications Adam Gh., Belyakov D.V., Vala M., Zrelov P.V., Korenkov V.V., Matveyev M.A., Podgainy D.V., Streltsova O.I.
17.00-17.15	RO-14-ITIM, upgrades for a diskless site Nagy J., Farcas F., Albert S., Trusca R.
17.15-17.30	Parallel calculations in optimal control problem Dikusar V., Olenev N., Wojtowicz M.
17.30-17.45	Intel® Parallel Studio XE for Distributed Computations Fedorov G.

Wednesday 05 July, 2017, LIT Conference Hall

Plenary

9.00-9.30	Mathematical modeling of resonant processes in confined geometry of atomic and atom-ion traps Melezhik V.S.
9.30-10.00	Generalized Techniques in Numerical Integration Safouhi H., Slevinsky R.
10.00-10.30	Disentangling complexity in Bayesian automatic adaptive quadrature Adam G., Adam S.
10.30-11.00	Fractional stochastic field theory Honkonen J.
11.00-11.30	BigData challenges and processing at present and future High Energy Physics and Nuclear Physics experiments and Computing Model Evolution. Klimentov A.

13.00	**Boat and Picnic Party**

Thursday 06 July, 2017, LIT Conference Hall

Plenary

9.00-9.30	Dynamics of quantum correlations in bipartite Gaussian open quantum systems Isar A.
9.30-10.00	Quantum correlations in bipartite systems Fel'dman E.
10.00-10.30	New Possibilities and Applications of the Method of Collocations and the Least Residuals Shapeev V.
10.30-11.00	Modeling Quantum Behavior in the Framework of Permutation Groups Kornyak V.
11.00-11.30	**Coffee**
11.30-12.00	Partial analytic integration of Cosserat PDE system describing dynamics of slender structures Gerdt V., Lyakhov D., Michels D., Weber A.
12.00-12.30	Usage Power Geometry and Normal Form Methods in simulation of degenerated nonlinear ODEs study Edneral V.
12.30-13.00	Shape Approximation Based on Higher-Degree Polynomials Dikusar N.

13.00-14.30	**Lunch**

Computer Algebra and Quantum Computing with Applications (I)

LIT Conference Hall

14.30-14.45	IVC Calculation Problem for Josephson Junction Stacks. On Asymptotic Construction near the Breakpoint Serdyukova S.I.
14.45-15.15	Cunningham numbers in accelerated modular arithmetic and applications Zima E.
15.15-15.30	High-Accuracy Finite Element Method for Elliptic Boundary-Value Problems Gusev A., Chuluunbaatar O., Gerdt V., Vinitsky S.
15.30-15.45	High-Accuracy Finite Element Method for the 2D Parametric Elliptic Boundary-Value Problems Vinitsky S., Gusev A., Chuluunbaatar G., Chuluunbaatar O.
15.45-16.00	Symbolic-numerical modeling of the influence of damping moments on satellite dynamics Gutnik S., Sarychev V.
16.00-16.30	**Coffee**
16.30-16.45	On generation of random ensembles of mixed states for quantum bipartite systems Khvedelidze A., Rogojin I.
16.45-17.00	On stratifications of X-state space of two qubits Khvedelidze A., Torosyan A.
17.00-17.15	Entanglement and quantum state transfer in spin chains with XY-Hamiltonian Kuznetsova E.I., Lazarev I.D.
17.15-17.30	On the Wigner quasiprobability function for N-level quantum systems Khvedelidze A., Abgaryan V.

17.30-17.45	The dipolar relaxation of multiple quantum coherences as a model for an investigation of decoherence processes in many-qubit clusters in multiple-quantum NMR Bochkin G., Fel'dman E., Vasil'ev S.
17.45-18.00	Quantum correlations in remote state creation. Information exchange with vanishing entanglement Doronin S., Zenchuk A.
18.00-18.15	Evolution of quantum steering of two bosonic modes in a squeezed thermal environment Mihaescu T., Isar A.

Mathematical methods and application software for modeling complex systems and engineering (III)

Room 310

14.30-14.45	Numerical algorithm for optimization of positive electrode in lead-acid batteries Morari C.I.C., Iarinca Buimaga L., Murariu A.T., Bende A., Janosi L., Farcas A., Varodi C.M., Adam Gh.
14.45-15.00	Modeling hysteretic effects in perovskite solar cells Nemnes G.A., Besleaga C., Stancu V., Palici A., Dogaru D.E., Leonat L.N., Pintilie L., Torfason K., Ilkov M., Anghel D.V., Pintilie I., Manolescu A.
15.00-15.15	Beyond the phenomenology of the BCS model Anghel D.V., Nemnes G.A.
15.15-15.30	Numerical methods for the prediction and optimization of the cryosurgery operations Kudryashov N., Shilnikov K., Gaiur I., Kochanov M.
15.30-15.45	Features of plastic flow localization in hollow cylinder Kudryashov N., Muratov R., Ryabov P.
15.45-16.00	Hidden attractors in bubble contrast agent model Garashchuk I.R., Sinelshchikov D.I., Kudryashov N.A.
16.00-16.30	**Coffee**
16.30-16.45	Linear approximation of volume integral equations for solving magnetostatics problems Akishin P., Sapozhnikov A.
16.45-17.00	User software for numerical study of Josephson junction with magnetic momenta Atanasova P., Zemlyanaya E., Shukrinov Yu., Panayotova S., Rahmonov I.
17.00-17.15	Simulation of collective excitations in the stack of long Josephson junctions Rahmonov I., Shukrinov Yu., Atanasova P., Zemlyanaya E., Streltsova O. Zuev M., Bashashin M.
17.15-17.30	Fitting by orthogonal polynomials of silver nanoparticles spectroscopic data Bogdanova N., Koleva M.
17.30-17.45	Transport Description of Heavy Ion Fragmentation Reactions at Energies of 35-140 MeV Mikhaylova T., Erdemchimeg B., Artyukh A.G., Sereda Yu.M., Wolter H.H., Di Toro M.
17.45-18.00	Symbolic and numerical modeling of nonlinear dynamics of particles in accelerators Sboeva E., Andrianov S.
18.00-18.15	Analitical solution for Experimental Data Approximation by Solving Linear Difference Equations with Constant Coefficients. Smirnov V., Kuznetsova A.

Physical processes modeling and related computational methods (III)

Room 406A

14.30-14.45	Numerical modelling of normal and superconducting properties of the doped graphene Kutukov A.
14.45-15.00	Mechanism of controlling the process of the convergence of the Newton iteration method Kazakov D., Nikonov E.
15.00-15.15	Generalized Darcy's law in filtration theory Rybakov Yu.P., Semenova N.V.
15.15-15.30	Modeling turbulence via numerical functional integration Honkonen I., Honkonen J.
15.30-15.45	On the generalized Sundman transformations and integrable Liénard-type equations Sinelshchikov D.
15.45-16.00	Functional integral approach to system of stochastic differential equations Ayryan E., Egorov A., Kulyabov D., Malyutin V., Sevastyanov L.
16.00-16.30	**Coffee**

Distributed and parallel computing and tools for scientific computing (II)

Room 406B

14.30-15.00	Image classification by shallow and deep neural networks Ososkov G., Goncharov P.
15.00-15.15	Machine-learning algorithms for classification and separation of noisy signals Butenko Yu., Streltsova O., Streltsov A.
15.15-15.30	Application of methods of machine learning and data mining to problems of institutional economics Kirilyuk I., Kuznetsova A., Senko O.
15.30-15.45	Astroparticle Data Life Cycle Initiative Kryukov A., Korosteleva E.
15.45-16.00	Intel® Data Analytics Acceleration Library – modern solution for Big Data, neural networks and Machine learning Fedorov G.
16.00-16.30	**Coffee**
16.30-16.45	Mock Data Challenge for the MPD/NICA experiment on the HybriLIT cluster Gertsenberger K.
16.45-17.00	Analisys of the Distribution of the Beam in Particle Accelerators Kulabukhova N.
17.00-17.15	Analysis of polydispersed vesicular systems structure: parallel implementation of the separated form-factors method Bashashin M.V., Zemlyanaya E.V., Sapozhnikova T.P., Kiselev M.A.
17.15-17.30	DDS – The Dynamic Deployment System Lebedev A., Manafov A.
17.30-17.45	Development of the geometry database for the CBM experiment Akishina E. Alexandrov E., Alexandrov I., Filozova I., Friese V., Ivanov V.

Friday 07 July, 2017, LIT Conference Hall

Plenary

09.00-9.30	Kinetic, Monte-Carlo and Multiparticle Models of the Processes in Photosynthetic Membrane Riznichenko G.
9.30-10.00	Higher-order partial differential equations for description of the Fermi-Pasta-Ulam and the Kontorova-Frenkel models. Kudryashov N.
10.00-10.30	Multiscale Multilevel Approach to Solution of Nanotechnology Problems Polyakov S., Podryga V.
10.30-11.00	On the Load Balancing Problem Semanišin G., Galčík F., Katrenič J.
11.00-11.30	An attempt to build a smart real-time system for heavy element research: approaches, mathematical objects, algorithms, equations. Tsyganov Yu.
11.30-12.00	Online event reconstruction in the CBM experiment at FAIR Kisel I.

12.00-13.30	**Lunch**

Mathematical methods and software for experimental data processing

LIT Conference Hall

13.30-13.45	Strange particles reconstruction by the missing mass method Kisel I., Kisel P., Zyzak M., Vassiliev I., Senger P.
13.45-14.00	J/ψ→e+e− decays selection criteria with TRD in CBM experiment Derenovskaya O., Ablyazimov T., Ivanov V.
14.00-14.15	4-dimensional reconstruction of time-slices Akishina V., Kisel I., Zyzak M., Vassiliev I.
14.15-14.30	Time-based global track reconstruction in the CBM experiment Ablyazimov T., Friese V., Ivanov V.
14.30-14.45	Speed up approaches in the Cellular Automaton track finder Kozlov G., Kisel I.
14.45-15.00	Simulation of Anti-Matter Matter Interactions in GEANT4 Galoyan A., Uzhinsky V., Ribon A.
15.00-15.30	**Coffee**
15.30-15.45	Nuclotron beam momentum reconstruction using multiwire proportional chambers and drift chambers in the BM@N experiment Voytishin N.
15.45-16.00	Study of the GEM detector performance in BM@N experiment Lenivenko V.
16.00-16.15	Global Alignment of BM@N Drift Chambers Fedorišin J.
16.15-16.30	BM@N online monitoring Gabdrakhmanov I.
16.30-16.45	A Scientific Workflow System for Satellite Data Processing with Real-time Monitoring Nguyen M.D.
16.45-17.00	Light ion beams for energy production in accelerator driven systems Paraipan M., Baldin A., Baldina E., Tyutyunnikov S.

17.00-17.15	Comparing the effectiveness of PROOF with others methods of parallelizm for the experimental data processing Solovjeva T., Soloviev A.
17.15-17.30	Primary data treatment software for position-sensitive detector of small-angle neutron scattering spectrometer in isotropic pattern scattering case Soloviev A., Kuklin A., Ivankov O., Kutuzov S.
17.30-17.45	Radiactivity registered with a small number of events Zlokazov V.B., Utyonkov V.K.

Computer Algebra and Quantum Computing with Applications (II)

Room 310

13.30-13.45	Provable programming of algebra: arithmetic of fractions Meshveliani S.
13.45-14.00	A new approach to weight multiplicity in representations of compact Lie groups Loutsiouk A.
14.00-14.15	Finite difference schemes as algebraic correspondences between layers Malykh M.D., Sevastianov L.A.
14.15-14.30	Diffraction of electromagnetic waves on a waveguide joint Malykh M., Sevastianov L., Tyutyunnik A., Nikolaev N.
14.30-14.45	Near-perfect matchings on cylinders $C_M \times P_N$ of odd order Perepechko S.
14.45-15.00	Computing Gröbner and Involutive Bases for Linear Systems of Difference Equations Yanovich D.
15.00-15.30	**Coffee**
15.30-15.45	Automation of stochastization algorithm with use of SymPy computer algebra library Demidova A., Gevorkyan M., Kulyabov D., Sevastyanov L.
15.45-16.00	Generation and analysis of the second order difference scheme for the Korteveg-de Vries equation Gerdt V., Blinkov Yu., Marinov K.
16.00-16.15	Finding the spectral characteristics for systems with control Velieva T., Korolkova A., Kulyabov D., Zaryadov I.
16.15-16.30	The standard scheme of the analysis of a stability through Lie symmetries and conservation laws: a nonlinear Schrodinger equation Rikhvitsky V.
16.30-16.45	An application of geometric methods to the one-step processes stochastization Kulyabov D., Korolkova A., Sevastyanov L., Eferina E.
16.45-17.00	Computer algebra algorithms of simplification of tensor expressions Kryukov A., Shpiz G.
17.00-17. 15	The system of n-order Riccati equations: derivation, solutions, applications. Yamaleev R.
17. 15-17.30	Creating Development environment and based on it versions of the computer algebra systems AXIOM, REDUCE and MAXIMA Raportirenko A.
17.30-17.45	Modification of Adaptive Artificial Viscosity for Solution of Gasdynamic Problems on Parallel Computer Systems Popov I., Soukov S.

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13.30-13.45	Modeling the behavior of virtual systems with endogenously shaping purposes Vinogradov G.P.
13.45-14.00	Critical points of extended phase space of instantaneous cardiac rhythm as cardiovascular system state markers Lebedev D.Yu., Mikheyev S.A., Tsvetkov V.P., Tsvetkov I.V., Bespalko E.V.
14.00-14.15	Holter monitoring data-based instantaneous cardiac rhythm spectrum. resonances and antiresonancesx Ivanov A.P., Kudinov A.N., Ryzhikov V.N., Mikheyev S.A., Tsvetkov V.P.
14.15-14.30	Instantaneous cardiac rhythm rate spectrum based on holter monitoring data and its features Ivanov A.P., Kudinov A.N., Ryzhikov V.N., Mikheyev S.A., Tsvetkov V.P.
14.30-14.45	Phase space of instantaneous cardiac rhythm is a fractal Kudinov A.N., Mikheyev S.A., Tsvetkov V.P., Tsvetkov I.V.
14.45-15.00	The mass-to-charge ratio of self-gravitating scalar field configurations Julia Chemarina
15.00-15.30	**Coffee**

18.00	**Closing**