The International Conference "Mathematical Modeling and Computational Physics" (MMCP'2026)

22-26 June 2026

TIMETABLE

Monday 22/06

09:00 – 10:00 **Registration**

MLIT Conference Hall

Plenary

MLIT Conference Hall

10:00 – 10:30	Opening
10:30 – 11:00	Elena Kolganova *JINR scientific program*
11:00 – 11:30	Nikolay Voytishin *Methods, algorithms and software for processing experimental data*
11:30 – 12:00	Gennady Ososkov *On the competition of alternative Deep Learning algorithms for processing data from SPD and MPD experiments at NICA*
12:00 – 12:30	Олег Белов *Status of ARIADNA collaboration for applied research at NICA facility and its requests for advanced computation techniques*
12:30 – 13:00	Saheya Barintag *AI-Driven Systematic Research on Oceanic Internal Solitary Waves: From SAR Image Interpretation to Governing Equation Discovery*
13:00	Group Photo

13:00 – 14:00 **Lunch**

14:00 – 16:00	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Modern methods for data processing and analysis in Mega-science projects in HEP** *Room 310*	**Numerical and analytical calculations in modern mathematical physics** *Room 406*

16:00 – 16:20 **Coffee**

	Mathematical methods and tools for modeling complex physical systems *MLIT Conference Hall*	**Modern methods for data processing and analysis in Mega-science projects in HEP** *Room 310*	**Numerical and analytical calculations in modern mathematical physics** *Room 406*

18:30 – 19:30 **Welcome Party**

Monday 22/06

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

14:00 – 14:15	Nikolay Stepenko *Modeling of thermophysical processes by multithreaded parallel computing algorithms*
14:15 – 14:30	Andrey Dyagilev *Modelling cosmic-ray propagation in electromagnetic fields and matter interactions with a Python package GT simulation*
14:30 – 14:45	Константин Чижов *Comparative assessment of quadratic programming solvers for neutron spectrum unfolding*
14:45 – 15:00	Marina Trapeznikova *Analysis of traffic flows in a roundabout system based on cellular automata models*
15:00 – 15:15	Женис Мусульманбеков *NuSt-Vis, Nuclear Structure Visualization Software*
15:15 – 15:30	Nugzar Makhaldiani *Solvable models for interacting particles with spin and fundamental constants*
15:30 – 15:45	Svetlana Dima *Maxwell-Fourier regularisation of MSC-230 cyclotron magnetic field map*
15:45 – 16:00	Natalia Churbanova *Simulation of gasdynamic flows in regions with complex geometries using the fictitious domain method*

16:00 – 16:20 **Coffee**

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

16:20 – 16:35	Eduard Nikonov *Breaking of Structural Symmetry and Topological Defects in the Classical Thomson Problem on a Disk at Zero Temperature*
16:35 – 16:50	Alexander Zlotnik *Regularized Equations for Dynamics of Heterogeneous Binary Mixtures and Water–Vapor Phase Transitions*
16:50 – 17:05	Andrei Eserkepov *Electrical conductivity of transparent conducting films based on crack templates*
17:05 – 17:20	Yuldashev Oleg *Methods and algorithms for parallel modeling magnetostatic fields of a compact electromagnetic device of experimental setup to study rot effects in fission of heavy nuclei*
17:20 – 17:35	Petr Vabishchevich *Numerical solution of nonstationary problems with memory*
17:35 – 17:50	Oleg Lychkovskiy *Symbolic recursion method for strongly correlated quantum dynamics*
17:50 – 18:05	Nikolay Dikusar *Analytical and Numerical Calculations within the Framework of the Basic Element Met*
18:05 – 18:20	Sumkhuu Davaasuren *Analysis of the resonant properties of the IBR-2M reactor during a cycle using the basic elements method*

Monday 22/06

Modern methods for data processing and analysis in Mega-science projects in HEP

Room 310

14:00 – 14:15	Alina Nurysheva *Processes of gravitino production as a dark matter particle in stealth supersymmetry* Dmitry
14:15 – 14:30	София Франк-Каменецкая *Gravitino pair production at the LHC*
14:30 – 14:45	Zaurbek Khabaev *Dark matter in the two-doublet Higgs model with b-quarks in the final state*
14:45 – 15:00	Rustam Azimzade *Application of deep neural network methods for the identification of Higgs boson production in association with a single top quark in proton–proton collisions at $\sqrt{s}=13.6$ TeV*
15:00 – 15:15	Vitalii Zavadskyi *Vectorized graph computations in Python with dag-modelling*
15:15 – 15:30	Chitta Ranjan Das *Neutrino Trapping Effects in Hybrid and Strange Stars Revealed Through Gravitational Waves from Merger Events Using AI Analysis*
15:30 – 15:45	Егор Дыдышко *Some algorithms for evaluation of Goncharov multilogarithms and related functions*
15:45 – 16:00	Олег Рогачевский *Event-by-Event analysis in the multiparticle events*
16:00 – 16:20	**Coffee**

Modern methods for data processing and analysis in Mega-science projects in HEP

Room 310

16:20 – 16:35	Nickolay Martynenko *Time-reversed anisotropic diffusion approach for probing the Galactic contribution to the TeV–PeV astrophysical neutrino flux*
16:35 – 16:50	Dmitry Fomenok *Overlapped signals delimitation for HEP experiments*
16:50 – 17:05	Maria Dima *3D hit reconstruction in End-Cap straw trackers in High Energy Physics*
17:05 – 17:20	Nikita Chalyi *Geant4 hadronic model developments for HEP experiments*
17:20 – 17:35	Сергей Шульга *Studies of Quark- and Gluon-Jet Properties at CMS: Methods, Challenges,and Solutions*
17:35 – 17:50	Renat Sadykov *Polarized gamma-gamma collisions in the ReneSANCe event generator*
17:50 – 18:05	

Monday 22/06

Numerical and analytical calculations in modern mathematical physics

Room 406

14:00 – 14:15	Polina V. Zheglova *Modelling S-parameters in PCBs with the method of moments and a scattering algorithm*
14:15 – 14:30	Georgiy Lavrov *Relaxation Method Based on Energy Landscape Information in the Vicinity of the Global Minimum of the Classical Thomson Problem on a Disk*
14:30 – 14:45	Ольга Белоусова *The surface electrode layer structure research*
14:45 – 15:00	Vasily Khramushin *Continuous-corpuscular schemes of computational experiment*
15:00 – 15:15	Mikhail Slautin *Pion off-shell form factors*
15:15 – 15:30	Alexandr Seliverstov, Ksaverii Malyshev *A Lower Bound on the Rank of Integer Matrices with Peculiar Leading Diagonal*
15:30 – 15:45	Bijan Saha *Spinor Field Dark Energy in FLRW Space-time: Theory and Observation*
15:45 – 16:00	Yuri Popov *Inelastic backscattering of high-energy electrons from He: Calculational details and approaches*
16:00 – 16:20	**Coffee**

Numerical and analytical calculations in modern mathematical physics

Room 406

16:20 – 16:35	Oleg Shavykin *High-performance computer simulation of complexation of fullerenes and fullerenols with the peptide dendrimer Lys2Gly*
16:35 – 16:50	
16:50 – 17:05	Lukas Mizisin *Equation of State in the Directed Percolation Universality Class: Numerical Three-Loop Analysis*
17:05 – 17:20	Milena Veneva *Multiple Right-Hand Sides and Multi-GPU CUDA Implementations of the Tridiagonal Partition Method*
17:20 – 17:35	Константин Ловецкий *A Modified Chebyshev Collocation Method for Solving Two-Point Problems for General Second-Order Linear ODEs*
17:35 – 17:50	Zarif Sharipov *A numerical study of the free-fall three-body problem with Pythagorean masses*
17:50 – 18:05	Anton Tsvetkov *Compensation constant of magnetocrystalline anisotropy K0 as a marker of spin-reorientation phase transition in a tetragonal ferromagnetic crystal*

Tuesday 23/06

Plenary

MLIT Conference Hall

09:30 – 10:00	Александр Гусев *Schemes of Finite Element Method on Hyperparallelepiped Meshes*
10:00 – 10:30	Arsen Khvedelidze *On a Generic 2-Qubit Entangler*
10:30 – 11:00	Victor Braguta *Spatial confinement-deconfinement transition in accelerated gluodynamics within lattice simulation*

11:00 – 11:20 **Coffee**

MLIT Conference Hall

Plenary

MLIT Conference Hall

11:20 – 11:50	Sergey Polyakov *A digital platform for supercomputer modeling of complex technical processes*
11:50 – 12:20	Viacheslav Samarin *Numerical solution of the time-dependent Schrödinger equation and modeling of nuclear transfer reactions*
12:20 – 13:00	Cristian S. Calude *A Localized Kochen-Specker Theorem for Unsharp Measurements*

13:00 – 14:00 **Lunch**

14:00 – 16:00	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Methods of quantum computing and quantum information processing** *Room 310*	**Numerical and analytical calculations in modern mathematical physics** *Room 406*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

16:20 – 19:00	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Methods of quantum computing and quantum information processing** *Room 310*	**Numerical and analytical calculations in modern mathematical physics** *Room 406*

Tuesday 23/06

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

14:00 – 14:15	Eugene Koval *Numerical simulation of the orientation symmetric top molecule by shaped laser pulse*
14:15 – 14:30	Sergey Postnov *An investigation of the controllability and optimal control problems for the fractional dynamical systems of variable order*
14:30 – 14:45	Ilia Agrelov *Application of the grid-characteristic method to the numerical study of anisotropy in fractured media*
14:45 – 15:00	Yury Ivanskiy *Multi-agent approach to nuclear many-body system modelling*
15:00 – 15:15	Nikolay Kudryashov *Analytical solutions of the Kuramoto–Sivashinsky equation with nonlinear convection*
15:15 – 15:30	Mikhail Turbylev *Application of the cabaret scheme for modeling twophase flows in pipelines*
15:30 – 15:45	Daniil Nifontov *Conservation laws for a family of generalized nonlinear Schrödinger equations*
15:45 – 16:00	Elena Postnova *About the hysteresis model in biological systems*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

16:20 – 16:35	Aleksandr Kutukov *Generalized ordinary differential equations of Chazy class VII: first integrals and general solutions*
16:35 – 16:50	Yury Zakharov *Self-Consistent Modeling of Oxygen Atom Transport in a Remote Plasma Reactor for Photoresist Ashing*
16:50 – 17:05	Dmitriy Egorov *Modification of the Finite Volume Method for Linear Hyperbolic Systems with Discontinuous Coefficients*
17:05 – 17:20	M. Kecer *Reaction-diffusion processes: Non-perturbative renormalization group treatment of advection effects*
17:20 – 17:35	Trong Hoang Trung Nguyen *Real-time identification and classification of defects in radiation damage simulations*
17:35 – 17:50	Dmitrii Lomasov *Stability Analysis of the Steady Solution for Incompressible Lid-Driven Cavity Flow*
17:50 – 18:05	Viktoriia Podryga *Multiscale mathematical modeling the cold spray of metallic nanoparticles on surfaces*
18:05 – 18:20	Sergei Voitov *Differentiable Fixed-Topology Mesh Adaptation*

Tuesday 23/06

Methods of quantum computing and quantum information processing

Room 310

14:00 – 14:15	Mikhail Altaisky *Quantum reservoir classifiers based on decoherence-free subspaces*
14:15 – 14:30	Ilnaz Mannapov *Quantum Version of Decision Tree Construction Algorithm Subroutine*
14:30 – 14:45	Николай Малетин *Возможности и перспективы применения квантовых и квантово-инспирированных отжигателей для решения задач управления сложными технологическими системами на примере задачи управления энерго-электро-сетями*
14:45 – 15:00	Ivan Shaimardanov *Neural network-based optimization of parameter search in quantum hashing*
15:00 – 15:15	Alexander Vasiliev *Quantum Hashing with QKD States*
15:15 – 15:30	Kamil Khadiev *Implementation of the Quantum Hashing Algorithm for Real Devices*
15:30 – 15:45	Alexander Zenchuk *Probabilistic perfect transfer of arbitrary multiqubit pure state*
15:45 – 16:00	Dimitar Mladenov *Towards description of the orbifold $\mathrm{SU(2)\times SU(2)}\backslash \mathrm{SU(4)}/\mathbb{T}^3$ as an entanglement space of two qubits*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Methods of quantum computing and quantum information processing

Room 310

16:20 – 16:35	Alexander Tsirulev *On randomization in variational quantum algorithms*
16:35 – 16:50	Georgii Bochkin *Connection of dipolar spin dynamics and multiple quantum dynamics of two-spin system with dephasing relaxation*
16:50 – 17:05	Airat Sitdikov *Spin Entanglement in the Deuteron within a Simple Algebraic Model*
17:05 – 17:20	Kirill Stepanenko *Two-parameter quantum hashing based on difference sets*
17:20 – 17:35	Виктор Юшанхай *DNA molecule as a quantum channel for the effective transfer of a photoinduced charge carrier*
17:35 – 17:50	Людмила Сюракшина *Transition to a many-body localization state in the disordered spin-1/2 Ising chain in the tensor network approach*

Tuesday 23/06

Numerical and analytical calculations in modern mathematical physics

Room 406

14:00 – 14:15	Данила Стариков *Numerical method with error control for designing thin-film waveguide Luneburg lens*
14:15 – 14:30	Kirill Zuev *Analytical solutions of the nonlinear fifth-order equation for waves in rotating fluid*
14:30 – 14:45	Pavel Afonin *Trajectory analysis for the Moyal equation*
14:45 – 15:00	Viktor Kadrov *On invariant manifolds of reversible difference schemes*
15:00 – 15:15	Stanislav Ladygin *Two-dimensional shallow water flows on adaptive moving triangular meshes*
15:15 – 15:30	Ivan Yakovlev *Numerical modeling of planetary wave propagation using overset and multiblock grids*
15:30 – 15:45	Olga Sidorova *Monte Carlo study of threshold effects on cross-talk in close-packed multi-detector scintillator arrays*
15:45 – 16:00	Alexander K. Motovilov *The a priori $\tan\Theta$ theorem and other estimates in the subspace perturbation theory*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Numerical and analytical calculations in modern mathematical physics

Room 406

16:20 – 16:35	Михаил Кременецкий *Analytic continuation of the T- and S-matrices to unphysical sheets in a multichannel extension of the Friedrichs-Faddeev model*
16:35 – 16:50	Agniia Borodina *Exact solutions of reaction–diffusion systems with polynomial nonlinearities via the logistic function method*
16:50 – 17:05	Dmitry S. Grudko *Feshbach resonances of the second order in a Friedrichs model*
17:05 – 17:20	Oleg Kovalev *Tensor Expansions in the Hermite Interpolation Polynomial Basis and Algorithmic Basis Reduction in Multidimensional Finite Element Method Schemes*
17:20 – 17:35	Ochbadrakh Chuluunbaatar *Minimization based approach and finite element method for solving the two-center Dirac equation*
17:35 – 17:50	Диана Волобуева *Fourth-order schemes for solving the time-dependent Schrödinger equation based on decomposition of the evolution operator*
17:50 – 18:05	Alexei Uteshev *Critical distances in some matrix robustness problems*
18:05 – 18:20	Anton Bazhin *The cubic spline method for solving two- and three-body Schrodinger Equation*

Wednesday 24/06

Plenary

MLIT Conference Hall

09:30 – 10:00	Hassan Safouhi *Analytical and Numerical Treatment of Molecular Integrals – The Case of the Three-Center Nuclear Attraction Integral*
10:00 – 10:30	Gheorghe Adam *An Overview of the Numerical Solution of Gauge Integrals*
10:30 – 11:00	Vladimir Korobov *Precision Physics with the Hydrogen Molecular Ion*

11:00 – 11:20 **Coffee**

MLIT Conference Hall

Plenary

MLIT Conference Hall

11:20 – 11:50	Vladimir Melezhik *Discrete-variable representation method in quantum physics*
11:50 – 12:20	Alexander Provorov *Применение компьютерных вычислений для исследования универсальных свойств (супер)алгебр Ли*
12:20 – 12:50	Irina Shoshina *Neuroscientific principles in designing hybrid systems*

15:00 – 19:30 **Boat and Picnic Party**

Thursday 25/06

Plenary

MLIT Conference Hall

09:30 – 10:00	Виктор Лахно *Quantum Informatics, Nanobioelectronics and Artificial Intellect*
10:00 – 10:30	Slavomir Hnatic *Software Innovations in MPD: Advanced Modeling, Algorithmic Developments, and Ecosystem Modernization in MpdRoot*
10:30 – 11:00	Vitaly Yermolchyk *Theory challenges for present and future colliders*

11:00 – 11:20 **Coffee**

MLIT Conference Hall

Plenary

MLIT Conference Hall

11:20 – 11:50	Alexander Bogdanov *Supercomputing without supercomputers*
11:50 – 12:20	Aleksandr Bugay *Mathematical Modelling in Radiation Biology*
12:20 – 12:50	Vladimir Ivanchenko *Progress of the Geant4 toolkit for LHC and NICA experiments*

13:00 – 14:00 **Lunch**

14:00 – 16:00	**Machine learning and big data analytics** *Room 420*	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Modern methods for data processing and analysis in Mega-science projects in HEP** *Room 310*	**Mathematical methods in life sciences** *Room 406*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

16:20 – 18:30	**Machine learning and big data analytics** *Room 420*	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Modern methods for data processing and analysis in Mega-science projects in HEP** *Room 310*	**Mathematical methods in life sciences** *Room 406*

Thursday 25/06

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

14:00 – 14:15	Иван Бедняков *Precision laser inclinometer. Method for determining vertical displacement of a surface from its tilt*
14:15 – 14:30	Maxim Bashashin *Floquet multipliers of ϕ^4 standing waves in a ball: comparison of JULIA and MATLAB implementations*
14:30 – 14:45	Robert Yamaleev *Derivation Weierstrass elliptic equation within Appell sequences of mass-shell polynomials and its application in relativistic kinematics*
14:45 – 15:00	
15:00 – 15:15	Павел Акишин *The application of the computational domain symmetry in the magnetostatics problem integral approach based on a linear approximation of magnetization*
15:15 – 15:30	Владимир Корняк *Gauge Averaging and Quantum Indeterminism: A Finite-Field Model*
15:30 – 15:45	Gregory Shipunov *On the Calculation of Feynman Integrals via Neural Network Approximation of Antiderivatives*
15:45 – 16:00	Мирослав Ильяш *Python driven Atomistic Simulation Environment modeling of adsorption based on interatomic potentials*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

16:20 – 16:35	Nikita Tarasov *Numerical study of the flow around a descent spacecraft taking into account radiative heat transfer*
16:35 – 16:50	Georgii Ageev *Numerical study of purging modes of the drift chamber of the TREK detector*
16:50 – 17:05	Ján Buša *Analytical solution of a fourth-order algebraic equation obtained within the framework of modeling the Brownian motion of particles*
17:05 – 17:20	Nikita Kalinichev *Modeling granule processing in a rotary tumbling machine*
17:20 – 17:35	Mikhail Chernyshov *Numerical solution of elliptic boundary value problems using edge-based approximation*
17:35 – 17:50	Ivan Safonov *Molecular Dynamics Modeling of Ni and Cu Nanocluster Interaction with a Metal Substrate*
17:50 – 18:05	Aleksandr Makarenko *Calculation of effective response of ring metamaterials in a rectangular waveguide*
18:05 – 18:20	Daniil Kolotinskii *GPU-Accelerated Particle-in-Cell Simulation of Thermo-Penning Discharges*

Thursday 25/06

Mathematical methods in life sciences

Room 406

14:00 – 14:15	Batmunkh Munkhbaatar *Computation of Structural Chromosome Aberrations in Human Blood after Irradiation with Therapeutic Proton Beams*
14:15 – 14:30	Nadezhda Fialko *Holstein model of charge transfer taking into account the transition between strands of DNA duplex*
14:30 – 14:45	Sergey Shirmovsky *Quantum entanglement processes in the DNA - mRNA system*
14:45 – 15:00	Эрмухаммад Душанов *Кинетическая модель механизмов НГСК и МГСК в клетках млекопитающих и человека*
15:00 – 15:15	Matvey Vologzhin *Comparative Analysis of Ionisation Cluster Size Distributions in Sub-cellular Structures using Geant4-DNA*
15:15 – 15:30	Anastasiya Gutsu *Mathematical Modeling of Albumin Filtration in the Glomerular Capillary of the Human Nephron*
15:30 – 15:45	
15:45 – 16:00	Yulia P. Sych *Stratification of thyroid nodules by Eu-TIRADS categories using transfer learning of convolutional neural networks*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Mathematical methods in life sciences

Room 406

16:20 – 16:35	Alexander Kryanev *Multifactorial mathematical model for selecting optimal ventilation flow values when connecting a patient to an artificial lung ventilation device*
16:35 – 16:50	Houchn Zhou *Neural activity and pattern recognition modeling based on the electrical activity of neurons in the basal ganglia of Parkinson's disease patients*
16:50 – 17:05	Elizaveta Dronova *Photochemical bleaching kinetics of archaerhodopsin-3 reveal bacterioruberin-dependent stabilization*
17:05 – 17:20	Daria Kuklina, Daria Kuklina, Yury Ryzhykau *Multiscale modeling of inactivated actin: from apo-monomer dynamics to solution-dependent oligomerization*
17:20 – 17:35	Sergey Poluyan *Using Path Sampling to Model Binding Kinetics in the Barnase-Barstar System*
17:35 – 17:50	Georgii Khaziev, Sofia Mankevich *Algorithm for detecting palindromes in RNA*
17:50 – 18:05	Sergey Samarin *Automated system for monitoring the phytosanitary state of vineyards using UAVs and computer vision algorithms*

Thursday 25/06

Machine learning and big data analytics

Room 420

14:00 – 14:15	
14:15 – 14:30	Mikhail Saakyan *Application of machine learning to the problem of toroidal plasma control*
14:30 – 14:45	Виктория Кисеева *Interpretability Study of Transformer-Based PID Models in the T2K Super Fine-Grained Detector*
14:45 – 15:00	Mariia Khvostova *Machine Learning Approaches for Calibration of Low-Cost PM2.5 Sensors: From Linear Regression to Quantum Models*
15:00 – 15:15	Hakizimana Evelyne *Interpretable Kolmogorov-Arnold Network (KAN) Architecture for Real-Time DDoS Detection in IoT Environments*
15:15 – 15:30	Dmitriy Divakov, Enoel Arrokho *Glia-to-neuron ratio estimation from histological images using machine learning*
15:30 – 15:45	Stanislav Kim *Machine Learning to detect collisions leading to the formation of a diatomic pair*
15:45 – 16:00	Konstantin Lukyanov *Improving an AI Assistant in a Web Application for Fitting Experimental Data Using Retrieval-Augmented Generation and Hyperparameter Optimization*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Machine learning and big data analytics

Room 420

16:20 – 16:35	Nikita Ilin *Methods of orchestration of non-deterministic tasks in analytical workflows: a hybrid of static graphs and agent subgraphs, stop policies and observability*
16:35 – 16:50	Дарья Зрелова *Выявление устойчивых трендов и редких тем в патентных данных на основе консенсуса трех принципиально разных методов и семантической унификации*
16:50 – 17:05	Anastasia Novitskaya *Machine learning approaches to quality assessment in automated recruitment systems*
17:05 – 17:20	Maxim Nikishin *DU-net architecture for geological inversion with variability in data recording system*
17:20 – 17:35	Natalia Kizhaeva *Application of AI agents for particle accelerator modeling*
17:35 – 17:50	Анна Ильина *Сравнительный анализ методов объединения семантических моделей в задаче сопоставления вакансий рынка труда и образовательных компетенций*
17:50 – 18:05	Tatiana Korenkova *Multi-Agent Architecture for Intelligent Search in a Scientific and Technical Knowledge Base*
18:05 – 18:20	Alena Gushina *Development of a software module for identifying the equations of motion of agents in a multi-agent system using physically-based AI tools*

Thursday 25/06

Modern methods for data processing and analysis in Mega-science projects in HEP

Room 310

14:00 – 14:15	Andrey Budnikov *Kubernetes-based online TPC data processing and monitoring for NICA/MPD*
14:15 – 14:30	Aleksei Didorenko *Track Reconstruction in SPD Timeslices Using Graph Neural Networks with Contrastive Learning*
14:30 – 14:45	Savelii Omelianchuk *Graph Attention Neural Network for Clustering Particle Tracks by Events in the SPD experiment*
14:45 – 15:00	Vladimir Papoyan *PIdML: ML-Based Particle Identification in MpdRoot*
15:00 – 15:15	Mihai-Octavian Dima *Tracklet aided determination of t0 in Straw Trackers*
15:15 – 15:30	Dmitry Baranov *Generative approach to charged cluster simulation in the GEM detector of the BM@N experiment*
15:30 – 15:45	Аркадий Тараненко *Full-scale simulation of the MPD experimental setup and data analysis techniques*
15:45 – 16:00	Maria Dima *Fast Weighted-DOCA Seeding for Primary Vertex Linearization in SPD*

16:00 – 16:20 **Coffee**

MLIT Conference Hall

Modern methods for data processing and analysis in Mega-science projects in HEP

Room 310

16:20 – 16:35	Vadzim Haurysh *D--, D_{S}--resonances electroweak characteristics in a relativistic quark model employing analytical computing systems calculation*
16:35 – 16:50	Евгений Осетров *On the Log-Normal Law of Ionization Energy Loss in the TPC Detector of the MPD/NICA Experiment*
16:50 – 17:05	Sergei Merts *Energy Loss Reconstruction Analysis in the BM@N Experiment*
17:05 – 17:20	Игорь Полев *Algorithm of geometry alignment of the BM@N detectors*
17:20 – 17:35	Peter Parfenov *Framework for realistic flow measurements and centrality determination in MPD at NICA*
17:35 – 17:50	Аида Галоян *Simulation of elastic and inelastic deuteron-deuteron interactions*
17:50 – 18:05	Владимир Ужинский *HEPWEB2: A Web Platform for Cross-Section Calculations and Testing of Monte Carlo Generators in High-Energy Physics*
18:05 – 18:20	Marina Kozhevnikova *Modelling of light nuclei and hypernuclei production in heavy-ion collisions at NICA energies with use of generator THESEUS based on 3-fluid dynamics*
18:20 – 18:35	Андрей Бернгардт *New Geant4 internal cross section data base*

Friday 26/06

09:00 – 11:00	**Mathematical methods and tools for modeling complex physical systems** *MLIT Conference Hall*	**Modern methods for data processing and analysis in Mega-science projects in HEP** *Room 420*	**Methods of quantum computing and quantum information processing** *Room 310*	**Mathematical methods in life sciences** *Room 406*
11:00 – 11:30	**Coffee** *MLIT Conference Hall*			
11:30 – 12:30	**Closing** *MLIT Conference Hall*			

Friday 26/06

Mathematical methods and tools for modeling complex physical systems

MLIT Conference Hall

09:00 – 09:15	Majed Abdel Ghani *Theoretical modelling of resonance and locking in anomalous Josephson junctions*
09:15 – 09:30	Ирина Брусилова *Modeling of a Josephson junction with a second harmonic in the current-phase relation*
09:30 – 09:45	Georgii Kalagov *FRG study of the Aharony fixed point in dipolar magnets*
09:45 – 10:00	Andrei Ovsiannikov *Field-Theoretic Approach to Helical MHD Turbulence and Large-Scale Dynamo Formati*
10:00 – 10:15	Татьяна Михайлова *Isotopic scaling as a probe of temperature in the heavy-ion fragmentation reaction*
10:15 – 10:30	Igor V. Anikin *Methods of Non-integral Geometry for the Image Reconstruction Problem*
10:30 – 10:45	Anastasia Anikina *On numerical singularities of computational scheme in the reconstruction problem*
10:45 – 11:00	Adiba Rahmonova *Simulation of Photon Detector Based on a Long Josephson Junction*

11:00 – 11:30 **Coffee**

MLIT Conference Hall

11:30 – 12:30 **Closing**

MLIT Conference Hall

Mathematical methods in life sciences

Room 406

09:00 – 09:15	Daria Kuklina, Daria Kuklina, Yury Ryzhykau *Stoichiometric constraints for reducing non-uniqueness in SAXS modeling of detergent-solubilized membrane proteins*
09:15 – 09:30	Татевик Бежанян *Development of the "MOSTLIT" Web Service for Radiation-Induced Foci Analysis*
09:30 – 09:45	Nikolai Ustinov *Investigation of the radiation-induced effects on melanoma growth using the spatially distributed phenomenological mathematical model with immune control*
09:45 – 10:00	Сара Шадмехри *Unsupervised Behavioral Clustering of Rodent Trajectories in the Morris Water Maze*
10:00 – 10:15	Alexey Chubov *Computer Vision (CV) Algorithms and Deep Learning Models for Radiobiological Research Experimental Data Analysis Using the «Open Field» Behavioral Test System*

11:00 – 11:30 **Coffee**

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11:30 – 12:30 **Closing**

MLIT Conference Hall

Friday 26/06

Modern methods for data processing and analysis in Mega-science projects in HEP

Room 420

09:00 – 09:15	Юрий Корсаков *A Reinterpretation of the LHC Results on the Search for Dark Matter in Various Models with an Extended Higgs Sector*
09:15 – 09:30	Alexander Bychkov *Capabilities of measuring electron drift velocity for MPD TPC*
09:30 – 09:45	Татьяна Соловьева *Distributed data Analysis in High Energy Physics: integration of ROOT RDataFrame and Apache Spark*
09:45 – 10:00	Зариф Шарипов *Geometric Alignment Method for GEM Detectors of the BM@N Experiment*
10:00 – 10:15	Alexander Kryukov *A method for multimodal analysis of TAIGA experiment data using essential features extracted by autoencoders*
10:15 – 10:30	Mohamed Gaber *Evaluation of Multi Deep Neural Network Architectures for Neutron Spectrum Unfolding Approaches from Bonner Sphere Systems*

11:00 – 11:30 **Coffee**

MLIT Conference Hall

11:30 – 12:30 **Closing**

MLIT Conference Hall

Methods of quantum computing and quantum information processing

Room 310

09:00 – 09:15	Ilia Lazarev *Dissipative dynamics of multiple-quantum NMR coherences in an ensemble of hundreds of equivalent spin-1/2 nuclei*
09:15 – 09:30	Ksenia Verkhovtseva *On Implementation of Variational Quantum algorithm on the HybriLIT Quantum Testbed applied to the Ising Model with a Transverse Field*
09:30 – 09:45	Yauheni Talochka *QTensorNet: A High-Performance Tensor-Network-Based Toolkit for Many-Body Quantum Simulations*
09:45 – 10:00	Константин Петрищев *Supercomputer simulation of quantum walks to solve complex computational problems*
10:00 – 10:15	Vahagn Abgaryan *Propagation of Two-Photon Zernike States in Atmospheric Turbulence*
10:15 – 10:30	Alla Bogolubskaya *Implementing 6D Parameterized 2-Qubit Gates on Bauman Octillion Platform*
10:30 – 10:45	

11:00 – 11:30 **Coffee**

MLIT Conference Hall

11:30 – 12:30 **Closing**

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