Session Program

22–26 Jun 2026



MATHEMATICAL MODELING AND COMPUTATIONAL PHYSICS 2026

Mathematical Modeling and Computational Physics - MMCP'2026

Numerical and analytical calculations in modern mathematical physics

Monday 22 June

14:00

Numerical and analytical calculations in modern mathematical physics

Session | **Location:** MLIT, Room 406

14:00–14:15 **Modelling S-parameters in PCBs with the method of moments and a scattering algorithm**

Speaker
Polina V. Zheglova

14:15–14:30 **Relaxation Method Based on Energy Landscape Information in the Vicinity of the Global Minimum of the Classical Thomson Problem on a Disk**

Speaker
Georgiy Lavrov

14:45–15:00 **A numerical study of the free-fall three-body problem with Pythagorean masses**

Speaker
Mr Zarif Sharipov

15:00–15:15 **Pion off-shell form factors**

Speaker
Mikhail Slautin

15:15–15:30 **A Lower Bound on the Rank of Integer Matrices with Peculiar Leading Diagonal**

Speakers
Alexandr Seliverstov, Ksaverii Malyshev

15:30–15:45 **Spinor Field Dark Energy in FLRW Space-time: Theory and Observation**

Speaker
Prof. Bijan Saha

15:45–16:00 **Inelastic backscattering of high-energy electrons from He: Calculational details and approaches**

Speaker
Yuri Popov

16:00

16:20

Numerical and analytical calculations in modern mathematical physics

Session | **Location:** MLIT, Room 406

16:20–16:35 **High-performance computer simulation of complexation of fullerenes and fullerenols with the peptide dendrimer Lys2Gly**

Speaker
Oleg Shavykin

16:50–17:05 **Equation of State in the Directed Percolation Universality Class: Numerical Three-Loop Analysis**

Speaker
Lukas Mizisin

17:05–17:20
Multiple Right-Hand Sides and Multi-GPU CUDA Implementations of the Tridiagonal Partition Method

Speaker
Ms Milena Veneva

17:20–17:35
A Modified Chebyshev Collocation Method for Solving Two-Point Problems for General Second-Order Linear ODEs

Speaker
Константин Ловецкий

17:35–17:50 **Continuous-corpuscular schemes of computational experiment**

Speaker
Vasily Khramushin

17:50–18:05
Compensation constant of magnetocrystalline anisotropy K0 as a marker of spin-reorientation phase transition in a tetragonal ferromagnetic crystal.

Speaker
Anton Tsvetkov

18:20

Tuesday 23 June

14:00

Numerical and analytical calculations in modern mathematical physics

Session | **Location:** MLIT, Room 406

14:00–14:15 **Numerical method with error control for designing thin-film waveguide Luneburg lens**

Speaker
Данила Стариков

14:15–14:30 **Analytical solutions of the nonlinear fifth-order equation for waves in rotating fluid**

Speaker
Kirill Zuev

14:30–14:45 **Trajectory analysis for the Moyal equation**

Speaker
Pavel Afonin

14:45–15:00 **On invariant manifolds of reversible difference schemes**

Speaker
Viktor Kadrov

15:00–15:15 **Two-dimensional shallow water flows on adaptive moving triangular meshes**

Speaker
Stanislav Ladygin

15:15–15:30 **Numerical modeling of planetary wave propagation using overset and multiblock grids**

Speaker
Ivan Yakovlev

15:30–15:45
Monte Carlo study of threshold effects on cross-talk in close-packed multi-detector scintillator arrays

Speaker
Olga Sidorova

15:45–16:00
The a priori $\tan\Theta$ theorem and other estimates in the subspace perturbation theory

Speaker
Alexander K. Motovilov

16:00

16:20

Numerical and analytical calculations in modern mathematical physics

Session | **Location:** MLIT, Room 406

16:20–16:35
Analytic continuation of the T- and S-matrices to unphysical sheets in a multichannel extension of the Friedrichs-Faddeev model

Speaker
Михаил Кременецкий

16:35–16:50
Exact solutions of reaction–diffusion systems with polynomial nonlinearities via the logistic function method

Speaker
Agniia Borodina

16:50–17:05 **Feshbach resonances of the second order in a Friedrichs model**

Speaker
Dmitry S. Grudko

17:05–17:20
Tensor Expansions in the Hermite Interpolation Polynomial Basis and Algorithmic Basis Reduction in Multidimensional Finite Element Method Schemes

Speaker
Oleg Kovalev

17:20–17:35
Minimization based approach and finite element method for solving the two-center Dirac equation

Speaker
Ochbadrakh Chuluunbaatar

17:35–17:50
Fourth-order schemes for solving the time-dependent Schrödinger equation based on decomposition of the evolution operator

Speaker
Диана Волобуева

17:50–18:05 **Critical distances in some matrix robustness problems**

Speaker
Alexei Uteshev

18:05–18:20 **The cubic spline method for solving two- and three-body Schrodinger Equation**

Speaker
Anton Bazhin

18:35