

The Talk Schedule

Wednesday, October 11

08:30 – 09:00 Registration/Welcome coffee

09:00 – 09:30 Opening ceremony

Session I. Numerical Modeling in Physics of Plasma

09:30 – 10:00 **Brushlinskii K.V., Stepin E.V.** On stability of equilibrium plasma configurations in magnetic traps (**INVITED TALK**)

10:00 – 10:30 **Gavrikov M.B., Taiurskii A.A.** Investigation of plasma ionization oscillations in SPT (**INVITED TALK**)

10:30 – 11:00 Conference Photo & Coffee Break

Session II. Numerical Modeling in Physics of Plasma

11:00 – 11:30 **Dudnikova G.I., Liseykina T.V., Vshivkov K.V.** Numerical simulation of the diamagnetic regime of an open magnetic trap (**INVITED TALK**)

11:30 – 12:00 **Belyaeva Yu.O.** Stationary solutions of the Vlasov-Poisson system in a finite cylinder (**INVITED TALK**)

12:00 – 12:30 **Chernoshtanov I.S., Soloviev A.A., Vshivkov V.A., Vshivkova L.V.** Fast simulation of collisions in the particle-in-cell method for ions of different types (**INVITED TALK**)

12:30 – 13:00 **Boronina M., Chernykh I., Genrikh E., Vshivkov K.** Three-dimensional model for numerical simulation of beam-plasma dynamics in open magnetic trap

13:00 – 15:00 Lunch

Session III. Numerical Modeling in Physics of Plasma

15:00 – 15:30 **Kozlov A.N.** Research of the ionizing gas flows with longitudinal magnetic field in the plasma accelerator channel (**INVITED TALK**)

15:30 – 16:00 **Liseykina T.V., Vshivkov V.A., Kholiyarov U.A.** An efficient algorithm for calculating the magnetic field in a cylindrical plasma trap (**INVITED TALK**)

16:00 – 16:30 **Efimova A., Sudakov A., Chernykh I.** Numerical model of diamagnetic plasma confinement in a gas-dynamic trap using a new method for solving the equations of motion

16:30 – 17:00 Discussion & Coffee Break

Session IV. Numerical Modeling in Physics of Plasma

17:00 – 17:30 **Vshivkov V.A., Dudnikova G.I., Vshivkova L.V., Voropaeva E.S.** Fully kinetic numerical model of plasma dynamics in an open magnetic trap (**INVITED TALK**)

17:30 – 18:00 **Oksogoeva I.P., Lazareva G.G.** Prediction of the Parameters of the Trap for Plasma Confinement in a Helical Magnetic Field (**INVITED TALK**)

18:00 – 18:30 **Kulikov I.M.** Using Adaptive Mesh Refinement Technique for Numerical Modeling of Relativistic Jets

18:30 Discussion

The Talk Schedule

Thursday, October 12

08:30 – 09:00 Registration/Welcome coffee

Session V. Numerical Methods for Hydrodynamics Equations

09:00 – 09:30 **Feodoritova O.B., Novikova N.D., Zhukov V.T.** A numerical study of the time integration solver for transient conjugate heat transfer in fluid-solid system (**INVITED TALK**)

09:30 – 10:00 **Lazareva G.G.** Effect of Temperature Distribution on the Calculation of the thermal current in the Mathematical Model of Pulsed Heating of a Tungsten Plate and a Thin Vapor Layer (**INVITED TALK**)

10:00 – 10:30 **Levina G.V.** A first application of the turbulent vortex dynamo theory for exact diagnosing the tropical cyclogenesis over the North Indian Ocean (**INVITED TALK**)

10:30 – 11:00 **Botchev M.A., Zhukov V.T.** Adaptive time step selection in monotone local iteration and exponential time integration of nonlinear heat conduction problems (**INVITED TALK**)

11:00 – 11:30 Discussion & Coffee Break

Session VI. Design of Algorithms in High Performance Computing

11:30 – 12:00 **Lazareva G.G., Olokhtonova M.S.** Calculation of the average ion velocity in a spiral magnetic open trap (**INVITED TALK**)

12:00 – 12:30 **Vedrukov P.E., Ivlev A.D., Linirov A.V., Meyerov I.B., Ivanchenko M.V.** Quantum state and process tomography for a single qubit on cloud quantum computers (**INVITED TALK**)

12:30 – 13:00 **Volokitin V., Vasiliev E., Kozinov E., Kustikova V., Linirov A., Rodimkov Yu., Sysoyev A., Meyerov I.** Improved vectorization of OpenCV algorithms for RISC-V CPUs (**INVITED TALK**)

13:00 – 15:00 Lunch

Session VII. Numerical Modeling in Astrophysics

15:00 – 15:30 **Rybakin B.P.** Protostellar cores formation for oblate molecular clouds (**INVITED TALK**)

15:30 – 16:00 **Lukin V.V., Shakura N.I., Postnov K.A.** Modelling of the L_1 point jet formation in binary star Her X1 (**INVITED TALK**)

16:00 – 16:30 **Kondratyev I.A., Moiseenko S.G., Bisnovatyi-Kogan G.S.** Magnetorotational supernova explosions: jets and violated mirror symmetry (**INVITED TALK**)

16:30 – 17:00 **Stoyanovskaya O.P., Youdina N.M., Turova (Baibulatova) G.D.** Dispersion and Group Analysis of Dusty Burgers Equations

17:00 – 17:30 **Vorobyov E.I., Kulikov I.M.** ngFEOSAD - Coarray-parallelized 3D numerical hydrodynamics code on nested meshes to study self-gravitating gas-dust protoplanetary disks (**INVITED ZOOM TALK**)

17:30 Workshop review talk & Discussion