

Program

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Please contact to the organizers if you see some mistakes and/or collisions with your own schedule.

August 17

Euler Institute, Pesochnaya nab. 10
The link to the Zoom channel of AMCM is in your [personal account](#)

09:30 — 10:25	Registration, coffee
10:25 — 10:30	Opening the conference
10:30 — 11:00	Vakhit Shaidulin (Saint Petersburg State University) Comparison of D criteria and metrics in the space of Keplerian orbits
11:00 — 11:30	Denis Mikryukov (Saint Petersburg State University) Analytic bounds of the distance between two elliptic orbits
11:40 — 12:00	Coffee break
12:00 — 12:30	Nikita Petrov , Dmitriy Leonov, Vahit Shaidulin (Saint-Petersburg State University mathematical and mechanical faculty) Set-theoretic distance and critical points of the surface distances on the example of asteroid 2102 Tantalus
12:30 — 13:00	Alexander Melnikov (Pulkovo Observatory, Institute of Applied Astronomy) Using orbital dynamics stability criteria in the search for exomoons
13:00 — 13:30	Alexey Rosaev (Centre of Integrable System, Yaroslavl State University) The empiric integral of motion in 3:2 resonance
13:30 — 15:00	Lunch

15:00 — 15:30	Sergey Gutnik (Moscow State Institute of International Relations (MGIMO University)) Stability of periodic oscillations of a two-body gravity gradient system in the plane of an elliptic orbit
15:30 — 16:00	Evgeny Smirnov , Ivana Milić Žitnik (Belgrade Astronomical Observatory) A numerical survey of von Zeipel–Lidov–Kozai resonances and their coupling with mean-motion resonances in the trans-Neptunian region and the inner Solar System
16:00 — 16:20	Coffee break
16:20 — 16:50	Maksim Dromashko (Saint Petersburg State University) Figure-eight orbit with unequal masses in the planar three-body problem
16:50 — 17:20	Victor Krym (St. Petersburg State University) Cosmology on the extended spacetime
17:20 — 17:50	Tatiana Sannikova (Crimean Astrophysical Observatory of the Russian Academy of Sciences) Using Apparent Motion Parameters as Features for Machine Learning-based Tracklet Association: An Analysis of Feature Discriminative Power
17:50 — 18:20	Andrei Pranevich , Mikalai Skabelka (Yanka Kupala State University of Grodno) The Jacobi - Poisson Method of Building First integrals by Integral Manifolds for Generalized Hamiltonian Systems
18:30 — 21:00	Welcome party

August 18

10:00 — 10:30	Alexander Bruno , Alexander Batkhin (Keldysh Institute of Applied Mathematics of RAS) Bifurcations of Periodic Solutions to Hamiltonian System with Symmetries
10:30 — 11:00	Alexander Batkhin (Keldysh Institute of Applied Mathematics of RAS) Families of asymmetric periodic solutions to the Hill 3-body problem
11:00 — 11:30	Coffee break

11:30 — 12:00	Alexander Dobroslavskiy (Moscow Aviation Institute) On Refining the Applicability Conditions of the Power Series in the Circular Restricted Three-Body Problem
12:00 — 12:30	Lei Liu (Shandong University) Birkhoff conjecture and Finite energy foliations in Hill's Lunar problem
12:30 — 13:00	Vladimir Titov (Saint-Petersburg State University) Regularized figure-eight orbit
13:00 — 13:30	Alexey Ivanyukhin , Vyacheslav Ivashkin (Research Institute of Applied Mechanics and Electrodynamics of Moscow Aviation institute) The Euler-Lambert problem of determining the orbit of the body based on its two positions
13:30 — 15:00	Lunch
15:00 — 15:30	Alexey Ivanyukhin (Research Institute of Applied Mechanics and Electrodynamics of Moscow Aviation institute) Low-Thrust Inclination Control on Elliptical Orbits with Constant Orbital Period
15:30 — 16:00	Tatiana Salnikova (Lomonosov Moscow State University) Three-axis rigid body in the field of gyroscopic forces for classical problems of celestial mechanics
16:00 — 16:30	Coffee break
16:30 — 17:00	Alena Dergileva , Viktor Popadyev (PLC Roskadastr) On the solution of the special BVP related to a full set of geodetic and gravimetric data
17:00 — 17:30	Vladimir Martinusi (Technion -- Israel Institute of Technology) A Covariant Poisson-Bracket Form of the Levi-Civita Separability Condition
17:30 — 18:00	Pablo Cincotta , Claudia Giordano (University of La Plata) Diffusion along the Chaotic Layer of a Single Resonance: Assessing Chirikov's Theory

August 19

10:00 — 10:30	Elena Polyakhova , Vladimir Korolev (СПбГУ, Санкт-Петербург, Россия) The history of the birth of cosmic dynamics at St. Petersburg State University
10:30 — 11:00	Olga Starinova (Samara University) Artificial periodic orbits of a solar sail spacecraft in Moon vicinity
11:00 — 11:30	Elena Polyakhova , Vladimir Titov (Saint-Petersburg State University) Analytical Problems of Sailing in Space for Solar System Research
11:30 — 12:00	coffee break
12:00 — 12:30	Denis Perepukhov (Keldysh Institute of Applied Mathematics of the Russian Academy of Sciences) Sundiving solar sails for fast space exploration
12:30 — 13:00	Yahyo Muxtarov (Samarkand state university named after Sharaf Rashidov) Emergence of Deterministic Chaos in Mechanical Systems Subjected to Small Periodic External Non-Autonomous and Parametric Self-Organizing Bifurcation Perturbations
13:00 — 14:30	Lunch
14:30 — 15:00	Ksaverii Malyshev (Skobeltsyn Institute of Nuclear Physics, Patrice Lumumba Peoples' Friendship University of Russia) On the integration of Hamiltonian systems using Liouville's theorem in CAS
15:00 — 15:30	Mikhail Malykh (Peoples' Friendship University of Russia named after Patrice Lumumba) On the behavior of orbits of Vanhaecke system on integral surfaces
15:30 — 16:00	Igor Nikiforov (Saint Petersburg State University) Velocities-distance optimization of the rotation model for a Galactic ensemble of massive young stars with masers: effects of parallax reduction
16:00 — 16:30	Coffee break
16:30 — 17:00	Tamara Vinogradova (Institute of Applied Astronomy of the Russian Academy of Sciences) Secular Perturbations of Orbital Elements of Asteroids in the Thule Group

17:00 — 17:30	Aleksei Lozovoi , Konstantin Orekhov, Konstantin Petrov, Alexey Tikhonov, Andrey Yakovlev (Saint Petersburg State University) On the analysis of the operation of a double electrostatic layer in the ion sail mode
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17:30 — 18:00	Sergey Shorokhov (Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia) On classical and modern approaches to the inverse problem of celestial mechanics
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August 20

09:30 — 10:00	Shevchenko Ivan (Saint Petersburg State University, Institute of Applied Astronomy of the Russian Academy of Sciences) The Batrakov effect
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10:00 — 10:30	Vladislav Sidorenko (Keldysh Institute of Applied Mathematics RAS) Professor M.L. Lidov: Per Aspera ad Astra (to the 100th Anniversary)
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10:30 — 11:00	Vladislav Topinskiy (Saint Petersburg State University) Neural network simulating the Lomb-Scargle periodogram
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11:00 — 11:30	Roman Baluev (Saint Petersburg State University) On the resonant multi-planet system TOI-1408
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11:30 — 12:00	Coffee break
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12:00 — 12:30	Sergey Kudryavtsev (Sternberg Astronomical Institute, M.V. Lomonosov Moscow State University) Total Effect of the Earth's Gravitational Field on the Tide-Generating Potential
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12:30 — 13:00	Andrei Fedotov (Special Astrophysical Observatory of the Russian Academy of Science) Exoplanet WASP-76 b secondary eclipse timing deviation possibly indicating the existence of additional unseen components
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13:00 — 13:30	Pavel Ivanov (PN Lebedev Physical Institute) A theory of secular orbital evolution of a binary black hole in a non-spherical stellar cluster
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13:30 — 15:00	Lunch
15:00 — 18:30	Excursion
19:00 — 22:00	Conference dinner

August 21

10:00 — 10:40	Vladislav Sidorenko (Keldysh Institute of Applied Mathematics RAS) Dynamics of entering and leaving the quasi-satellite regime among the known Earth co-orbitals
10:40 — 11:10	Ivan Hristov (Sofia University "St. Kliment Ohridski") Stable periodic orbits of the equal-mass zero angular momentum three-body problem
11:10 — 11:30	Coffee break
11:30 — 12:00	Alexandre Petrov (Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (IPMech RAS)) On the forms of equilibrium of rotating inhomogeneous liquid masses under the influence of gravity and shell elasticity
12:00 — 12:30	Marat Yumagulov (Уфимский университет науки и технологий) Hamiltonian structures and normal forms of dynamic systems with periodic perturbations
12:30 — 13:00	Stepan Samulevich (Saint-Petersburg State Electrotechnical University) Modified Collocation Methods for Functional Differential Equations
13:00 — 14:30	Lunch
14:30 — 15:00	Naumov K.A. , Lebedeva M.A., Iakovlev V.A., Vasilyev M.V., Yagudina E.I., Zotov K.A. (The Institute of Applied Astronomy of the Russian Academy of Sciences) The system of Ephemeris Research in Astronomy ERA, Ephemeris of Planets and the Moon EPM: current status and future plans

15:00 — 15:30	Alexander Melnikov , Maxim Khovritchev, Igor Izmailov (Pulkovo Observatory, Institute of Applied Astronomy) Search for invisible satellites of visual binary stars by studying the stability of their long-term orbital dynamics
15:30 — 16:00	Coffee break
16:00 — 16:30	Mahdi Reza Akhloumadi , Екатерина Ерошенко (Moscow institute of physics and technology) Nonlinear Formation Flying Control of Small Spacecraft in the Vicinity of Asteroid 4179 Toutatis
16:30 — 17:00	Galina Kuteeva (Saint-Petersburg State University) Memories of Professor L. Sokolov
17:00 — 17:30	Eduard Kuznetsov (Ural Federal University) Selecting orbits for safe storage of space debris in the GNSS region
17:30 — 19:00	Round-table discussion. Closing of the conference. Coffee and snacks.