International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

Sirius, Sochi (September 19-23, 2022)

Schedule of talks

	19.09	20.09	21.09	22.09	23.09
9.00-9.50	**Registration**				
9.50-10.00	**Opening remarks**				
10.00-10.40	Treschev (online)	Mogavero (online)	Albouy (online)	Artemyev (online)	Terracini (online)
10.40-11.20	Celletti (online)	Bolotin	Kudryavtseva	Sidorenko	Zobova
11.20-11.35	**Technical break**	**Technical break**	**Technical break**	**Technical break**	**Technical break**
11.35-12.15	Maciejewski (online)	Przbylska (online)	Shevchenko (online)	Kol (online)	Libert (online)
12.15-12.55	Ivanov PB	Salnikova (30 мин)	**Lunch**	Markeev	Perets (online)
12.55-14.30	**Lunch**	**Lunch**		**Lunch**	**Lunch**
14.30-15.00	Bardin	Krasilnikov		Sokolov	
15.00-15.30	Polekhin	Sukhov		Belichenko	
15.30-16.00	Batkhin	Kuleshov		Pivovarova	
16.00-16.30	**Welcoming party**	Cincotta (online, 40 min)		**Coffee break**	
16.30-17.00		**Coffee break**		Savin	
17.00-17.30		**Poster session**		Maksimov	
17.30-18.00				Ivanov AP (online)	
18.00-18.30				**Conference dinner**	
18.30-19.00					

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

Conference sessions will be held at the Omega Sirius Hotel, Sochi Conference Hall, 2nd floor.

1

International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

Scientific program

September 19

09.00-09.50	**Registration**
	Morning session
09.50-10.00	**Opening ceremony**
10.00-10.40	**D.V. Treschev: Linearization by means of a functional parameter (online)**
10.40-11.20	**A. Celletti: Normal forms: a powerful technique to study the Earth's space debris dynamics (online)**
11.20-11.35	*Technical break*
11.35-12.15	**A.J. Maciejewski, M. Przybylska, N. Combot: Non-integrability of the three body problem (online)**
12.15-12.55	**P.B. Ivanov: Some mathematical aspects of the theory of dynamic tides**
12.55-14.30	*Lunch*
	Afternoon session
14.30-15.00	**B.S. Bardin: On Local Variables in a Neighborhood of Periodic Solutions of an Autonomous Hamiltonian System**
15.00-15.30	**I. Polekhin: On the covering of a Hill's region by solutions in systems with gyroscopic forces**
15.30-16.00	**A.B. Batkhin, N.V. Batkhina: Statistics of distribution of families of periodic solutions to the Hill problem**
16.00-16.30	*Welcoming party*

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

Scientific program

September 20

Morning session

10.00-10.40	**F. Mogavero: Long-term dynamics of the inner planets in the Solar System: chaos and stability (online)**
10.40-11.20	**S.V. Bolotin: Dynamics near the homoclinic set in slow-fast Hamiltonian systems**
11.20-11.35	*Technical break*
11.35-12.15	**M. Przybylska, A.J. Maciejewski: Dynamics of dipole in a stationary non-homogeneous electromagnetic field (online)**
12.15-12.45	**T.V. Salnikova, E.I. Kugushev: Existence of extremals of the action functional in celestial mechanics**
12.45-14.30	*Lunch*
	Afternoon session
14.30-15.00	**P.S. Krasilnikov: On the exo-planet precession under torqes due to three celestial bodies with the evolution of the satellite's orbit**
15.00-15.30	**E.A. Sukhov: On numerical continuation, stability and bifurcation analysis of periodic motions of autonomous Hamiltonian systems**
15.30-16.00	**A.S. Kuleshov, M.M. Gadzhiev: The problem of motion of a rigid body with a fixed point in a flow of particles**
16.00-16.40	**P. Cincotta: Estimation of instability times in Hamiltonian system: a Shannon entropy approach (online)**
16.40-17.00	*Coffee break*
17.00-18.00	*Poster session*

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

<div align="center">

International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

Scientific program

</div>

September 21

Morning session

10.00-10.40	**A. Albouy: Early theorems in dynamics and abstraction from Euclidean geometry (online)**
10.40-11.20	**E.A. Kudryavtseva: Superintegrable Bertrand mechanical systems**
11.20-11.35	*Technical break*
11.35-12.15	**I.I. Shevchenko: Resonant exoplanet dynamics and planetary chaotic zones (online)**
12.15-14.30	*Lunch*

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

Scientific program

September 22

Morning session

10.00-10.40	**A. Artemyev**, A. Neishtadt, A. Vasiliev: Nonlinear resonances in Hamiltonian systems and kinetic equations (online)
10.40-11.20	**V.V. Sidorenko: Adiabatic approximation in dynamical studies of exoplanetary systems in mean-motion resonance**
11.20-11.35	*Technical break*
11.35-12.15	**B. Kol: A flux-based statistical theory for the three-body problem (online)**
12.15-12.55	**A.P. Markeev: On the metric stability and the Nekhoroshev estimate of the velocity of Arnold diffusion in a special case of the three-body problem**
12.55-14.30	*Lunch*
	Afternoon session
14.30-15.00	**S.V. Sokolov**, P.E. Ryabov: Singularities of a Lagrange top with a vibrating suspension point
15.00-15.30	**M.V. Belichenko: On the stability of the equilibrium positions of a rigid body with a suspension point vibrating in three-dimensional space**
15.30-16.00	**E. Pivovarova**, A. Kilin: Dynamics of a Chaplygin sphere on a vibrating plane
16.00-16.30	*Coffee break*
16.30-17.00	**A.A. Savin: Analysis of the orbital stability of plane periodic motions of a heavy rigid body with a fixed point in the Hess case**
17.00-17.30	**B. Maksimov: Analysis of the orbital stability of periodic pendulum oscillations of a heavy rigid body with a fixed point under the Goryachev-Chaplygin condition**
17.30-18.00	**A.P. Ivanov: Attitude control of gyrostat without energy supply (online)**
18.00-19.00	*Conference dinner*

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

Scientific program

September 23

Morning session

10.00-10.40	**S. Terracini: An example of billiard in Celestial Mechanics (online)**
10.40-11.20	**A.A. Zobova: Stability loss delay and shimmy for accelerated motion of a Castor wheel**
11.20-11.35	***Technical break***
11.35-12.15	**A.-S. Libert: Dynamical constraints on extrasolar systems (online)**
12.15-12.55	**H. Perets:The three-body problem and its implications: from secular to chaotic evolution (online)**
12.55-14.30	***Lunch***

Conference schedule uses Sochi local time. It coincides with Moscow time and 1 hour ahead of CEST (Central European Summer Time).

International conference

DYNAMICAL SYSTEMS OF CLASSICAL AND CELESTIAL MECHANICS

September 19-23, Sirius (Sochi, Russia)

POSTER SESSION

1. **Afonin, K.: Entropy of a unitary operator on L^2(T^n)**

2. **Agureeva, E.: Bifurcation curves of the Zhukovsky system in Pseudo-Euclidean space**

3. **Akpan, D.: Examples and singularities of two-dimensional Nijenhuis operators**

4. **Artemova, E., Kilin, A.: Nonlinear stability of regular vortex N-gons in a Bose – Einstein condensate**

5. **Biktimirov, S.: On the satellite formation flying mission to display graphics from space**

6. **Chernyshev, A.: Entropy of unitary operator on C^J**

7. **Degtyareva, S.: Classification of three-dimensional linear Nijenhuis operators with functionally independent invariants**

8. **Elfimov, N.: On the linearizability problem in a Hamiltonian system with one degree of freedom**

9. **Fionov, A.: Integrable solutions for binary star systems with a planet**

10. **Kuznetsova, A.: Modeling of degenerate singularities of integrable Hamiltonian systems by billiard books**

11. **Lobzin, F.: Complete sets in bi-involution construction for singular points of Lie algebras**

12. **Onufrienko, M.: Typical rank-1 singularities of integrable systems**

13. **Palshin, G.: Bifurcation of two Liouville tori in one problem of vortex dynamics**

14. **Pestrikov, A.: Model of formation of non-spherical satellites of the planet**

15. **Pruss, G.: Dynamics of two vortices in a Bose-Einstein condensate**

16. **Shchegortsova, O.: Asymptotics for Gaussian beams of the Schrodinger equation with a delta potential**

17. **Zhikhareva, E.: Lie algebras with bases generating two-dimensional subalgebras**