

6th International Conference on Integrable Systems and Nonlinear Dynamics 22–26.09.2025

Conference Programme

All conference talks are scheduled in Moscow Time (GMT+3)

Duration of keynote talks: 35', duration of section talks: 20'.

Monday, 22.09.2025

	Registration / Opening
09:00–09:45	Conference Registration
09:45–10:00	IT company “Tensor”, Rector of the YarSU (in Russian)

	Morning session: Keynote talks
10:00–10:40	D. Treschev (in Russian)
10:40–11:15	V.V. Kozlov (in Russian)
11:15–11:45	Coffee break
11:45–12:20	S. Kashchenko “Dynamics of non-periodic chains with two-way couplings” (in Russian)
12:20–12:55	V. Buchstaber “Solutions of the Kadomtsev-Petviashvili equation in hyperelliptic sigma functions and Baker functions” (in Russian)
13:00–14:30	Lunch break

	Afternoon session: Keynote talks
14:30–15:05	S. Gonchenko “Homoclinic resonances in area-preserving maps, Poincaré problems and structures like “Saturn-ring” ((online)) (in Russian)
15:05–15:40	M. Pavlov “Two-dimensional geodesic integrable flows and non-polynomial first integrals with respect to momenta”
15:40–16:10	A. Bountis “Singularity analysis of chaos in nonlinear dynamical systems” ((online))
16:10–16:40	Coffee break

	Section talks
16:40–17:00	I. Kashchenko “Dynamics of the equation with impulse delayed feedback”
17:00–17:20	A. Sokolov “Non-linear Supersymmetry for Non-Hermitian Matrix Hamiltonians and its minimal realizations”
17:20–17:40	Alexey Kazakov “Cascades of Lorenz attractors near the first foliation tangency curve” ((online))
17:40–18:00	E. Karatetskaia “New Lorenz-type attractors of three-dimensional ODEs and maps” ((online))

Tuesday, 23.09.2025

	Morning session: Keynote talks
09:35–10:10	V. Sokolov “Novikov equations for commuting differential operators of orders 3,4,5”
10:10–10:45	S. Dobrokhotov “Asymptotics of orthogonal polynomials with respect to large numbers and some questions about the integrable Hamiltonian systems they generate”
10:45–11:20	D. Millionshchikov “Ricci nilsolitons, Einstein solvmanifolds and Lie algebra gradings”
11:20–11:50	Coffee break
11:50–12:25	A. Smirnov “The simplest solutions to the derivative nonlinear Schrödinger equation with integrable perturbation”
12:25–13:00	S. Bolotin “Billiards in celestial mechanics”
13:00–14:30	Lunch break

	Afternoon session: Section talks
14:30–14:50	E. Nikulin “On boundary layer solutions in the reaction-diffusion problem with a singularly perturbed nonlinear boundary condition of integral type”
14:50–15:10	A.O. Orlov “On the features of the solutions with boundary layers in the Tikhonov system of ODEs with advection terms”
15:10–15:30	M. Davydova “Numerical-asymptotic method for determining thermophysical characteristics of high-temperature fuel alloys and composites using simulation data”
15:30–15:50	N. Levashova “Stationarity of the front in the reaction-diffusion problem in the case of a piecewise-linear discontinuous source of modular type” (online)
15:50–16:10	B. Sharafutdinov “Numerical and asymptotic analysis of the solution of a model problem on the spread of tumor cells”
16:10–16:40	Coffee break
16:40–17:00	V. Volkov “Moving fronts in singularly perturbed reaction-advection-diffusion problems”
17:00–17:20	A. Makhmudov “Front formation in the reaction-diffusion problem with nonlinear diffusion”
17:20–17:40	M. Balakhnev “On some properties of the Schwartz-KdV equation”
17:40–18:00	D. Serow “Symbolic Anatomy of the Birkhoff Curve”

	18:00: Poster session
V. Alexeev	On uniqueness and stability of the limit cycle of Mackey–Glass equation
D. Bain	On implementation of numerical methods for discontinuous differential equations
E. Chunzhuk	Asymptotic analysis of the propagation of a two-dimensional front through the interface of the medium
D. Fedulov	Cubic-Quadratic Nonlinearity Effects on Stable Regimes in Dynamically Self-Organizing Systems
V. Dryuma	Multidimensional Riemannian metrics in theory of the Navier-Stokes equations (online)
E. Georgievskaya	Study of the Hyers-Ulam stability of a system of stochastic differential equations with two independent stochastic parameters
M. Kolesnikov	Negative flows for equations for 3rd order PDEs
D. Kosterin	Piecewise smooth solutions of a system of integro-differential equations in a simple critical case
K. Kotsubinsky	Contrast structures in a reaction-diffusion system with multiscale diffusion coefficients and discontinuous reaction functions (online)
Igor Maslenikov	Local dynamics of a second-order equation with two delays at the derivative
Ivan Maslenikov	Chaotic dynamics of a delayed pulse feedback differential equation
I. Melnikov	Classification of soliton solutions in generalized Korteweg-de Vries and Schrödinger equations
E. Morozova	Dynamics of delay differential equation with simple behavior at infinity
M. Pogrebnyak	Traffic Model for Two Interacting Traffic Streams
M. Preobrazhenskaia	Homothety of periodic solutions in a class of delay differential equations
Ch. Stepanova	Alldrige, Max and Zirnbauer’s approach for $l^2(\mathbb{Z}) \otimes C$
A. Tokmachev	Discrete Traveling Waves in a Toda Relay Chain: New Results
A. Tovsultanov	Elliptic functional differential equations with affine transformations
V. Vorontsova	Bursting and Chaos of the Reviving Neuron
Yu. Baina (Yakubiv)	Multistable periodic solutions in neutral delay differential equation induced by an infinite dimensional bifurcation

Wednesday, 24.09.2025

	Morning session: Keynote talks
09:35–10:10	O. Sheinman “Real solutions to Hitchin systems”
10:10–10:45	D. Talalaev “The Lie-Bianchi integrability of the full symmetric Toda system”
10:45–11:20	B. Konopelchenko “On solutions of the Euler equation for incoherent fluid in curved spaces” (online)
11:20–11:50	Coffee break
11:50–12:25	V. Caudrelier “A variational formulation of Hitchin’s integrable system with Lagrangian multiform theory” (online)
12:25–13:00	S. Agapov “Rational integrals of geodesic flows on 2-surfaces”
13:00–14:30	Lunch break

	Afternoon session: Section talks
14:30–14:50	G. Sharygin “On the quantum argument shift method”
14:50–15:10	Anton Kazakov “The Calderón Problem and Metric Properties of Electrical Networks”
15:10–15:30	D. Kulikov “Convective Cahn-Hilliard equation in the case of two spatial independent variables. Periodic traveling waves”
15:30–15:50	K. Safonov “Smoothness of one-dimensional factor map in systems with the Lorenz attractor”
15:50–16:10	S. Glyzin “Dynamic self-organisation in networks of nonlinear oscillators”
16:10–16:40	Coffee break
16:40–17:00	D. Belonozhko “Modeling of instability caused by a surface electric charge induced on a liquid surface covered by a surfactant film”
17:00–17:20	D. Solovev “On integrable examples of magnetic geodesic flows on the 2-torus”
17:20–17:40	P. Serowa “Basins of Wada with a Different Rotation Numbers”
17:40–18:00	N. Houkonnou “Conformal inversion in a Minkowski phase space: recursion operator and quadratic algebra” (online)
19:00	Buffet

Thursday, 25.09.2025

	Morning session: Keynote talks
09:35–10:10	A. Kamchatnov “Asymptotic integrability and its consequences”
10:10–10:45	V. Sedykh “On adjacencies of simple stable singularities of a front” (online)
10:45–11:20	Ch. Skokos “Analyzing phase space transport using the origin fate map” (online)
11:20–11:50	Coffee break
11:50–12:25	V. Rothos “Chaos near-resonance in perturbed Coupled Nonlinear Schrödinger equations” (online)
12:25–13:00	N. Barabash “An analyzable piecewise smooth reconstruction of ‘butterfly family’ chaotic attractors” (online)
13:00–14:30	Lunch break

	Afternoon session: Section talks
14:30–14:50	A. Kashchenko “Nonlocal cycles in nonlinear system with delay and small parameter”
14:50–15:10	Yu. Chashechkin “Geometry of Periodic Flows of Heterogeneous Fluids: Asymptotic Theory and Laboratory Experiments”
15:10–15:30	A. Ochirov “Analytical Theory for the Construction of Wave and Ligament Components of Surface Periodic Flows”
15:30–15:50	S. Igonin “On matrix Lax pairs under the gauge equivalence relation and Miura-type transformations for lattice equations”
15:50–16:10	M. Flamarion “Extreme ocean events arising from irregular waves” (online)
16:10–16:40	Coffee break
16:40–17:00	V. Litvinov, “On one solution of the problem of oscillations of mechanical systems with moving boundaries” (online)
17:00–17:20	D. Shaykin “Dispersive shock waves for integrable equations in AKNS scheme with dissipative perturbation terms”
17:20–17:40	F. Lobzin “Classification of 4D-Orbit Lie Algebras: Semidirect Sums of Semisimple and Solvable”
17:40–18:00	S. Titarenko “Cellular structures as the basis of logical unity of classic and quantum theory”

Friday, 26.09.2025

09:00–09:35	A. Bufetov “The Gaussian multiplicative chaos for the sine-process”
09:35–10:10	A.Yu. Orlov “Integrals over special unitary group as tau functions”
10:10–10:30	M. Matushko “R-matrix valued Lax pair for elliptic Calogero-Inozemtsev system and associative Yang-Baxter equations of BC_n type”
10:30–10:50	E. Bunkova “Polynomial dynamical systems associated with the KdV hierarchy”
10:50–11:10	P. Kassotakis “On non-Abelian pentagon and Yang–Baxter maps” (online)
11:10–11:30	J. Stavroulakis “On the link between oscillation of the second order ODE and the first order delay equation” (online)
11:30–12:00	Coffee break
12:00–12:20	S. Erasmus “Temperature dependent elastic and structural properties of uniaxially strained graphene” (online)
12:20–12:40	R. Potapov “Large N limit of classical Gaudin model and spectral duality”
12:40–13:00	I. Andreeva “Notes on a qualitative study of a series of dynamical systems with polynomial right-hand sides in a Poincaré disk” (online)
13:00–13:20	P. Vergallo “Degenerate Hamiltonian operators, flat pencils and superintegrable systems” (online)