

3rd International Conference on Integrable Systems & Nonlinear
Dynamics, and
Scientific School “Integrable and Nonlinear Days”

4-8 October, 2021, Yaroslavl

The programme is written in Moscow time (GMT+3)

1 Monday, 4.10.2021

	Plenary talks combined with lectures for the Scientific School
09:00–09:45	Registration
09:45–10:00	Conference opening: Tensor, Rector YarSU, First Pro-Rector
10:00–11:00	V. Kozlov, “Quadratic in momenta integrals of circulatory systems”
11:00–11:30	Coffee break
11:30–12:30	T. Bountis, “Recent Results on Integrable and Non-integrable Lotka Volterra Systems”
12:30–13:30	A. Mikhailov, “Quantisation of free associative dynamical systems. Quantisation ideals”
13:30–14:30	Lunch break

	Section: Integrable Systems
14:30–15:00	R. Vitolo, “WDVV equations and invariant bi-Hamiltonian formalism” (online)
15:00–15:30	V. Gerdjikov, “On the nonlinear evolution equations related to the Kac-Moody algebras $A_5^{(1)}$ and $A_5^{(2)}$ ” (online)
15:30–16:00	S. Agapov, “On the construction of exact solutions in the problem of integrable geodesic flows”
16:00–16:30	V. Kibkalo, “Topology of typical corank-1 singularities for integrable systems with 3 degrees of freedom”
16:30–17:00	Coffee break
17:00–17:30	S. Nikolaenko, “Topology of algebraically solvable Hamiltonian systems”

18:30	Welcome party
--------------	----------------------

	Section: Nonlinear Dynamics
14:30–15:00	I. Kashchenko, “The local dynamics of singular perturbed equations with distributed delay”
15:00–15:30	N. Nefedov, “On a new type of periodic fronts in Burgers type equations”
15:30–16:00	A. Maltsev, “Features of the motion of ultracold atoms in quasiperiodic potentials” (online)
16:00–16:30	A. Anikin, “Efficient variational method of calculating librations appearing in tunneling problems” (online)
16:30–17:00	Coffee break
17:00–17:30	E. Nikulin, Contrast structures in a problem with a weak reaction discontinuity
17:30–18:00	N. Hatzizisis, “A semiclassical WKB problem for the Dirac operator with a decaying potential”
18:30	Welcome party

2 Tuesday, 5.10.2021

	Plenary talks combined with lectures for the Scientific School
09:00–10:00	V. Buchstaber, “From the Korteweg–de Vries hierarchy to the quantum equation of S.P. Novikov”
10:00–11:00	V. Sokolov, “Non-Abelian generalizations of integrable PDEs and ODEs”
11:00–11:30	Coffee break
11:30–12:30	F. Calogero, “Solvable systems of first-order nonlinear ordinary differential equations (ODEs) and difference equations (DEs)” (online)
12:30–13:30	A. Pogrebkov, “Negative numbers of times of integrable hierarchies”
13:30–14:30	Lunch break

	Section: Integrable Systems
14:30–15:00	E. Kudryavtseva, “Symplectic classification of structurally stable nondegenerate semilocal singularities of integrable systems”
15:00–15:30	S. Sokolov, “Atlas of bifurcation diagrams for the one model of a Lagrange top with a vibrating suspension point”
15:30–16:00	
16:00–16:30	A. Dzhamay, “Different Hamiltonians for Painlevé equations and their identification using geometry of the space of initial conditions” (online)
16:30–17:00	Coffee break

	Section: Nonlinear Dynamics
14:30–15:00	A. Kashchenko, “Dependence of dynamics of the model of coupled oscillators on the number of oscillators”
15:00–15:30	V. Volkov, “Asymptotic solution of the boundary control problem for the interior layer Burgers-type equation with modular advection”
15:30–16:00	Ch. Skokos, “The smaller (SALI) and the generalized (GALI) alignment Index methods of chaos detection” (online)
16:00–16:30	H. Moges, “On the behavior of the generalized alignment index (GALI) method for regular motion in multidimensional Hamiltonian systems” (online)
16:30–17:00	Coffee break

3 Wednesday, 6.10.2021

	Plenary talks combined with lectures for the Scientific School
09:00–10:00	S. Kashchenko, “Irregular solutions in Fermi–Pasta–Ulam problem” (in Russian)
10:00–11:00	D. Talalaev, “Tetrahedron equation, weighted graphs and loop quantum gravity”
11:00–11:30	Coffee break
11:30–12:30	S. Wabnitz, “Spatiotemporal condensation of walk-off multimode solitons” (online)
12:30–13:30	V. Caudrelier, “Integrable boundary conditions for equations on quad-graphs, open boundary reductions and integrable mappings” (online)
13:30–14:30	Lunch break

	Section: Integrable Systems
14:30–15:00	P. Kassotakis, “On non-abelian quadrirational Yang–Baxter maps” (online)
15:00–15:30	M.C. Van der Weele, “Dirichlet-to-Neumann map for evolution PDEs on the half-line with time-periodic boundary conditions” (online)
15:30–16:00	G. Grahovksi, “On Liouville integrability of Yang–Baxter maps” (online)
16:00–16:30	N. Hounkonnou, “Hamiltonian dynamics in Alcubierre and Gödel metrics: recursion operators and underlying master symmetries” (online)
16:30–17:00	F. Lobzin, “Generalized Mishchenko–Fomenko conjecture for Lie algebras of small dimensions”
17:00–17:30	B. Bychkov, “Electrical networks and Lagrangian Grassmannians” (online)

	Section: Nonlinear Dynamics
14:30–15:00	K. Trifonov, “Partially hyperbolic symplectic automorphisms of 4-torus” (online)
15:00–15:30	A. Rosaev, “On the interaction of binary asteroid with resonance”
15:30–16:00	G. Palshin, “On non-compact bifurcation in the restricted problem of three magnetic vortices” (online)
16:00–16:30	V. Goryunov “Estimates of Lyapunov exponents spectrum of self-organization modes in one distributed biophysical model” (online)
16:30–17:00	M. Preobrazhenskaia, “Discrete traveling waves in the Mackey-Glass generator system”
17:00–17:30	M. Hillebrand, “Bubbles in DNA molecules: the role of nonlinear dynamics in biological mechanisms” (online)
17:30–18:00	A. Ngapasare, “Energy spreading, equipartition and chaos in lattices with non-central forces” (online)

Poster session: 18:00–19:00	
E. Alekseeva, A. Rassadin, “Exact solution of one nonlinear ordinary differential equation in Banach algebra $l_1(\mathbb{R})$ ”	
I. Maslenikov, “Local dynamics of a second-order equation with a delay at the derivative”	
M. Onufrienko, “Structurally stable corank 1 singularities of integrable systems with three degrees of freedom” M. Pogrebnyak, “Traffic flow model”	
D. Serow, “The Wada property and homogeneous systems remarks”	
E. Tatanova, “The local dynamics of differential equations with delay and periodic coefficients”	
A. Tovsultanov, “Functional differential equation with stretch and twist”	

BANQUET	
19:00–22:00	Conference Dinner

4 Thursday, 7.10.2021

	Plenary talks combined with lectures for the Scientific School
09:00–10:00	A. Tsiganov, “Tensor fields with simultaneously non-zero Nijenhuis and Haantjes tensors”
10:00–11:00	D. Millionshchikov, “The Liouville equation and Combinatorics”
11:00–11:30	Coffee break
11:30–12:30	S. Glyzin, “Traveling-wave-type solutions of fully coupled systems of nonlinear oscillators” (in Russian)
12:30–13:30	M. Pavlov, “Nonlocal kinetic equation, describing a soliton gas”
13:30–14:30	Lunch break

	Section: Integrable Systems
14:30–15:00	S. Pustovoitov, “Monodromy of the focus-focus point of the circular billiard in the potential field”
15:00–15:30	I. Kobtsev, “Topological analysis of magnetic geodesic flow problem”
15:30–16:00	A. Yu. Orlov, “BKP and new matrix models” (online)
16:00–16:30	V. Ponomarev, “Connections between the ring of cojoint invariants and the Jordan–Kronecker invariants of the 7-dimensional nilpotent Lie algebras”
16:30–17:00	Coffee break
17:00–17:30	G. Sharygin, “Operations on universal enveloping algebra and the ‘argument shift’ method”
17:30–18:00	Y. Ikeda, “Quasi-differentiation of central elements of the universal enveloping algebra Ugl_n ”

	Section: Nonlinear Dynamics
14:30–15:00	A. Tolchennikov, “Calculation of wave fields by ray method and variational method of finding rays”
15:00–15:30	V. Golubenets, “Local dynamics of singularly perturbed second order equation with state-dependent delay”
15:30–16:00	D. Lukyanenko, “Solving inverse problems for nonlinear equations of the reaction-diffusion-advection type with data on the position of a reaction front” (online)
16:00–16:30	N. Levashova, “Existence of a stable stationary solution with a two-scale transition layer of a system of two diffusion equations with quasimonotonicity conditions of different signs” (online)
16:30–17:00	Coffee break
17:00–17:30	V. Grines, “New invariant of uniform equivalence for non-autonomous vector fields on S^3 ”

5 Friday, 8.10.2021

	Plenary talks combined with lectures for the Scientific School
09:00–10:00	L. Lerman “The dynamics near a symmetric homoclinic orbit of a saddle-focus in a reversible system” (online)
10:00–11:00	P. Grinevich, “The linear instability of the Akhmediev breather. Explicit unstable solutions and regular approach”
11:00–11:30	Coffee break
11:30–12:30	A. Hone, “Heron triangles with two rational medians and Somos-5 sequences” (online)
12:30–13:30	P. Xenitidis, “Systems of difference equations and their symmetries” (online)
13:30–14:30	Lunch break

	Section: Integrable Systems
14:30–15:00	C. Monin, “Circular crunodal cubics with an infinite real inflexion point in a Minkowski plane” (online)
15:00–15:30	G. Belozarov, “Billiard bounded by three-axial ellipsoid in a Hooke potential field”
15:30–16:00	V. Zavyalov, “Quadratically integrable geodesic flows on non-orientable two-dimensional surfaces and billiards with slipping” (online)
16:00–16:30	S. Igonin, “Algebra and geometry of Bäcklund transformations for (1+1)-dimensional partial differential and differential-difference equations”

	Section: Nonlinear Dynamics
14:30–15:00	B. Senyange, “Chaotic behavior of disordered nonlinear lattices ”
15:00–15:30	D. Kosterin, “Piecewise smooth solutions of quasi-normal form in the simple critical case”
15:30–16:00	G. Dvorkin, “Geometric interpretation of entropy”
16:00–16:30	D. Kulikov, “On two generalized variants of a weakly dissipative version of the complex Ginzburg–Landau equation” (in Russian)