

Program
Conference "Dynamics in Siberia"



Monday, March 1	
9:00-09:50	Registration (Ground floor of the Sobolev Institute of Mathematics)
Plenary talks (Conference Hall of the Sobolev Institute of Mathematics)	
09:50-10:00	Opening.
10:00-10:40	V. Kozlov. <i>Weak ergodicity and non-equilibrium statistical mechanics.</i>
10:45-11:25	A. Shafarevich. <i>Reflection of Lagrangian manifolds and of Maslov complex germs in the Cauchy problem for the Schrödinger equation with delta potential localized on a surface of codimension 1.</i>
Coffee break (20 minutes)	
11:45-12:25	O. Pochinka. <i>On the number of the classes of topological conjugacy of Pixton diffeomorphisms.</i>
Lunch (95 minutes)	

Section talks (Monday, March 1)			
	Section “ <i>Mathematical modeling of hydrodynamic and heat and mass transfer processes in medical applications</i> ” (Conference Hall)	Section B (417, Sobolev Institute of Mathematics)	Section C (115, Sobolev Institute of Mathematics)
14:00-14:25	A. Yakovlev , F. Bakhar, R. Gilmanov, S. Tikhomirov. <i>Complex geometric structures in geology and hydrodynamics of oil and gas reservoirs.</i>	S. Gorchinskii. <i>Counterexamples in Differential Galois theory.</i>	S. Agapov. <i>On the construction of exact solutions in the problem of integrable geodesic flows.</i>
14:25-14:50	M. Guzev , V. Chudnovskii. <i>Study on laser heating of biological fluids in the interests of medicine.</i>	N. Tyurin. <i>Lagrangian Mironov cycles in complex Grassmannians.</i>	I. Polekhin. <i>On the non-integrability and dynamics of discrete models of threads.</i>
14:55-15:20	A. Chernov , A. Pil’nik, M. Guzev, V. Chudnovskii. <i>Simulation of growth of a vapor bubble induced by laser heating of a liquid.</i>	V. Przhiyalkovskiy. <i>Dolgachev-Nikulín duality and mirror symmetry for Fano threefolds.</i>	N. Stankevich. <i>Quasi-periodic Hénon-like attractors: universal scenario of appearance and radio-physical applications.</i>
15:20-15:45	R. Fursenko , S. Minaev, V. Chudnovskii. <i>On the formation of a high-velocity jet during the collapse of a gas bubble near a microfiber immersed in a liquid. Numerical study.</i>	A. Zheglov. <i>The Schur-Sato theory for quasi-elliptic rings and some of its corollaries.</i>	M. Barinova. <i>Realization of Hasse diagrams by means of A-diffeomorphisms of surfaces with non-trivial basis sets.</i>
Coffee break (20 minutes)			
16:05-16:30	S. Kabanikhin. <i>Connections between dynamic, spectral and scattering inverse problems.</i>	Yu. Kordukov. <i>Berezin-Toeplitz quantizations associated with Landau levels of the Bochner Laplacian on a symplectic manifold.</i>	V. Kruglov. <i>On functional moduli of surface non-singular flows with two limit cycles.</i>
16:30-16:55	M. Shislenin , S. Kabanikhin. <i>Dynamic inverse problems and conservation laws.</i>	D. Millionshikov. <i>Algebra and Combinatoric of symmetries of Liouville equation.</i>	E. Nozdrinova , V. Galkin. <i>Stable arcs connecting polar cascades on a torus.</i>
17:00-17:25	O. Krivorotko , M. Sosnovskaya, I. Vashchenko, S. Kabanikhin. <i>Agent-based modeling and forecasting scenarios of COVID-19 propagation in Novosibirsk region.</i>	M. Pavlov. <i>The Symmetric Form of Integrable Systems.</i>	D. Mints , V. Grines. <i>On interrelations between basic sets of structurally stable diffeomorphisms of surfaces.</i>
17:25-17:50	T. Zvonareva , O. Krivorotko. <i>Numerical solution and stability analysis of the inverse problem for the diffusion-logistic model.</i>	A. Orlov. BKP hierarchy, algebra of pseudodifferential operators on the circle, and matrix models.	P. Klepikov , O. Khromova, E. Rodionov. <i>Einstein’s equation on three-dimensional locally homogeneous (pseudo) riemannian spaces with vectorial torsion.</i>

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Tuesday, March 2	
Plenary talks (Conference Hall of the Sobolev Institute of Mathematics)	
10:00-10:40	D. Treschev. <i>Volume preserving diffeomorphisms as Poincare maps for volume preserving flows.</i>
10:45-11:25	A. Tsiganov. <i>Divisor arithmetic, integrable and superintegrable systems.</i>
Coffee break (20 minutes)	
11:45-12:25	N. Kuznetsov. <i>Global stability boundary, hidden oscillations, and non-equilibrium dynamics in the models with cylindrical phase space: PLL and Sommerfeld effect.</i>
Lunch (95 minutes)	

Section talks (Tuesday, March 2)			
	Section A (Conference Hall of the Sobolev Institute of Mathematics)	Section B (417, Sobolev Institute of Mathematics)	Section C (115, Sobolev Institute of Mathematics)
14:00-14:25	A. Basalaev. <i>Integrable hierarchies associated to infinite families of Frobenius manifolds.</i>	A. Medvedev. <i>Estimation of the measure of KAM tori in Hamilton systems under small perturbations.</i>	O. Kiselev. <i>A dynamics of a shadow bifurcation border in the perturbed Painleve-2 equation.</i>
14:25-14:50	S. Aizikovich. <i>Asymptotic solution of the contact problem on indentation of poroelastic layer.</i>	S. Zinina. <i>Morse-Bott function for topological flows with a finite hyperbolic chain-reccurent set.</i>	A. Kozhevnikov. <i>Dynamics of curved gauge vortex in parity-breaking media.</i>
14:55-15:20	E. Samylyna. <i>On reversible three-dimensional system containing attractor and repeller of Lorenz type.</i>	D. Baranov, E. Chilina. <i>Topological Classification of Periodic 2-torus Homeomorphisms.</i>	C. Shramov. <i>Automorphism groups of Severi-Brauer varieties.</i>
15:20-15:45	V. Shmukler. <i>Bifurcations changing the type of heteroclinic curves of a Morse-Smale 3-diffeomorphism.</i>	V. Kibkalo. <i>Cuspidal singularities in integrable systems of dynamics.</i>	V. Golubyatnikov. <i>On uniqueness of a cycle of one dynamical system.</i>
Coffee break (20 minutes)			
16:05-16:30	I. Kharcheva. <i>Realization of topological invariants by integrable billiard books.</i>	A. Dymov. <i>On the wave turbulence theory for the stochastically perturbed nonlinear Schrodinger equation.</i>	I. Podvigin. <i>On possible rates of convergence for the ergodic averages.</i>
16:30-16:55	S. Pustovoitov. <i>Integrable magnetic billiard in circular domain.</i>	G. Belozarov. <i>A topological classification of billiards bounded by confocal quadrics in three-dimensional Euclidean space.</i>	A. Tetenov, O. Chelkanova. <i>On the rigidity of self-affine Jordan arcs.</i>
17:00-17:25	N. Barabash. <i>Sliding homoclinic bifurcations in a Lorenz-type system: stability with a positive saddle value.</i>	D. Shubin. <i>Nonsingular flows on n-manifolds with two limit cycles.</i>	L. Golikova. <i>Necessary and sufficient conditions of topological conjugacy rough circle's transformations product.</i>
17:25-17:50	V. Galkin. <i>Derivations of the Lie algebra of type F_4 over the field of characteristic two</i>	I. Klevin. <i>Asymptotic "bouncing ball" type eigenfunctions with focal points of the Schrödinger operator.</i>	A. Morozov. <i>Realization of homeomorphisms of surfaces of algebraically finite type by Morse-Smale diffeomorphisms with orientable heteroclinic.</i>

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Wednesday, March 3 (Conference Hall of the Sobolev Institute of Mathematics)

10:00-10:40 **S. Sokolov.** *Dynamics of a circular cylinder and two vortex filaments in an ideal fluid.*

10:45-11:25 **V. Timorin.** *A model for the cubic connectedness locus.*

Coffee break and poster session (30 minutes)

11:55-12:40 **D. Orlov.** *Geometric realizations of algebraic objects and finite-dimensional algebras.*

Cultural program

Poster Session:

D. Drozdov. *On fractal cubes with finite intersection property.*

N. Kirillova. *On invariant surfaces in the smooth gene network models.*

T. Kozlovskaya. *The singular braid group and its representations.*

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Thursday, March 4 (Conference Hall of the Sobolev Institute of Mathematics)

10:00-10:40	S. Bolotin. <i>Separatrix map for slow-fast Hamiltonian systems.</i>
10:45-11:25	S. Dobrokhotov. <i>Real semiclassical approximation for the asymptotics with complex-valued phases and asymptotics of Hermitian type orthogonal polynomials.</i>
Coffee break (20 minutes)	
11:45-12:25	A. Glutsyuk. <i>Density of thin film billiard reflection pseudogroup in Hamiltonian symplectomorphism pseudogroup.</i>
Cultural program	

Friday, March 5 (Conference Hall of the Sobolev Institute of Mathematics)

10:00-10:40	V. Nazaikinskii. <i>Pseudo-homogeneous Lagrangian manifolds and asymptotics in the Cauchy problem with localized initial data.</i>
10:45-11:25	I. Vyugin. <i>On Some Applications of Differential Equations to Problems in Additive Number Theory.</i>
Coffee break (20 minutes)	
11:45-12:25	A. Buryak. <i>A noncommutative generalization of Witten's conjecture.</i>
Cultural program	