

# Program

## Conference "Dynamics in Siberia"



Monday, February 24		
9:00-09:30	Registration (Ground floor of the House of Scientists SB RAS)	
Plenary talks (Small Hall of the House of Scientists)		
09:30-09:40	Opening.	
09:40-10:20	V. Kozlov. <i>Квадратичные законы сохранения уравнений математической физики.</i>	
10:25-11:05	A. Sorrentino. <i>Inverse problems and rigidity questions in Billiard Dynamics.</i>	
Coffee break (20 minutes)		
11:25-12:05	V. Dragovic. <i>Integrable Billiards in the Minkowski plane and space.</i>	
12:10-12:50	A. Chupakhin. <i>On the energy of a hydroelastic system.</i>	
Lunch (100 minutes)		
	Section A (Conference Hall of the Sobolev Institute of Mathematics)	Section B (417, Sobolev Institute of Mathematics)
14:30-14:50	M. Guzev. <i>Inhomogeneous distribution of characteristics in ideal crystal.</i>	P. Akhmet'ev. <i>Invariants of winding-numbers in dynamics of flux lines and its visualization.</i>
14:50-15:10	S. Medvedev. <i>Linear systems with quadratic integrals.</i>	N. Daurtseva. <i>Almost Hermitian structures of cohomogeneity 1 on the round sphere <math>S^6</math>.</i>
Coffee break (20 minutes)		
15:30-15:50	V. Grebenev. <i>Conformal invariance of the zero-vorticity lagrangian path in 2d turbulence.</i>	C. Fierobe. <i>On analytic projective billiards with open sets of triangular orbits.</i>
15:50-16:10	S. Konstantinou-Rizos. <i>On the 3D consistency of Grassmann extended lattice systems.</i>	S. Sokolov. <i>Dynamics of vortex filaments in a fluid bounded by a circular cylinder.</i>
16:10-16:30	I. Marshall. <i>Action-Angle Duality for a Poisson-Lie Deformation of the Trigonometric <math>BC_n</math> Sutherland System.</i>	V. Sharafutdinov. <i>Rank 3 Killing tensor fields on a Riemannian 2-torus.</i>
16:30-16:50	M. Shislenin. <i>3D analogs of Gelfand-Levitan equation and digital oilfield.</i>	A. Tetenov. <i>Self-similar sets with finite intersection property.</i>

# Program

## Conference "Dynamics in Siberia"



Tuesday, February 25		
Plenary talks (Conference Hall of the Sobolev Institute of Mathematics)		
09:00-09:40	D. Treschev. <i>On inclusion of a diffeomorphism into a flow.</i>	
09:45-10:25	S. Maksymenko. <i>Homotopy types of groups of foliated diffeomorphisms for Morse-Bott foliations.</i>	
Coffee break (20 minutes)		
10:45-11:25	A. Slizewska. <i>A family of integrable perturbed Kepler systems.</i>	
11:30-12:00	L. Shalom. <i>Non-ordinary Gutkin billiards.</i>	
Lunch (120 minutes)		
	Section A (115, Sobolev Institute of Mathematics)	Section B (417, Sobolev Institute of Mathematics)
14:00-14:20	D. Millionshchikov. <i>Characteristic Lie algebras of hyperbolic systems.</i>	A. Zheglov. <i>Пары Лакса для линейных гамильтоновых систем.</i>
14:20-14:40	E. Nozdrinova. <i>Solution of the 33rd Palis-Pugh problem for gradient-like diffeomorphisms of a two-dimensional sphere.</i>	A. Orlov. <i>Как интегралы по матрицам перечисляют накрытия римановых и клейновых поверхностей.</i>
14:40-15:00	A. Morozov. <i>Conjugacy of orientation preserving Morse-Smale diffeomorphisms graphs.</i>	D. Osipov. <i>Discrete Heisenberg groups, algebraic surfaces and theta functions.</i>
Coffee break (20 minutes, 213 IM SB RAS)		
15:20-15:40	V. Shmukler. <i>О трехмерных диффеоморфизмах Морса-Смейла с единственной некомпактной гетероклинической кривой.</i>	V. Przyjalkowski. <i>Зеркальная симметрия и структуры Ходжа.</i>
15:40-16:00	D. Shubin. <i>On 4-dimensional flows with wildly embedded invariant manifolds of a periodic orbit.</i>	C. Shramov. <i>Automorphisms of elliptic surfaces.</i>
16:00-16:20	N. Yakushkin. <i>Условия бифуркаций Тьюринга и Андронова-Хопфа для одномерной системы типа «реакция – диффузия» с кубической нелинейностью.</i>	N. Tyurin. <i>Примеры лагранжевых торов в грассманианах <math>Gr(1, n)</math>.</i>

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## Conference "Dynamics in Siberia"



Wednesday, February 26 (Conference Hall of the Sobolev Institute of Mathematics)	
9:00-09:40	<b>S. Bolotin.</b> <i>Динамика быстро-медленных гамильтоновых систем около гомоклинического множества.</i>
09:45-10:25	<b>M. Hounkonnou.</b> <i>Geometry and probability on the noncommutative 2-torus in a magnetic field.</i>
Coffee break and poster session (30 minutes)	
10:55-11:35	<b>O. Pochinka.</b> <i>On paths connecting polar diffeomorphisms.</i>
11:40-12:20	<b>A. Borisov.</b> <i>Об одной неголономной системе, близкой к шару Чаплыгина.</i>
12:25-13:05	<b>A. Tsiganov.</b> <i>On rigid body dynamics in a magnetic field.</i>
Cultural program	

### Poster Session:

1. **T. Alexeeva.** *Forecasting Limiting Dynamics in the Shapovalov Model of a Mid-Size Firm.*
2. **D. Drozdov.** *On the connected components of fractal cubes.*
3. **J. Soninbayar.** *Обтекание препятствий потоком тяжелой несжимаемой жидкости.*
4. **A. Tovsultanov.** *О задаче Дирихле для эллиптического функционально-дифференциального уравнения с аффинным преобразованием аргумента.*

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## Conference "Dynamics in Siberia"



### Thursday, February 27 (Conference Hall of the Sobolev Institute of Mathematics)

9:00-09:40	<b>S. Kabanikhin.</b> <i>Inverse problems for mathematical models in epidemiology.</i>
09:45-10:25	<b>N. Kuznetsov.</b> <i>Theory of hidden oscillations and stability of control systems.</i>
Coffee break (20 minutes)	
10:45-11:25	<b>S. Dobrokhotov.</b> <i>Новые интегральные представления канонического оператора Маслова и эффективные асимптотики в виде специальных функций.</i>
11:30-12:10	<b>S. Tikhomirov.</b> <i>Various parabolic equations with hysteresis.</i>
Cultural program	

### Friday, February 28 (Conference Hall of the Sobolev Institute of Mathematics)

9:00-09:40	<b>V. Nazaikinskii.</b> <i>Uniformization and semiclassical asymptotics for equations with Bessel-type degeneration on the boundary.</i>
09:45-10:25	<b>Yu. Kordyukov.</b> <i>Quasiclassical approximation for magnetic monopoles.</i>
Coffee break (20 minutes)	
10:45-11:25	<b>V. Vedyushkina.</b> <i>Liouville foliation of integrable billiards on cell complexes.</i>
11:30-12:10	<b>V. Grines.</b> <i>Геодезические ламинации и хаотическая динамика на поверхностях.</i>
12:15-12:55	<b>A. Plakhov.</b> <i>New results in Newton's aerodynamic problem for convex bodies.</i>
Cultural program	

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## Conference "Dynamics in Siberia"



**Saturday, February 29** (Conference Hall of the Sobolev Institute of Mathematics)

9:30-10:10	<b>A. Shafarevich.</b> <i>Lagrangian Tori and Quantization Conditions Corresponding to Spectral Series of the Laplace Operator on a Surface of Revolution with Conical Points.</i>
10:15-10:55	<b>A. Gaifullin.</b> <i>Redistribution of the combinatorial curvature and local combinatorial formula for the first Pontryagin class.</i>
Coffee break (20 minutes)	
11:15-11:55	<b>V. Timorin.</b> <i>Combinatorial models for spaces of dendritic polynomials.</i>
12:00-12:40	<b>Yu. Trakhinin.</b> <i>Structural stability of shock waves and current-vortex sheets in the solar tachocline.</i>
Cultural program	