

# PROGRAM OF WORKSHOP

Semiclassical Analysis and Nonlocal Elliptic Theory, 17-20 October 2023

Talks in Room Nr. 171, RUDN University, Miklukho-Maklaya st. 6, Moscow Russia

Online talks in Microsoft Teams

The duration of every talk, including questions, is 35 minutes

Registration: Tuesday 17.10, 9:00 - 9:45

## 17 October

Morning

Link:

Chairman

Time	Speaker	Title
9:45		Opening of the conference
10-00	A. S. Mishchenko	Maslov Index on Symplectic Manifolds and Infinitesimal Lagrangian Manifolds
10-40	A. L. Piatnitski	Large deviation principle for Markov processes with nonlocal convolution-type generator
11-20		Coffee break
11-50	A. L. Skubachevskii	On Global Weak Solutions to Mixed Problems for the Vlasov–Poisson System with External Magnetic Field
12-30	L. E. Rossovskii	Elliptic Functional Differential Equations with Compressed and Rotated Argument
13-10	A. V. Lebedev	Sup-sums Principles for F-divergence and Their Applications
13-50		Lunch

## Afternoon

Link:

Chairman

time	speaker	title
15-00	O. V. Sarafanov	A Method for Numerical Study of Surface Waves Scattering on an Irregularity of the Boundary in a Diffraction Grating
15-40	Yu. A. Kordyukov	Principal Symbol Calculus on Contact Manifolds
16-20	Coffee break	
16-50	E. Zhizhina	Homogenization of Nonlocal High-contrast Elliptic Operators and Random Jumps in High-Contrast Periodic Media
17-30	V. G. Danilov	Stochastic Hyperbolic and Parabolic Problems on Grids – Feynman Checkerboard and Random Walks
18-10	M. A. Rakhel	Justification of the Exact Asymptotics of the Fundamental Solution for Degenerate Parabolic Equation with a Small Parameter
18-50	N. D. Filonov	On the Pólya Conjecture for the Neumann Problem in Planar Convex Domains

# 18 October

## Morning

Link:

Chairman

time	speaker	title
10-00	D. I. Borisov	Operator Estimates for Domains with Irregularly Oscillating Boundary: Dirichlet and Neumann Condition
10-40	A. G. Sergeev	Hermitian Yang–Mills Equations and Their Generalizations
11-20	Coffee break	
11-50	A. P. Kiselev	Bateman's Wave, Its Generalizations and Applications
12-30	M. A. Lyalinov	Eigenfunctions in a Model Problem for the Laplace Operator in a Wedge-shaped Domain with the Third Order Boundary Conditions
13-10	A. I. Nazarov	Fractional Powers of Operators as Traces of Operator-valued Functions of One Variable
13-50	Lunch	

## Afternoon

Link:

Chairman

time	speaker	title
15-00	S. Yu. Dobrokhotov	Asymptotics of Linear and Nonlinear Long Waves Captured by Gentle Shores
15-40	A.I. Shafarevich	Short-wave Asymptotic Solutions of Strictly Hyperbolic Systems with Abruptly Varying Coefficients
16-20	A. V. Tsvetkova	Uniform Asymptotic Solution in the Form of an Airy Function for Semiclassical Bound States in One-dimensional Problems
17-00	A. A. Tolchennikov	Asymptotic of Solution of the Helmholtz Equation with a Linear Refractive Index, in which the Conical Arnold's Singularity of Rays Family Appears
17-40	V. A. Sergeev	On Adiabatic Evolution Generated by a Schrödinger Operator
18:20	R. Rodsphon (online)	Noncommutative Geometric Perspectives on Transverse Index Theory for Lie Group Actions

## 19 October

### Morning

Link:

Chairman

time	speaker	title
10-00	A. A. Shkalikov	Spectral Asymptotics for the Systems of Differential Equations and Applications
10-40	N. A. Rautian	On the Properties of Semigroups Generated by Volterra Integro-Differential Equations
11-20	Coffee break	
11-50	<a href="#">A. B. Antonevich (online)</a>	On SemiFredholm Nonlocal Pseudodifferential Operators
12-30	<a href="#">I. Androulidakis (online)</a>	Hypoellipticity and the Helffer-Nourrigat Conjecture
13-10	<a href="#">G. N. Makrakis (online)</a>	Asymptotics of the Phase Space Schrödinger Equation
13-50	Lunch	

### Afternoon

Link:

Chairman

time	speaker	title
15-00	<a href="#">P. Melentijević (online)</a>	Maximal and Truncated Riesz Transforms — Explicit Dimension-free Estimates
15-40	<a href="#">Z. Rakić(online)</a>	Duality Principle in Osserman Manifolds
16-20	Coffee break	
16-50	<a href="#">V. Nistor (online)</a>	Layer Potentials on Manifolds with Cylindrical Ends: the Laplace Operator
17-30	<a href="#">T. Krainer (online)</a>	Cobordism Invariance of the Index Revisited
18-10	<a href="#">V. Rabinovich (online)</a>	On the $L_p$ -theory of Interaction Problems for $n$ -dimensional Dirac Operators with Singular Potentials
18-50	<a href="#">R. Jimenez (online)</a>	On Invariant Cohomology of a Group

## 20 October (Online day of the workshop)

Link:

Chairman:

time	speaker	title
10-00	<a href="#">I. A. Taimanov (online)</a>	On the Schrödinger Operators on Non-simply-connected Manifolds
10-40	<a href="#">Zhang Weiping (online)</a>	Deformed Dirac Operators and Scalar Curvature
11-20	Break	
	Parallel Session: Link	Parallel Session: Link
11-40		<a href="#">B. Gajić (online)</a> Gyroscopic Chaplygin Systems and Generalized Demchenko Case
12-20	<a href="#">Wang Hang (online)</a> Topological K-Theory for Discrete Groups and Index Theory	<a href="#">B. Jovanović (online)</a> Integrable Models of the Chaplygin Ball
13-00	<a href="#">R. Ponge (online)</a> Noncommutative Geometry and Semiclassical Analysis	<a href="#">A. A. Arutyunov (online)</a> Different Types of Derivation Calculuses on Group Algebras
13-40	Break	

Link:

Chairman:

time	speaker	title
14-30	<a href="#">E. Schrohe (online)</a> Asymptotics of the Porous Medium Equation on Manifolds with Conical Singularities	<a href="#">G. I. Sharygin (online)</a> Argument Shift Method in Uglid
15-10	<a href="#">G. Rozenblum (online)</a> Eigenvalue Estimates and Asymptotics of Polynomially Compact Pseudodifferential Operators and Applications to the Neumann-Poincare Operator in 3D Elasticity	<a href="#">Th. Yu. Popelensky(online)</a> Asymptotic Behaviour of Energy Levels of a Quantum Free Particle in an Elliptic Sector
15-50	<a href="#">S. N. Tumanov (online)</a> Conditions for the Discreteness of the Spectrum and Compactness of the Resolvent for the Singular Schrödinger Operator with Complex Non-sectional Potential	<a href="#">E. A. Zlobina (online)</a> High-frequency Grazing Diffraction by a Jump of Curvature
16-30	<a href="#">A. A. Fedotov (online)</a> Hierarchical Structure of Eigenfunctions of a Non-selfadjoint Difference Quasi-periodic Schrödinger Operator	
	Closing of the conference	

