# Memorial conference on Spectral Theory of Partial Differential operators

# Programme (draft)

### Monday 19

- 8:00 9:00 Breakfast
- 9:00 9:05 Introduction (A.Laptev)
- 9:05-9:30 (memorial speeches G.Rosenblum, D.Yafaev)
- 9:30 10:15 On the spectral theory of substitution dynamical systems Boris Solomyak
- 10:15-10:45 Coffee break
- 10:45 11:30 Bounds for eigenfunctions of the Laplacian on non-compact Riemannian manifolds Vladimir Maz'ya
- 11:45 12:30 Is (quasi) analyticity relevant to financial markets? Yakar Kannai
- 12:30-14:00 Lunch
- 14:00 14:45 Spectral approach to homogenization of periodic differential operators Tatiana Suslina
- 15:00 15:45 A solution of M.G. Krein's problem concerning the Lifshitz Krein trace formula Vladimir Peller
- 15:45-16:15 Coffee break
- 16:15 17:00 Trace formulas for pairs of m-dissipative operators and contractions Mark Malamud

# Tuesday 20

- 8:00 9:30 Breakfast
- 9:30 10:15 Implications of Anderson Localization in the time domain Uzy Smilansky
- 10:15-10:45 Coffee break
- 10:45 11:30 Some recent results on growth of Sobolev norms for time dependent Schrödinger evolutions- Didier Robert
- 11:45 12:30 Functional calculus for self-adjoint operators under the Kato smoothness condition Alexander Pushnitski
- 12:30-14:00 Lunch
- 14:00 14:45 Spectral asymptotics for 1D perturbations of positive compact operators and small ball probabilities for Gaussian random functions Alexander Nazarov

15:00 – 15:45 – On the linearized version of the symplectic capacity - Efim Gluskin

16:00 – 16:45 – Hadamard formula for eigenvalues of the Dirichlet and Neumann problems for elliptic operators on C<sup>1</sup> and C<sup>1</sup>,\alpha} – domains - Vladimir Kozlov

#### Wednesday 21

8:00 - 9:30 - Breakfast

9:30 – 10:15 - Many Body Localization and Anderson Model on Random Regular Graphs - Boris Altshuler

10:15-10:45 - Coffee break

10:45 – 11:30 - Trace ideal versions of the Stein-Tomas theorem - Rupert Frank

11:45 – 12:30 - Analytic definition of spin structure - Dmitri Vassiliev

12:30-14:00 - Lunch

14:00 – 14:45 – Classification and factorization of linear ordinary differential operators - Sergei Yakovenko

15:00 – 15:45 – Curved version of the Radon inversion formula - Simon Gindikin

#### 19:00 - Conference dinner

### **Thursday 22**

8:00 - 9:30 - Breakfast

9:30 − 10:15 - The Spectrum of a Harmonic Oscillator Operator Perturbed by \$\delta\$ - Interactions - Boris S. Mityagin

10:15-10:45 - Coffee break

10:45 – 11:30 – Semiclassical spectral bounds with remainder terms - Timo Weidl

11:45 – 12:30 - Maxwell operator in a cylinder with coefficients that do not depend on the longitudinal variable - Nikolai Filonov

12:30-14:00 - Lunch

14:00 – 14:45 – 45 – Sharp constants and correction terms in a class of interpolation inequalities - Alexei Ilyin

15:00 – 15:45 – Remarks on Pleijel's theorem - Thomas Hoffmann-Ostenhof

16:00 – 16:45 – Asymptotics of the ground state energy for relativistic heavy atoms and molecules - Victor Ivrii