

The Seventh Saint-Petersburg Conference in Spectral Theory
dedicated to the memory of M. Sh. Birman
Euler Institute, Saint-Petersburg, Russia

July 3-6, 2015

PROGRAMME

FRIDAY 3 July:

9:30–10:00: REGISTRATION

10:00–10:50: PAVEL EXNER (Doppler Institute for Mathematical Physics and Applied Mathematics, Prague)
Spectral transitions of Schrödinger operators with below unbounded potential channels

COFFEE BREAK

11:30–12:20: ALEXANDER SOBOLEV (University College London)
On non-smooth functions of Wiener-Hopf operators

LUNCH

14:30–15:20: EVGENI KHRUSLOV (B. Verkin Institute for Low Temperature Physics and Engineering, Kharkov, Ukraine)
Periodic Maxwell's operators with preassigned gaps in spectrum

15:30–16:20: VALERY SMYSHLYAEV (University College London)
Two-scale homogenization of high-contrast PDE systems

COFFEE BREAK

16:50–17:40: MARK MALAMUD (Institute of Applied Mathematics and Mechanics, Donetsk)
Perturbation determinants and trace formulas for pairs of operators

18:00: BOAT TRIP WITH WELCOME PARTY

SATURDAY 4 July:

10:00–10:50: YURI MATIYASEVICH (Steklov Institute, St.Petersburg)
Structure of eigenvalues and eigenvectors of certain almost triangular Hankel matrices

COFFEE BREAK

11:30–12:20: SERGEI DENISOV (University of Wisconsin, Madison)
On a problem by Steklov in the theory of orthogonal polynomials and Schrödinger conjecture

LUNCH

14:30–15:20: EVGENY ABAKUMOV (University Paris-Est)
Localization of zeros for de Branges spaces and applications to canonical systems

15:30–16:20: MICHAEL KALTENBÄCK (Vienna University of Technology)
Spectral Theorem for definitizable normal linear operators on Krein spaces

COFFEE BREAK

16:50–17:40: MIHAIL BELISHEV (Steklov Institute, St.Petersburg)
Time-domain inverse scattering problem for the 3d acoustic equation (the BC-method)

SUNDAY 5 July:

10:00–10:50: TIMOFEI SHILKIN (Steklov Institute, St.Petersburg)
On some recent advances and new challenges in the theory of the Navier-Stokes equations

COFFEE BREAK

11:30–12:20: GIANLUCA PANATI (Università degli Studi di Roma La Sapienza, Rome)
Wannier functions for periodic Schrödinger operators and harmonic maps into the unitary group

LUNCH

14:30–15:20: EVGENI KOROTYAEV (St.Petersburg State University)
Schrödinger operators on the multidimensional lattice

15:30–16:20: MICHAEL RUZHANSKY (Imperial College London)
Schatten classes and nuclearity on compact manifolds

COFFEE BREAK

YOUNG MATHEMATICIANS SESSION

16:50–17:15: YULIA PETROVA (St.Petersburg State University)
Asymptotics of eigenvalues for some integro-differential operators

17:20–17:45: NIKITA SENIK (St.Petersburg State University)
On homogenization for non-self-adjoint periodic elliptic differential operators on an infinite cylinder

17:50–18:15: ALEXANDER BOGATSKIY (St.Petersburg State University)
Hankel determinants and Painlevé XXXIV transcendent

18:30–22:00 (TBC): CONFERENCE PARTY at the EIMI

MONDAY 6 July:

10:00–10:50: JAMES RALSTON (University of California, Los Angeles)
Applications and limitations of the technique of “Gaussian Beams”

COFFEE BREAK

11:30–12:20: ROMAN NOVIKOV (CNRS, Ecole Polytechnique)
Inverse scattering without phase information

LUNCH

14:30–15:20: VLADIMIR SLOUSHCH (St.Petersburg State University)
Asymptotics of discrete spectrum of periodic Schrödinger operator perturbed by non-negative potential and related estimates of singular values for integral operators

15:30–16:20: ALEXANDER FEDOTOV (St.Petersburg State University)
Stark-Wannier resonances and cubic exponential sums