Control Theory, Integral Geometry, Inverse Problems

12-18 June 2017

Euler International Mathematical Institute, St. Petersburg, Russia

Our sponsors: Russian Foundation for Basic Research, grant No. 17-01-20036 Octopus Ltd.

12 June, Monday

9:00–9:55 Registration

9:55–10:00 Opening ceremony

Morning session, ch. J.Boman

10:00–10:40 Yu. Egorov. On the optimal form of nano-rods.

Cofee break

11:00 - 11:40 *B. Vainberg.* D-bar method for inverse two-dimensional problems and its applications.

11:45–12:25 $\,$ H.Kang. The spectral theory of the Neumann-Poincare operator and plasmon resonance.

Lunch

Evening session, ch. V.Sharafutdinov

14:15–14:55 *A.El Badia.* Some recent results on some inverse source problems: identification and stability.

Coffee break

15:15–15:55 *M.I.Ismailov.* An externally controlled problem for diffusion equation with nonlocal Wentzell boundary condition.

13 June, Tuesday

Morning session, ch. Yu.Egorov

10:00–10:40 A.A.Shkalikov. Recovering of potentials in the scale of Sobolev spaces. Cofee break

11:00 – 11:40 *M.Eller*. Stabilization of Maxwell's equation.

11:45–12:25 Rakesh. The exterior Goursat problem for the wave equation.

Lunch

Evening session, ch. G.Nakamura

14:15–14:55 A.V.Fursikov. Parabolic equation of normal type connected with 3D Helmholtz system and its nonlocal stabilization.

Coffee break

15:15–15:55 S. Avdonin Control and Inverse Problems for Differential Equations on Graphs.

14 June, Wednesday

Morning session, ch. H.Kang

10:00–10:40 *M.Di Cristo.* A stability result for quantitative photoacoustic tomography. **Coffee break**

11:00 - 11:40 V.Serov. Inverse scattering problems for perturbation of the bi-harmonic operator.

11:45–12:25 M.Salo. The attenuated geodesic X-ray transform.

Lunch, boat trip

15 June, Thursday

Morning session, ch. A.V.Fursikov

10:00–10:40 J.Boman. Stability estimates in tensor tomography.

Coffee break

Evening session, ch. R.Novikov

14:15–14:55 T.Hohage. Variational Source Conditions and Stability Estimates.

Coffee break

15:15–15:55 $\,$ A.Jollivet. Steklov zeta-invariants and a compactness theorem for isospectral families of planar domains.

BANQUET!

16 June, Friday

Morning session, ch. M.Eller

10:00–10:40 G.Nakamura. Inverse boundary value problem for identifying elasticity tensor by boundary measurements.

Coffee break

11:00 – 11:40 R.Novikov. Inverse scattering without phase information.

 $11:45{-}12:25$ V.Sharafutdinov. The Reshetnyak formula and Natterer stability estimates in tensor tomography.

Lunch

Evening session, ch. V.Agoshkov

14:15–14:55 A.V.Baev. Solution of an Inverse Scattering Problem for the Acoustic Wave Equation in Three-Dimensional Layered Media.

Coffee break

15:15–15:55 A.S.Demidov, M.A.Galchenkova. Inverse magnetoencephalography problem and its flat approximation.

17 June, Saturday

Morning session, ch. Rakesh

 $10:00-10:40 \quad V. Agoshkov. \ Statement \ and \ study \ some \ inverse \ problems \ in \ modeling \ of \ hydrophysical fields in water areas with "liquid" \ boundaries.$

Coffee break

11:00 – 11:40 *P.Kurasov.* Inverse problems for graphs.

11:45–12:25 *Ye.M.Assylbekov.* Inversion formulas and range characterizations for the attenuated geodesic ray transform.

Lunch

Evening session, ch. P.Kurasov

14:15–14:55 L.Pestov. On the boundary rigidity problem for simple manifolds. Coffee break

 $15{:}15{-}15{:}55 \quad S.A. Simonov. \ {\rm Wave \ models \ of \ Sturm-Liouville \ operators.}$

18 June, Sunday

11:00–15:00 Round table and discussions. Closing ceremony