Information about the scientific program

The conference is devoted to spectral theory, which one of the most important fields of modern mathematical physics.

Traditionally, the topics include general operator theory, differential and difference operators, scattering theory, inverse problems, periodic and ergodic operators, asymptotic methods, and applications to modern quantum physics. There are also talks devoted to interesting general analytic problems.

Most of the talks are invited. Usually we organize around eighteen 50-minutes talks and five or six 25-minite talks by young researchers. All talks by young researchers are invited, based on recommendations from known experts in spectral theory.

We plan to organize 5 talks each day (50 minutes each with 5 minutes for questions). Typical schedule:

> 10h00 -10h50: talk 1;   10h50-11h20: coffee break;   11h20-12h10: talk 2; 12h20-13h10 talk 3;   13h10-15h10: lunch; 15h10-16h00: talk 4; 16h00- 16h30: coffee break; 16h30- 17h20: talk 5 or two talks by young researchers

The list of our invited speakers is on the main page. The list of young researchers will be finalized by May.

Some invited talks:

1. Alexander Aptekarev. Selfadjoint Jacobi matrices on graphs-trees and multiple orthogonal polynomials.
2. Nikolay Filonov. Absolutely continuous spectrum for a periodic Schrodinger operator in a cylinder with the Robin boundary condition.
3. Alexander Grigorian. Heat kernels on manifolds with ends.
4. Vojkan Jaksic. What is absolutely continuous spectrum?
5. Ilya Kachkovskiy. Localization and delocalization for two interacting quasiperiodic particles.
6. Abel Klein. Manifestations of localization in the random XXZ spin chain.

7. Frédéric Klopp. Resonances for large random samples.
8. Aleksey Kostenko. Infinite Quantum Graphs.
9. Sergey Naboko. On the instability of the absolutely continuous spectra from Block Jacobi Matrices.
10. Georgi Rajkov. Pauli operators with almost periodic electromagnetic fields.
11. Hermann Schulz-Baldes. The spectral localizer of an even index pairing.
12. Jan Philip Solovej. Spectral flow and zero modes for Dirac operators with magnetic links.
13. Andrey Shkalikov. Eigenvalue Dynamics for PT-Symmetric Sturm-Liouville Operators with Physical Parameter. Solvable Models and Applications.
14. Tatyana Suslina. Homogenization of a stationnary periodic Maxwell system in a bounded domain.

Some talks by young researchers:

Yulia Meshkova. Homogenization of hyperbolic equations with periodic coefficients.
Maria Platonova. Branching random walk on Z^d.