

SPECTRAL THEORY AND GEOMETRIC ANALYSIS

CONFERENCE IN HONOR OF THE 65th BIRTHDAY OF MIKHAIL SHUBIN

July 29 - August 2, 2009

Northeastern University, Boston

Schedule

Wednesday, July 29 — 220 Shillman Hall

10:00 – 10:20 Registration

10:20 – 10:40 Opening Remarks

10:40 – 11:40 Vladimir Maz'ya (University of Liverpool and Linköping University)

Title: Higher Order Elliptic Problems in Non-Smooth Domains

Coffee

12:10 – 1:10 Ari Laptev (KTH, Stockholm and Imperial College London)

Title: Spectral inequalities for a class of hypo-elliptic operators

Lunch

3:00 – 4:00 Jochen Brüning (Humboldt University, Berlin, Germany)

Title: The signature operator on Riemannian pseudomanifolds

Coffee

4:30 – 5:30 Gregory Eskin (UCLA)

Title: Artificial Black Holes

Thursday, July 30 — 220 Shillman Hall

9:30 – 10:30 Carolyn Gordon (Dartmouth College)

Title: Inverse spectral results for Schrodinger operators on line bundles

10:40 – 11:40 Toshikazu Sunada (Meiji University, Japan)

Title: Quantum walks in view of discrete geometric analysis

Coffee

12:10 – 1:10 Peter Perry (University of Kentucky)

Title: Miura Maps and Inverse Scattering

Lunch

2:00 – 3:00 Poster Session

3:00 – 4:00 Victor Guillemin (MIT)

Title: Some inverse spectral results for the semi-classical Schroedinger operator

Coffee & Posters

4:30 – 5:30 Daniel Sternheimer (U. Bourgogne & Keio University)

Title: Deformations, Quantizations, and the Geometry of Space-Time: an Introductory Overview

Friday, July 31 — 220 Shillman Hall

9:30 – 10:30 Jean-Michel Bismut (U. Paris-Sud, Orsay, France)

Title: The hypoelliptic Laplacian and its applications

10:40 – 11:40 Richard Melrose (M.I.T.)

Title: Spectral flow and Morse fibrations

Coffee

12:10 – 1:10 Grigory Litvinov (Independent University of Moscow)

Title: The Maslov Dequantization, Tropical Mathematics, and Geometry

Lunch

3:00 – 4:00 Alexander Turbiner (UNAM, Mexico)

Title: Sextic Oscillator

Coffee

4:30 – 5:30 Andrei Gabrielov (Purdue University)

Title: Irreducibility of some spectral determinants

Saturday, August 1 — 10 Behrakis Health Sciences Center

9:30 – 10:30 Bernard Helffer (U. Paris-Sud, Orsay, France)

Title: Semiclassical analysis for the ground state energy of a Schroedinger operator with magnetic field

10:40 – 11:40 Victor Ivrii (U.Toronto, Canada)

Title: Spectral Asymptotics and Dynamics

Coffee

12:10 – 1:10 Boris Fedosov (Moscow Institute of Electronic Technology, Russia)

Title: On a spectral theorem for deformation quantization

Lunch

2:00 – 3:00 Poster Session

3:00 – 4:00 Israel Michael Sigal (U. Toronto, Canada)

Title: Mean-field limit of quantum systems of many bosons

Coffee & Posters

4:30 – 5:30 Yuri Kordyukov (Institute of Mathematics, Ufa, Russia)

Title: Adiabatic limits on foliated manifolds

6:00 – 8:30 Banquet

Sunday, August 2 — 10 Behrakis Health Sciences Center

9:30 – 10:30 Steve Rosenberg (Boston University)

Title: Characteristic classes on loop spaces and diffeomorphism groups

10:40 – 11:40 Mikhail Shubin (Northeastern University)

Title: Spectra in Analysis and Topology