Geometric Scattering and Applications

March 15-19, 2010

Monday, March 15

8:45-9:00   Caroline Green, Welcome to BIRS

9:00-9:50   C. Robin Graham, Dirichlet problem at infinity for middle degree forms on asymptotically hyperbolic manifolds and linearized 11-dimensional supergravity

10:00-10:30   Coffee Break

10:30-11:20   Andreas Juhl, On the recursive structure of GJMS-operators and Q-curvatures

11:30-12:30   A. Rod Gover, Poincaré-Einstein spaces, BGG complexes, and the curved analogue of projective polyomial systems

12:30-3:00   Lunch Break

3:00-3:30   Coffee

3:30-4:20   Kengo Hirachi, Quadratic invariants of conformal structures

4:30-5:20   Mihai Tohaneanu, Local energy estimates and Strichartz estimates on Schwarschild and Kerr spacetimes

Tuesday, March 16

9:00-9:50   Spyros Alexakis, A black hole uniqueness theorem

10:00-10:30   Coffee

10:30-11:20   Jared Wunsch, Quasinormal modes for rotating black holes

11:30-12:20   Dean Baskin, The Klein-Gordon equation on asymptotically de Sitter space

12:30-3:00   Lunch break

3:00-3:30   Coffee

3:30-4:20   Fang Wang, Radiation field for Einstein vacuum equations

4:30-5:20   Andras Vasy, Wave propagation on asymptotically de Sitter and anti-de Sitter spaces

Wednesday, March 17

9:00-9:50 Steven Zelditch, Quantum ergodic restriction theorems

10:00-10:30 Coffee

10:30-11:20 Stéphane Nonnenmacher, Quantized Poincaré maps in chaotic scattering

11:30-12:20 Clara Aldana, Ricci flow and the determinant of the Laplacian on non-compact surfaces

Free Afternoon

Thursday, March 18

9:00-9:50 Colin Guillarmou, Extension of the resolvent for geometrically finite hyperbolic manifolds

10:00-10:30 Coffee

10:30-11:20 Kiril Datchev, Quantum decay rates for manifolds with hyperbolic ends

11:30-12:20 Pierre Albin, The signature package on Witt spaces

12:30-3:00 Lunch break

3:00-3:30 Coffee

3:30-4:20 David Borthwick, Sharp geometric bounds for resonances of hyperbolic surfaces

4:30-5:20 Tanya Christiansen, A mathematical formulation of the Mahaux-Weidenmüller formula for the scattering matrix

Friday, March 19

9:00-9:50 Leonardo Marazzi, Scattering and inverse scattering for some classes of conformally compact manifolds

10:00-10:50 Dietrich Hafner, Scattering theory for Dirac fields on the Kerr metric