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 polynomial 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 Schwarzschild 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