Singularities in Geometry and Topology

Invited Speakers include:

Markus Banagl
Jean-Michel Bismut
Tullia Dymarz
Steve Ferry
Mikhail Gromov
Wolfgang Lueck
Ed Miller
Julius Shaneson
Peter Teichner
Joan Birman
Jeff Cheeger
Yakov Eliashberg
Greg Friedman
Connie Leidy
Laurentiu Maxim
Kent Orr
Dennis Sullivan
Shmuel Weinberger

This conference will also honor of Sylvain Cappell’s 60th Birthday

Time: Mar 17-20, 2008
Place: Courant Institute, 251 Mercer St. Room 109 (M,T) Room 1302 (W,Th)

Note that there will be an AMS meeting at Courant on March 15-16 that participants may well find of interest. See, in particular, http://www.math.binghamton.edu/marco/08amsss.html

Wednesday evening there will be a banquet in Sylvain’s honor. Please register for a subsidized pre-conference price at cappelliday@gmail.com. There should be some funds for graduate students and others for local and travel expenses. Please write to cappelliday@gmail.com if you wish to apply for these.

We would like acknowledge the support of the Courant Institute, Henry Laufer, and Shmuel Weinberger. In addition, we anticipate support from the National Science foundation.
Monday

9:30-10:30 Kent Orr, Embedding theory and surface topology
10:30-11 Coffee
11-12 Jeff Cheeger, Generalized differentiation and bi-Lipschitz Nonembedding
12-1:30 Lunch
1:30-2:30 Laurentiu Maxim, Hirzebruch-type invariants of complex algebraic varieties
2:45-3:15 Joan Birman, Lorenz links, twisted torus links and modular knot
3:45-4:15 Coffee
4:15 – 5:15 Greg Friedman, Intersection Homology and Poincare Duality on Homotopically Stratified Spaces
5:15 Reception

Tuesday

9:30-10:30 Markus Banagl, Homotopy Theory, Poincaré Duality for Singular Spaces and String Theory
10:30-11 Coffee
11-12 Peter Teichner, 4-dimensional manifolds with 2-dimensional fundamental group
12-1:30 Lunch
1:30-2:30 Wolfgang Lueck, On the Borel Conjecture and related topics
2:45-3:45 Connie Leidy, Higher-order degrees and obstructions on the fundamental group of algebraic curve complements
3:45-4:15 Coffee
4:15-5:15 Steve Ferry, A structure theorem for homology manifolds

Wednesday

9:30-10:30 Jean-Michel Bismut, A survey of the hypoelliptic Laplacian
10:30-11 Coffee
11:00-12 Yakov Eliashberg, Approximation of a tangential homotopy by a wrinkled isotopy.
12-1:30 Lunch
1:30-2:30 Julius Shaneson, Lattice points in a circle.
2:45-3:45 Dennis Sullivan poincare duality for combinatorial manifolds and fluid models
3:45-4:15 Coffee
4:15-5:15 Shmuel Weinberger, The Topological Work of Sylvain Cappell
6:30 Banquet at NYU, Rosenthal Pavillion, Kimmel Center corner LaGuardia Place and W. 4th St.
Thursday

9-10  Ed Miller, A Complex Valued Analytic Torsion in Geometrical and Analytical Settings
10:15-11:15  Tullia Dymarz, Tukia's theorem and the large scale geometry certain solvable groups
11:15-11:45  Coffee