# Singularities in Geometry and Topology



Invited Speakers include:

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

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
2:45-3:45  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.

<u>Thursday</u>

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