Math 666, Spring 1998
Syllabus
Topics in Geometric Analysis on Manifolds of Non-positive Curvature

Part I. Geometry of Non-positively Curved Manifolds

1. Preissmann Theorem;

2. Lawson-Yau and Gromoll-Wolf splitting theorem;

3. Rigidity Theorems of Eberlein and Gromov;

4. Visibility manifolds and Gromov's hyperbolic spaces.

Part II. Analysis on Non-positively Curved Manifolds

1. Dirichlet problem at infinity;

2. Non-positive curvature, asymptotic behavior of heat kernal and Green's function;

3. Analysis of Laplacian operators on forms of non-positively curved spaces.