1086-35-1736 **Fabrice Baudoin**, **Michel Bonnefont**, **Nicola Garofalo** and **Isidro H Munive Lima*** (imunive@math.purdue.edu), 3105 Courthouse DR W APT 2B, West Lafayette, IN 47906.

Comparison Theorem for Negatively Curved Sub-Riemannian Manifolds.

In this talk we prove a volume comparison theorem for manifolds satisfying the generalized curvature-dimension inequality introduced by Baudoin and Garofalo in the context of sub-Riemannian manifolds. In particular we establish:

•The volume doubling property;

•The Poincare inequality;

•The parabolic Harnack inequality.

The key ingredient is the study of dimensional reverse log-Sobolev inequalities for the heat semigroup and corresponding non-linear reverse Harnack type inequalities. (Received September 24, 2012)