1099-58-166        **Fabrice Baudoin\***, Purdue University. *Weitzenböck formulas and Riesz transforms on sub-Riemannian manifolds with transverse symmetries.*

In this talk we prove a Weitzenböck type formula on sub-Riemannian manifolds with transverse symmetries. As an application we derive several gradient bounds for heat equation solutions and dimension independent bounds for the Riesz transform. The results are new even in the Heisenberg group which is the simplest example of a sub-Riemannian manifold with transverse symmetries. (Received February 06, 2014)