Luca Capogna, UA, Regularity of certain minimal graphs in the sub- Riemannian Heisenberg group

Abstract: Minimal surfaces in the sub-Riemannian Heisenberg group can be constructed by means of a Riemannian approximation scheme, as limit of Riemannian minimal surfaces. We study the regularity of Lipschitz, non-characteristic minimal surfaces which arise as such limits. Our main results (joint with Citti and Manfredini) are a-priori estimates on the solutions of the approximating Riemannian PDE and the ensuing $C^ {\infty}$ regularity of the sub-Riemannian minimal surface along its Legendrian foliation.