

1015-35-18

Luca Capogna* (lcapogna@uark.edu), Department of Mathematics, University of Arkansas, Fayetteville, AR 72701. *mean curvature flow in sub-Riemannian manifolds*. Preliminary report.

I will describe recent results, some joint with Giovanna Citti and some joint with Mario Bonk concerning the evolution of hypersurfaces in a sub-Riemannian manifold (mostly Carnot groups or the Heisenberg group) moving along the direction of their "horizontal mean curvature". The corresponding PDE's are in some respects similar to the Riemannian counterpart, but with more pathologies (e.g. singular points can occur in the form of characteristic points, lack of ellipticity even along tangential directions, lack of symmetries, etc. etc.,...). (Received December 08, 2005)