

Approximation schemes for second order equations in the Heisenberg group

Speaker: Pablo Ochoa
University of Pittsburgh. PDE and Analysis Seminar

Abstract: In this talk, we provide a simple and analytical method to find approximation schemes converging to viscosity solutions of fully non-linear partial differential equations defined on the Heisenberg group. In general terms, the method provides approximations of sub-solutions and super-solutions to PDE in the Heisenberg group. If a comparison principle exists, the method provides viscosity solutions. In the talk, we shall also consider and discuss equations where the method applies, such as: the Laplace and Poisson equations, Parabolic equations involving the infinite Laplacian operator, etc.