DIMITER VASSILEV, University of New Mexico

Regularity of solutions to non-local semilinear equations related to Sobolev type embeddings on homogeneous groups

I will present regularity and asymptotic decay results for positive solutions to certain non-local equations on homogeneous Lie groups. The equations include Schrödinger equations with suitable potential and the equations for the extremals of Sobolev type inequalities. In the latter case, the considered operator can be seen as generalization of nonlocal conformally invariant operators arising in conformal and sub-Riemannian geometry. However, we work in a setting where a Hörmander type condition might not hold.