Synthetic Ricci curvature for the Heisenberg group

Nicolas Juillet (Grenoble/Bonn)

Lott and Villani and simultaneously Sturm recently introduced a property for geodesic metric measure spaces (X, d, m) that has to be understood as an uniform lower bound for Ricci curvature (which usually only make sense for Riemannian manifolds). This property called "curvature-dimension" involves mass transportation and especially the behaviour of entropy functionals on the space of probability measures of X. We will investigate what happens when X is the sub-Riemannian Heisenberg group. The property does not hold but surprisingly the weaker "measure contraction property" does.