1112-58-117 **Sean Li*** (seanli@math.uchicago.edu). *BiLipschitz decomposition for Carnot groups.*

Let $f : X \to Y$ be a Lipschitz function between metric measure spaces. A natural question one can ask is if X can be decomposed into Borel pieces $\{A_i\}$ and a junk set Z so that $f|_{A_i}$ are biLipschitz and $f(Z)$ has small (or null) measure. This has been extensively studied when X is Euclidean and a positive result holds even when Y is a general metric measure space. We present two results of this type in the nonabelian setting of Carnot groups. When X and Y are both Carnot groups, we show that this is possible to do quantitatively. On the other hand, we construct a metric space Y of positive Hausdorff 4-measure for which there is a Lipschitz surjection f from the Heisenberg group with no biLipschitz decomposition.

The second result is joint work with E. Le Donne and T. Rajala. (Received July 25, 2015)