1030-51-274 **Ben Schmidt*** (schmidt@math.uchicago.edu), 5469 S. Cornell, Chicago, MI 60615. On nearest neighbors under isometries and nearest neighbor metrics. Preliminary report.

In work in progress with Ian Biringer, we study finiteness properties for the number of nearest neighbor distances appearing in finite orbit segments of isometries and time one maps of geodesic flows in Riemannian manifolds. (Received August 05, 2007)