1084-55-348 **Andrew J Blumberg***, blumberg@math.utexas.edu, and **Itamar Gal**, **Michael A. Mandell** and **Mathew Pancia**. *Persistent Homology for Metric Measure Spaces and Topological Hypothesis Testing.*

This talk describes work studying the use of distributions of persistent homology barcodes associated to taking subsamples of a fixed size from metric measure spaces. Such distributions can be efficiently computed and provide robust invariants of metric measure spaces. These invariants also supply a basis for applying standard statistical methodology to problems in topological data analysis. (Received September 04, 2012)