

1154-68-2036 **Anna C Gilbert*** (annacg@umich.edu), 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Sparse Metric Repair*.

Suppose we are given a distance or similarity matrix for a data set that is corrupted in some fashion, find a sparse correction or repair to the distance matrix so as to ensure the corrected distances come from a metric; i.e., repair as few entries as possible in the matrix so that we have a metric. I will discuss generalizations to graph metrics, applications to (and from) metric embeddings, and algorithms for variations of this problem. I will also touch upon applications in machine learning and bio-informatics. (Received September 17, 2019)