

1165-51-38

**Sunhyuk Lim\*** ([memoli@math.osu.edu](mailto:memoli@math.osu.edu)), Columbus, OH 43210-1174, and **Facundo Memoli** and **Osman Berat Okutan**. *Some rigidity results for metric spaces via persistent homology.*

Persistence barcodes provide computable signatures for datasets. These signatures absorb both geometric and topological information in a stable manner. One question that has not yet received too much attention is: how strong are these signatures? A related question is that of ascertaining their relationship to other more classical invariants such as curvature. In this talk I will describe some results about characterizing metric spaces via persistence barcodes arising from Vietoris-Rips filtrations. Of particular interest is a relationship which we established linking persistence barcodes to Gromov's filling radius. (Received January 09, 2021)