1136-55-520 **Woojin Kim***, 100 Math Tower, The Ohio State University, Columbus, OH 43210, and **Facundo Memoli**, 100 Math Tower, The Ohio State University, Columbus, OH 43210. *Stable signatures for dynamic metric spaces via persistent homology.*

When studying flocking/swarming behaviors in animals one is interested in quantifying and comparing the dynamics of the clustering induced by the coalescence and disbanding of animals in different groups. Motivated by this we study the problem of obtaining persistent homology based summaries of time dependent metric data. In particular, we study the stability of this construction under a suitable variant of the Gromov-Hausdorff distance. (Received January 22, 2018)