

1125-55-1147 **Justin M Curry*** (curry.justin@gmail.com). *The Role of (Co)Sheaves in TDA*. Preliminary report.

Many constructions in topological data analysis can be viewed as sheaves or cosheaves: Persistence, Mapper, Vineyards, the Persistent Homology Transform, and so on. With certain niceness assumptions, these (co)sheaves are constructible and can be viewed as representations of the entrance path category, which is associated to a particular stratification of a topological space X . However, the ability to pass back to the open sets of X allows us to compare different stratifications and quiver representations. This provides a unifying framework for combining the representation theory of quivers with sampling theory, the techniques of interleaving (which provides a distance between sheaves), and density results. (Received September 15, 2016)