1145-55-2046 **Ojaswi Acharya** (oacharya@smith.edu), **Chen Li** (sli97@smith.edu), **David C Meyer** (dmeyer@smith.edu) and **Jasmine Noory*** (jnoory@smith.edu). *The variety of interleavings.* Preliminary report.

In topological data analysis, persistence modules are used to distinguish the legitimate topological features of a finite data set from noise. Interleavings between persistence modules feature prominently in the analysis. It is known that for any ϵ positive, the collections of ϵ-interleavings between two fixed persistence modules has an algebraic structure. In this project, we investigate how this structure changes when the value of ϵ increases. (Received September 24, 2018)