Leo Selker 2016-2017

Thesis Notes

Big idea: Magnitude of a metric space is large as t, some scale factor, gets large - t scales the metric, and as points get farther apart, they are "counted separately." On the other hand, hierarchical clustering records fewer clusters as r, a scale factor, gets large. What is the relationship between these two "counts of number of clusters?" Is magnitude even such a count?

Mobius inversion:

$$g(n) = sum_{d|n} f(d) \Rightarrow f(n) = \sum_{d|n} \mu(\frac{d}{n}) g(n)$$