Mark Meckes (Case Western Reserve University)

Magnitude of metric spaces and intrinsic volumes in normed spaces

Abstract: Magnitude is an isometric invariant of metric spaces which was originally motivated by category theory, and has turned out to be closely related to a wide variety of other geometric quantities, from dimension to volume to persistent homology. I will give a survey of this subject, focusing in particular on results relating magnitude to intrinsic volumes in both Euclidean and more general normed spaces, and some recent applications of these connections.