

**Title**

Equivariant Alexandrov geometry

**Abstract**

I will introduce the theory of Alexandrov geometry -- the study of metric spaces which have a lower curvature bound, but not necessarily any manifold structure. Then I will discuss how groups of isometries act on these spaces, proving some of the basic results needed to study the equivariant geometry of Alexandrov spaces. Applications include a clearer picture of how different symmetry conditions combine with positive curvature to constrain topology, as well as a result on how the geometry of a Riemannian orbifold constrains its topology. Some of the research described was carried out jointly with Catherine Searle.