

Geometry, Topology and Dynamics Seminar

Hierarchies for Relatively Hyperbolic Non-Positively Curved Cube Complexes

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Abstract: Abstract: A non-positively curved (NPC) cube complex is a combinatorial complex constructed by gluing Euclidean cubes along faces in a way that satisfies a combinatorial local non-positive curvature condition. A hierarchy is an inductive method of decomposing the fundamental group of a cube complex. Cube complexes and hierarchies of cube complexes have been studied extensively by Wise and feature prominently in Agol's proof of the Virtual Haken Conjecture for hyperbolic 3-manifolds. In this talk, I will give an overview of the geometry of cube complexes, explain how to construct a hierarchy for a NPC cube complex, and discuss applications of cube complex hierarchies to hyperbolic and relatively hyperbolic groups.

Monday, February 11 at 3:00 PM in 636 SEO