Graduate Seminar in Mathematics

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Thursday, January 28, 2016
1:00p.m., HH-3017

Introduction to Persistent Homology

Abstract:

Persistent homology is a technique that uses algebraic topology to visualize data. This talk introduces the basics of persistent homology, beginning with background about simplicial complexes and simplicial homology. We then present how persistent homology begins with a point cloud data, builds Vietoris-Rips (VR) complexes, analyzes the homology of the VR-complexes, and obtains a barcode.