

# Topology and Geometry Seminar

## Speaker:

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Monday, March 10th

2:00 p.m., HH-3017

## Persistent homology - studying the distribution of points within a point cloud

### Abstract:

The distribution of points within a point cloud often has a shape, and we would like to study it using homology. However a point cloud is a discrete set of points and so it has no interesting homological features. In this talk I will describe the method by Gunnar Carlsson, called persistent homology, in which we build a series of simplicial complexes from a point cloud and study the shape of the distribution of points using homology.