Graz University of Technology

Doktoratskolleg Discrete Mathematics

Advanced Topics Seminar

Freitag, 11.12.2015, 10:30 Uhr

Seminarraum 2 (Geometrie), 4. Stock, Kopernikusgasse 24

Maximal Persistence

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Persistent homology is a central tool in topological data analysis. It describes various structures such as components, holes, voids, etc. via a barcode (or a persistence diagram), with longer bars representing "real" structure and shorter bars representing "noise." A natural question is how long are the bars we can expect to see from data with no structure, i.e. noise. In this talk, I will introduce some recent results regarding the persistent homology of random processes, specifically, a homogeneous Poisson process. Only an understanding of basic probability will be assumed, with the required topological and probabilistic methods introduced as needed.

M. Kerber und DK-Koordinatoren