

Applied Topology in Albany (ATiA) Seminar

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TOPOLOGY AND GEOMETRY OF RANDOM CUBICAL COMPLEXES

Friday, May 7th, 2021
2:00 p.m. on Zoom

ABSTRACT. In this talk, we explore the topology and local geometry of different random cubical complex models. In the first part of the talk, we explore two models of random subcomplexes of the regular cubical grid: percolation clusters (joint work with David Aristoff), and the Eden Cell Growth model (joint work with Fedor Manin and Benjamin Schweinhart). In the second part of the talk, we study the fundamental group of random 2-dimensional subcomplexes of an n -dimensional cube; this model is analogous to the Linial-Meshulam model for simplicial complexes (joint work with Matt Kahle and Elliot Paquette).