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Random Independent Sets in Hypergraphs

In this talk I will survey some recent results on finding large independent sets in hypergraphs, mainly via probabilistic techniques. Applications to Ramsey Theory, Combinatorial Geometry and Finite Geometry will be discussed, along with some new constructions of dense hypergraphs without large independent sets. This work is in part joint with Alexandr Kostochka, Dhruv Mubayi, and in part with Jeroen Schillewaert.