Peter Keevash: A hypergraph blowup lemma

We obtain a hypergraph generalisation of the graph blow-up lemma proved by Komlós, Sarközy and Szemerédi, showing that quasirandom hypergraphs with no atypical vertices behave like complete partite hypergraphs for the purpose of embedding bounded degree subhypergraphs. There are many potential applications of our theorem to hypergraph generalisations of results for graphs that were obtained with the blow-up lemma. We illustrate the method with a hypergraph generalisation of a result of Kühn and Osthus on packing bipartite graphs.