

Quasirandom hypergraphs

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Since the foundational results of Thomason and Chung-Graham-Wilson on quasirandom graphs over 20 years ago, there has been a lot of effort by many researchers to extend the theory to hypergraphs. I will present some of this history, and then describe our recent results that provide such a generalization and unify much of the previous work. One key new aspect in the theory is a systematic study of hypergraph eigenvalues. If time permits I will show some applications to Sidorenko's conjecture and the certification problem for random k -SAT. This is joint work with John Lenz.