DEPARTMENT COLLOQUIUM

On Turan Problems for Weakly Quasirandom 3-uniform Hypergraphs

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Abstract: In recent work, we found a new proof of a conjecture due to Erds and Ss stating that large weakly quasirandom 3-uniform hypergraphs with density greater than 1/4 contain four vertices spanning at least three hyperedges. This was proved earlier by Glebov, Kral, and Volec using flag algebras and computers. The new proof is based on the hypergraph regularity method and gave rise to further developments some of which are surveyed in this talk. This is joint work with Vojtech Rodl and Mathias Schacht.

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