Combinatorics Seminar

Regular subgraphs of 3-uniform hypergraphs

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Abstract: Every graph on n vertices with at least n edges necessarily contains a 2-regular subgraph (a cycle). It is much more difficult to determine how many edges are necessary for a graph to contain a k-regular subgraph and the best known bounds so far are due to Pyber, Rdl and Szemerdi. In this talk I will present our recent attempt to answer these type of questions in the setting of 3-uniform hypergraphs.

(This research was partially done at the Banff workshop 2010 in collaboration with P. Haxell, T. Luczak, D. Mubayi, B. Nagle, Y. Person, V. Rdl, M. Schacht, J. Verstraete)

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