Combinatorics Seminar

Friday March 1, 2013 at 2PM

Room B1.01

Jan Volec

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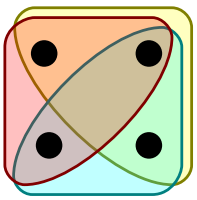
A problem of Erdős and Sós on 3-graphs

We show that for every $\varepsilon > 0$ there exist $\delta > 0$ and $n_0 \in \mathbb{N}$ such that every 3-uniform hypergraph on $n \geq n_0$ vertices with the property that

every k-vertex subset, where $k \geq \delta n$, induces at least $\left(\frac{1}{4} + \varepsilon\right)\binom{k}{3}$ edges,

contains K_4^- as a subgraph, where K_4^- is the 3-uniform hypergraph on 4 vertices with 3 edges. This question was originally raised by Erdős and Sós. The constant $\frac{1}{4}$ is the best possible.

Joint work with Roman Glebov and Daniel Král'.



There will be refreshments for the attendees.
Please bring your own mugs (for coffee/tea) if possible.
Everyone is welcome.

warwick.ac.uk/combinatorics