

COMBINATORICS SEMINAR

Large girth approximate Steiner triple systems

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One can define the *girth* of a graph to be the minimum g such that there is a set of g vertices that spans at least g edges. This definition can be extended to the setting of Steiner triple systems by defining the *girth* to be the smallest $g \geq 4$ for which there is a set of g vertices that spans at least $g - 2$ triples.

In this talk we discuss a natural randomized algorithm that produces an approximate Steiner triple system of arbitrarily large girth, i.e., with $(1/6 - o(1))n^2$ triples, answering a question of Erdős from 1973 (that was independently also asked by Lefmann, Phelps, and Rödl in 1993, and Ellis and Linial in 2013).

This is joint work with Tom Bohman: see <https://arxiv.org/abs/1808.01065>

Wednesday April 24 – 4:00 pm

Mathematics & Science Center – W301

MATHEMATICS DEPARTMENT
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