Combinatorics
Seminar

Lines, Incidences, and a Conjecture of Solymosi

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Abstract: Given any n points in the plane, the celebrated Szemeredi-Trotter theorem gives bounds on the number of lines that can each hit at least k points. J. Solymosi conjectured a significantly tighter bound with the stronger condition that the points be a grid and the lines be in general position – no parallel lines, and no three lines meet at a single point. Using methods of Elekes as well as Borenstein and Croot, we prove Solymosi's conjecture. This is joint work with Gagik Amirkhanyan, Ernie Croot, and Chris Pryby.

Friday, April 6, 2012, 4:00 pm
Mathematics and Science Center: W306

Mathematics and Computer Science
Emory University