Geometry Seminar
Tuesday, December 21, 2010
Room 201 WWH at 6:00 P.M.

Convexity and sumsets

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Let $B = \{b_1 < b_2 < \ldots < b_n\}$ be an increasing sequence of real numbers and suppose that $b_i - b_{i-1} < b_{i+1} - b_i$ for any $1 < i < n$. We call such sequences convex.

Erdós conjectured that convex sequences have large difference (and sum) sets. Elekes, Nathanson and Ruzsa proved that $|B - B| \geq c|B|^{\frac{3}{2}}$. It is not known if $|B - B| \geq c|B|^{2-\epsilon}$ holds for convex sequences or not. In this talk we show that there is a constant $\delta > 0$ such that for any convex sequence B, $|B - B| \geq c|B|^{\frac{3}{2}+\delta}$.

This is a joint work with Jozsef Solymosi.

For more information please visit the seminar website at:
`http://www.math.nyu.edu/seminars/geometry_seminar.html`.