Geometry Seminar
February 20, 2007, Tuesday, 6:00 p.m.
Room 613, Courant Institute
251 Mercer Street, New York

# The measurable chromatic number and sets with excluded distances

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**Abstract**

Given a set of excluded distances $D = \{d_1, \ldots, d_n\}$, a measurable set $A$ in the plane is said to be $D$-avoiding if the distances $d_1, \ldots, d_n$ do not occur between points in $A$. I will show that the density of $A$ is exponentially small in $n$ provided the sequence of distances grows sufficiently quickly. In particular, the measurable chromatic number of the plane can be exponential in the number of excluded distances.

For further information contact {pach,pollack}cims.nyu.edu, or visit our website: http://www.math.nyu.edu/seminars/geometry_seminar.html