

UNIVERSITY OF DELAWARE
DEPARTMENT OF MATHEMATICAL SCIENCES
DISCRETE MATHEMATICS SEMINAR

Friday March 5, 2004, 4:00pm, Room 436 Ewing Hall

Dependent random choice and its applications to Ramsey and Turán type problems

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The Probabilistic Method is a powerful tool in tackling many problems in Combinatorics. It belongs to those areas of mathematics that have experienced a most impressive growth in recent years. Ramsey Theory and Extremal Graph Theory are among the branches of discrete mathematics where this approach has proved to be especially useful. In fact, many of the strongest results in these areas in the last few decades are examples of this method.

In this talk we discuss few recent application of this method, in particular we present simple but yet surprisingly powerful probabilistic arguments which were used recently to make progress on some long standing Ramsey and Turán type problems.