Seminar on Combinatorial Computing
September 14, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

A bipartite analogue of Dilworth's theorem

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Abstract

In this talk we will prove a bipartite analogue of Dilworth's famous theorem on partially ordered sets. Let $m(n)$ be the maximum integer such that for every partially ordered set P with n elements, there are disjoints subsets A and B of P, each with cardinality $m(n)$, such that every element of A is greater than every element of B or every element of A is incomparable with every element in B. We prove that $m(n) = \Theta(\frac{n}{\log n})$. We also discuss several related Ramsey-type problems.

For further information contact Janos Pach at pach@cims.nyu.edu, or visit our website
http://www.math.nyu.edu/p̃ach/public_html/combinatorics_seminar.html