Seminar on Combinatorial Computing
October 26, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

Bounded-degree graphs have arbitrarily large geometric thickness

Edgar Troudt
CUNY Graduate Center

Abstract

The *geometric thickness* of a graph G is the minimum integer k such that there is a straight line drawing of G with its edge set partitioned into k plane subgraphs. The slope number of G, a somewhat related measure, is the minimum number of distinct edge slopes in a straight line drawing of G. In their paper, Barat, Matousek, and Wood, answer a question of Eppstein by showing that there exist regular graphs with a fixed degree, having arbitrarily large geometric thickness. This implies that there exist bounded degree graphs with arbitrarily large slope number. This answers an open problem posed by Dujmovic at al.

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