Geometry Seminar
May 13, 2008, Tuesday, 6:00 p.m.
Room 613, Courant Institute
251 Mercer Street, New York

Coloring points and rectangles

Gabor Tardos
Simon Fraser University, Burnaby

Abstract

We survey recent results oncerning the following problem: Given a set of points in the plane and a family of planar regions, for what k and l can we k-color the points so that no region containing at least l points will be monochromatic? In the related dual problem, we want to color a set of regions avoiding that a point that is contained in many regions is contained in regions of one color only. Both of these questions are related to frequency assignment problems (and to conflict-free colorings).

We will concentrate on the well-studied special case of these questions where the planar regions are axis-parallel rectangles. The results presented are joint work with Xiaomin Chen, Mario Szegedy and Janos Pach.

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