Geometry Seminar
February 28, 2006, Tuesday, 6:00 p.m.
Room 613, Courant Institute
251 Mercer Street, New York

Inside-out polytopes

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Abstract

A number of combinatorial problems can be viewed as problems of counting lattice points in a certain convex set, which may be full-dimensional or involve some linear equations. For this there is a well-developed theory. Other problems, like graph coloring, are similar but involve linear antiequations, where a quantity cannot equal a constant. Matthias Beck and I have found a way to modify the standard theory so it can apply to such problems. I will show how this is done and how it yields new insights into coloring of graphs and signed graphs, counting magic squares, etc.

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