

Combinatorics and Geometry — Seminar —

THE DEGREE OF LATTICE POLYTOPES

BENJAMIN NILL
Freie Universität, Berlin

Abstract

The number of lattice points in integer multiples of a lattice polytope has a rational generating function. Its numerator is called the h^* -*polynomial*, and its degree is the *degree* of the lattice polytope. It is well-known that the degree equals at most the dimension of the polytope, and it is smaller the more “empty” the lattice polytope is. Our main question of interest is the following: What can we say about lattice polytopes of given degree? In this talk we present recent results and ongoing work on a conjecture of Batyrev, with a simple proof in the case of a Gorenstein polytope.

Wednesday, October 10 5:15 p.m.
Room 381-U

<http://math.stanford.edu/~sampayne/seminar/>