Stanford Algebraic Geometry
— Seminar —

SYZYGIES AND THE EFFECTIVE CONE OF THE MODULI SPACE OF CURVES

GAVRIL FARKAS
University of Texas at Austin

Abstract

One of the fundamental invariants of the moduli space of curves M_g is its cone of effective divisors. The shape of this cone is predicted by the Harris-Morrison Slope Conjecture which singles out the classical Brill-Noether divisors as those having minimal slope. We will describe how to construct effective divisors on M_g that violate the Slope Conjecture for infinitely many genera. These divisors are defined in terms of syzygies of certain special linear systems on curves and they are part of a more general stratification of M_g with the smallest stratum being the locus of curves sitting on K3 surfaces.

Friday, October 15
3:15 p.m.
Room 383-N

http://math.stanford.edu/~vakil/s0405/