

Stanford Algebraic Geometry — Seminar —

SYZYGIES, SCROLLS, AND HURWITZ SPACES

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Abstract

A famous conjecture of Mark Green predicts a close relationship between the *geometry* of a curve and the *algebraic* properties of its coordinate ring. Namely, the Clifford index of the curve should equal the length of the linear part of the resolution of its coordinate ring under the canonical embedding. A conjecture of Schreyer goes beyond this by specifying that the last piece of the linear part should moreover tell you whether or not the curve has a *unique* pencil of minimal degree. We will discuss a proof of Schreyer's conjecture for general curves of prescribed gonality, obtained jointly with Gavril Farkas. Two of the key actors in this story are the scroll associated to a pencil and the geometry of Hurwitz space.

Friday, October 7

4:00 p.m.

Room 383-N