

Harvard-M.I.T. Algebraic Geometry Seminar

CASTELNUOVO THEORY VIA GRÖBNER BASES

IVAN PETRAKIEV

Harvard University

In this talk I will provide new evidence for a conjecture of Eisenbud-Harris concerning projective curves in \mathbf{P}^n of high genus with respect to the degree. By taking a general hyperplane section, the problem reduces to a question about sets of points in “uniform position” in \mathbf{P}^{n-1} failing to impose many conditions on quadrics. The new ingredient in my approach is to construct the beginning of a Gröbner basis for the homogeneous ideal of the points.

Tuesday, April 19th, 2005

3:00 p.m.

Harvard Rm 507

<http://www-math.mit.edu/ags/>