

EQUATIONS AND SYZYGIES OF THE FIRST SECANT VARIETY

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ABSTRACT. We discuss the geometry of secant varieties and the adaptation of the Koszul methods of Green and Lazarsfeld to the study of equations and their syzygies. In particular, we will outline a proof that if C is a linearly normal smooth curve embedded by a line bundle of degree at least $2g + 3 + p$ then the secant variety to the curve satisfies $N_{3,p}$.