

*Algebraic Geometry and
Commutative Algebra Seminar*



Speaker: Jeff Madsen
University of Notre Dame

Wednesday, February 26, 2014
3:00 pm
Room: 258 Hurley Hall

Title: Rees algebras of parameterized plane curves

Abstract:

If C is a rational parameterized plane curve of degree d , the bihomogeneous coordinate ring of its graph is given by the Rees algebra of an almost complete intersection ideal in $k[x, y]$. The Rees algebra can be viewed as the quotient of the symmetric algebra by its torsion ideal A . Finding a minimal generating set of A is largely an open problem, though it has been solved, for instance, for $d \leq 6$ by the work of Busé and of Kustin, Polini, and Ulrich. I will present results that can be used to find all possible bidegrees of the minimal generators of A when $d = 7$, and show how these degrees correspond to the singularities of C .