

1100-13-154

Jeff Madsen*, University of Notre Dame, 219 Hayes-Healy Center, Notre Dame, IN 46556-5641.

Rees algebras of parameterized plane curves. Preliminary report.

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 Buse 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 . (Received February 06, 2014)