

1075-13-34

Hema Srinivasan* (srinivasanh@missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. *Betti Numbers of Affine Monomial Curves.*

We will discuss a conjecture on the periodicity of the betti numbers for the homogeneous coordinate ring of the affine monomial curves. We will prove this for the monomial curves associated to an arithmetic sequence which was the main motivation for the conjecture. In a joint work with P.Gimenez and I.Sengupta, we give an explicit construction of the minimal homogeneous resolution of $R/I_{\mathbf{m}}$ where R is a polynomial ring and $I_{\mathbf{m}}$ is the binomial ideal defining the monomial curve associated to an arithmetic sequence \mathbf{m} . In fact, we show that the Betti numbers for these depend only on the initial term m_0 of the arithmetic sequence modulo n the codimension of $R/I_{\mathbf{m}}$. (Received August 11, 2011)