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**Thanh Quang Vu\*** (vqthanh@math.berkeley.edu). *Periodicity of Betti numbers of monomial curves.*

Let  $K$  be an arbitrary field. Let  $\mathbf{a} = (a_1 < \dots < a_n)$  be a sequence of positive integers. Let  $C(\mathbf{a})$  be the affine monomial curve in  $\mathbb{A}^n$  parametrized by  $t \rightarrow (t^{a_1}, \dots, t^{a_n})$ . Let  $I(\mathbf{a})$  be the defining ideal of  $C(\mathbf{a})$  in  $K[x_1, \dots, x_n]$ . For each positive integer  $j$ , let  $\mathbf{a} + j$  be the sequence  $(a_1 + j, \dots, a_n + j)$ . In this talk, we present a proof of the conjecture of Herzog and Srinivasan saying that the betti numbers of  $I(\mathbf{a} + j)$  are eventually periodic in  $j$  with period  $a_n - a_1$ . When  $j$  is large enough, we describe the betti table for the closure of  $C(\mathbf{a} + j)$  in  $\mathbb{P}^n$ . (Received August 15, 2013)