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Kirsten Eisentraeger* (eisentra@umich.edu), Department of Mathematics, University of Michigan, 2074 East Hall, Ann Arbor, MI 48109. *Hilbert's Tenth Problem for function fields of characteristic zero.*

We will discuss how elliptic curves of rank one can be used to prove undecidability of Hilbert's Tenth problem for function fields of characteristic zero, such as $\mathbf{R}(t)$ and function fields of varieties over \mathbf{C} of dimension at least two. (Received September 22, 2005)