

1096-11-1668

**Jennifer Park\***, Department of Mathematics, 77 Massachusetts Avenue, Cambridge, MA 02139.

*Effective Chabauty for symmetric powers of curves.*

While we know by Faltings' theorem that curves of genus at least 2 have finitely many rational points, his theorem is not effective. In 1985, Coleman showed that Chabauty's method, which works when the Mordell-Weil rank of the Jacobian of the curve is small, can be used to give a good effective bound on the number of rational points of curves of genus  $g > 1$ . In this talk, we draw ideas from tropical geometry to show that we can also give an effective bound on the number of rational points of  $\text{Sym}^d(X)$  that are not parametrized by a projective space or a coset of an abelian variety, where  $X$  is a curve of genus  $g > d$ , when the Mordell-Weil rank of the Jacobian of the curve is at most  $g - d$ . (Received September 16, 2013)