1086-14-2930 **Eric Edward Katz*** (eekatz@math.uwaterloo.ca), Department of C & O, 200 University Avenue West, Waterloo, ON N2L 3G1, Canada. *Geometric rank functions and rational points on curves.*

The Chabauty-Coleman method in number theory gives a method for bounding the number of rational points on particular algebraic curves. We discuss how to use an extension of the rank function of Baker-Norine for linear systems on graphs to improve the bounds for curves with bad reduction. This is joint work with David Zureick-Brown. (Received September 26, 2012)