Jeffrey D Achter* (j.achter@colostate.edu), Department of Mathematics, Colorado State University, Fort Collins, CO 80523-1874. Divisibility of function field class numbers. Preliminary report.

Much like the Cohen-Lenstra heuristics for number fields, the Friedman-Washington conjecture predicts the frequency with which a given abelian ℓ -group occurs as the ℓ -Sylow part of the class group of a function field. In this talk, I'll state and prove a version of this conjecture.

I'll also discuss recent results on the divisibility properties of the number of points on an abelian variety drawn from an arbitrary family of abelian varieties over a finite field. (Received March 07, 2006)