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**Ekin Ozman, Rachel Pries\*** (pries@math.colostate.edu) and **Colin Weir**. *The  $p$ -rank of Jacobians of cyclic covers of the projective line*. Preliminary report.

The distinction between ordinary and supersingular elliptic curves can be generalized to (Jacobians of) curves of higher genus. If  $C$  is a curve defined over  $\overline{\mathbb{F}}_p$ , its  $p$ -rank  $f$  measures the number of  $p$ -torsion points on its Jacobian or, equivalently, the length of the slope 0 segment of the Newton polygon of its  $L$ -function. For all  $g \geq 3$  and all  $p$  and all  $0 \leq f \leq g$ , Faber and Van der Geer proved that there exists a smooth curve of genus  $g$  over  $\overline{\mathbb{F}}_p$  with  $p$ -rank  $f$ . A similar result for hyperelliptic curves was proven by Glass and Pries. In this talk, we discuss a new result about  $p$ -ranks of curves which are a cyclic cover of the projective line. The proof uses the method of degeneration to the boundary of a Hurwitz space. (Received September 24, 2012)