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Darren B Glass* (dglass@gettysburg.edu), Department of Mathematics, Gettysburg College, Gettysburg, PA. *The p -torsion of hyperelliptic curves with extra automorphisms.*

This talk examines the relationship between the automorphism group of a hyperelliptic curve defined over an algebraically closed field of characteristic p and the p -rank of the curve. In the case where $p=2$, we exploit the wild ramification to analyze the ramification of hyperelliptic curves that admit extra automorphisms and use this data to impose restrictions on the genera and 2-ranks of such curves. We will also show how some of the techniques and results carry over to the case where our base field is of characteristic $p>2$. (Received September 25, 2006)