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**Colin Weir\*** ([colin.weir@cse-cst.gc.ca](mailto:colin.weir@cse-cst.gc.ca)). *Computing the  $p$ -torsion of Jacobians in characteristic  $p$ .*

Over an algebraically closed field an elliptic curve in characteristic  $p$  is either ordinary or supersingular depending on whether or not it contains a point of order  $p$ . Moreover, this fully classifies the possible  $p$ -torsion of elliptic curves as only these 2 isomorphism types can occur. In general, there are  $2^g$  possible isomorphism types for the  $p$ -torsion of an abelian variety of dimension  $g$ . We will present an algorithm to compute the isomorphism type of the  $p$ -torsion of the Jacobian of a curve of genus  $g$  in characteristic  $p$ , and present some interesting findings on the possible  $p$ -torsion types arising from hyperelliptic curves. (Received September 21, 2015)