

1042-11-15

Alvaro Lozano-Robledo and **Benjamin E. Lundell***, Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853. *Bounds for the torsion of elliptic curves over extensions with bounded ramification.*

Let E be a semi-stable elliptic curve defined over \mathbb{Q} , and fix $N \geq 2$. Let K_N/\mathbb{Q} be the maximal algebraic Galois extension of \mathbb{Q} whose ramification indices are all at most N . We show that there exists a computable bound $B(N)$, which depends only on N and not on the choice of E/\mathbb{Q} , such that the size of $E(K)_{\text{Tors}}$ is always at most $B(N)$. (Received June 20, 2008)