

1125-VN-2665 **Michael Chou*** (michael.chou@uconn.edu). *Growth of torsion points on elliptic curves from \mathbb{Q} to the maximal abelian extension of \mathbb{Q} .*

Torsion of an elliptic curve over a number field is finite due to the Mordell-Weil theorem. However, even in certain infinite extensions of \mathbb{Q} we have that torsion is finite. Ribet proved that torsion over the maximal abelian extension of \mathbb{Q} of an elliptic curve with coefficients in \mathbb{Q} is finite. In this talk, we show that the size of such torsion subgroups is in fact uniformly bounded. Further, we give a classification of all possible torsion structures an elliptic curve defined over \mathbb{Q} can obtain when base extended to the maximal abelian extension of \mathbb{Q} . (Received September 20, 2016)