

BOSTON UNIVERSITY NUMBER THEORY SEMINAR

# Divisibility questions for genus one curves

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Monday, March 20 at 4:15 pm  
111 Cummington Mall, MCS B21  
Tea and cookies in MCS 144 at 4:00 pm

**Abstract:** Genus one curves with a fixed Jacobian can be viewed as elements of the Weil-Chatelet group. We will discuss divisibility questions within this group. This leads us to analyzing the divisibility properties of the Tate-Shafarevich group. There are two related questions: 1. Are the elements of the Tate-Shafarevich group divisible within the Weil-Chatelet group? (Cassels' question.) 2. How does the Tate-Shafarevich group intersect the maximal divisible subgroup of the Weil-Chatelet group? (Bashmakov's question.) We will discuss our answers to these questions. This is joint work with Jakob Stix.