
HARRIS DANIELS, Amherst College

This talk is Galois-entangled with Álvaro Lozano-Robledo's talk

Let E be an elliptic curve defined over \mathbb{Q} . The adelic Galois representation attached to E (this object will be defined during the talk) captures all sorts of interesting information about the arithmetic of the points on $E(\overline{\mathbb{Q}})$, including data about the torsion subgroup, isogenies, and other finer invariants of the curve and its isogeny class. In this talk, and in Álvaro Lozano-Robledo's talk, we will give a summary of recent results towards the classification (up to isomorphism) of the possible adelic Galois representations that arise from elliptic curves over \mathbb{Q} . We will present some recent results of the authors and their collaborators (Álvaro Lozano-Robledo, Jackson Morrow) about the ways in which the division fields of an elliptic curve can be entangled. Our talks will be mostly self-contained, but very much related... entangled, if you will.