

Tom Fisher: On families of n -congruent elliptic curves

Elliptic curves E and E' are said to be n -congruent if their n -torsion subgroups are isomorphic as Galois modules. The elliptic curves n -congruent to a given elliptic curve are parametrised by (the non-cuspidal points of) certain twists of the modular curve $X(n)$. I will discuss methods for computing equations for these curves, and also for the surfaces that parametrise pairs of n -congruent elliptic curves.