

Séminaire de théorie des nombres

Le 20 février 2012 à 14h

On torsion fields arising from elliptic curves

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Résumé : Let E be an elliptic curve over a number field K , and n be a positive integer. In this elementary talk we consider the problem of characterizing the primes of K which are complete split in the extension $K(E[n])/K$. If K is either \mathbb{Q} or a quadratic extension of it, and $n > 2$, then we show how the above question can be answered using Hilbert Class Polynomials. This work was motivated by a question raised by Wiese and Merel.