

Using de Rham-Witt cohomology in Kedlaya's algorithm

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Abstract

In 2001, Kedlaya has introduced a p -adic algorithm to count points on a hyperelliptic curve over a finite field of odd characteristic. This algorithm has since been generalized to various classes of curves, and varieties. It employs Monsky-Washnitzer cohomology, which requires one to compute a lift of the Frobenius. In this talk, we will explain how this part of the algorithm might be removed by considering de Rham-Witt cohomology instead. This is a work in progress.