
GARRETT PALUCK, Simon Fraser University
Hensel Lifting Dense Bivariate Polynomials

We present a new algorithm for performing linear Hensel Lifting of bivariate polynomials over a finite field. The sequential version of our algorithm has a running of $O(nd^3)$ for lifting n univariate polynomials of degree d with respect to a bivariate polynomial of degree d in both variables, assuming that we are using classical polynomial multiplication.