

The main conjecture for CM elliptic curves at supersingular primes

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Abstract. The main conjecture of elliptic curves relates an algebraic p -adic L -function to an analytic p -adic L -function. For CM curves, by work of Karl Rubin, the main conjecture for primes of ordinary reduction has been known since the early ninties. However, in the supersingular case the p -adic L -functions are more complicated and Rubin's original arguments do not clearly apply. Using Kobayashi's theory of restricted Selmer groups, we offer a proof (joint with Karl Rubin) of this main conjecture in the supersingular case.

