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Yukako KEZUKA . On the conjecture of Birch and Swinnerton-Dyer for certain elliptic curves with complex multiplication.

Friday, June 28, 2019 10:15 AM (1 hour)

Abstract: This talk will describe recent joint work in progress with J. Coates, Y. Li and Y. Tian. Let K be the imaginary quadratic field $\mathbb{Q}(\sqrt{-q})$, where q is any prime congruent to 7 modulo 16. Let A be the Gross curve defined over the Hilbert class field H of K , with complex multiplication by the ring of integers of K . In their most recent work, Coates and Li found a large family of quadratic twists E of A whose complex L -series $L(E/H, s)$ does not vanish at $s=1$. We will discuss the p -part of the Birch and Swinnerton-Dyer conjecture for these curves for every prime p which splits in K (in particular, this includes $p=2$).