

Speaker: Alina Cojocaru

Title: Frobenius fields for elliptic curves

Abstract: Let E be an elliptic curve defined over \mathbb{Q} . For a prime p of good reduction for E , let π_p be the p -Weil root of E and $\mathbb{Q}(\pi_p)$ the associated imaginary quadratic field generated by π_p . In 1976, Serge Lang and Hale Trotter formulated a conjectural asymptotic formula for the number of primes $p < x$ for which $\mathbb{Q}(\pi_p)$ is isomorphic to a fixed imaginary quadratic field. I will discuss progress on this conjecture, in particular an average result confirming the predicted asymptotic formula.