Math 209 - Number Theory

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Bad reduction of genus 3 curves with complex multiplication

Abstract:
Let C be a smooth, absolutely irreducible genus-3 curve over a number field M. Suppose that the Jacobian of C has complex multiplication by a sextic CM-field K. Suppose further that K contains no imaginary quadratic subfield. We give a bound on the primes p of M such that the stable reduction of C at p contains three irreducible components of genus 1.
Joint work with Bouw, Cooley, Lauter, Manes, Newton, Ozman.

Host: Kiran Kedlaya

Thursday, January 8, 2015
2:00 PM
AP&M 7421