

ALGEBRA
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Selmer groups of elliptic curves

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Abstract: Recently, Poonen and Rains proposed heuristics for the distributions of Selmer groups of elliptic curves. Work dating back to Heath-Brown in 1994 suggests that these heuristics should be satisfied within quadratic twist families of elliptic curves as well. I will be presenting results of Mazur, Rubin, and myself showing that, after a parity adjustment, these heuristics are satisfied within quadratic twist families of elliptic curves with an S_3 2-division field. I will also explain how our work challenges the conventional wisdom of Goldfelds conjecture about how ranks are distributed within quadratic twist families of elliptic curves over general number fields.

Wednesday, March 6, 2013, 3:00 pm
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MATHEMATICS AND COMPUTER SCIENCE
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