Abstract:
Recently, there's been a lot of talk about a result of Fiorilli, relating Chebyshev bias for elliptic curves and ranks of elliptic curves, during coffee hour. At the time of discussion all we had at our disposal was a vague abstract from a talk that Fiorilli gave at AMS in San Diego, so I had a hard time figuring out what was going on. As luck would have it, few weeks ago, I saw a talk by William Stein relating Chebyshev bias and ranks of elliptic curves, and this past week Fiorilli sent a preprint to Farzad. This talk will try to summarize all of these recent developments. In particular, I will describe what we mean by Chebyshev's bias for elliptic curves, and how this bias is related to the (analytic) rank of an elliptic curve.