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Barry C Mazur* (mazur@math.harvard.edu). *Arithmetic statistics of central zeroes of L -functions of the symmetric n -th powers of a given automorphic form.*

Given an elliptic curve over the rational numbers, and letting p range through prime numbers, how often is $p + 1$ an over-count or an under-count for the number of rational points on the curve modulo p ? The rough answer is 50/50, but for finer statistics it is useful to know about the “zeroes” alluded to in the title. Here, computation can even outstrip theory in that people have algorithms to make such computations whether or not the holomorphicity of the L -functions in question have been proved. I have no new results here, but my aim in twenty minutes, is to advertise some conjectures (and some recent work) regarding this problem that suggest interesting computational projects. (Received September 22, 2012)