

1050-11-144

Russell Prime* (prime@math.uconn.edu), Department of Mathematics, University of Connecticut, 196 Auditorium Rd, U-3009, Storrs, CT 06269. *Averages of L -functions over Quadratic Function Fields.*

The problem of averaging quadratic L -functions dates back to Gauss, who (essentially) conjectured an average value for the class numbers of quadratic fields, which is connected to the the average of certain quadratic L -functions at $s = 1$. We will discuss a formula for the average value of L -functions associated to a set of quadratic function fields ramified at one finite place and infinity, which are analogous to the imaginary quadratic fields $\mathbf{Q}(\sqrt{-p})$ for a prime number p . (Received March 02, 2009)