1145-11-546 **Wanlin Li***, UW-Madison Department of Mathematics, Van Vleck Hall, 480 Lincoln Drive, Madison, WI 53706. *Vanishing of Hyperelliptic L-functions at the Central Point.*

We obtain a lower bound on the number of quadratic Dirichlet L-functions over the rational function field which vanish at the central point $s = 1/2$. This is in contrast with the situation over the rational numbers, where a conjecture of Chowla predicts there should be no such L-functions. The approach is based on the observation that vanishing at the central point can be interpreted geometrically, as the existence of a map to a fixed abelian variety from the hyperelliptic curve associated to the character. (Received September 09, 2018)