

The reciprocity law for the twisted second moment of Dirichlet L -functions over rational function fields

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We investigate the reciprocity law for the twisted second moments of Dirichlet L -functions over rational function fields, corresponding to two irreducible polynomials in $F_q[t]$, where F_q is a finite field with q elements. This formula is the analogue of the formulas for Dirichlet L -functions over the field of rational numbers obtained by B. Conrey and M. Young.