

On Shintani's invariants for totally real number fields

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Abstract

For a Dirichlet L -Function $L(s, \chi)$ of a totally real field, the vanishing order at $s = 0$ is determined by the infinite component of the character χ ('even or odd' at each real place). In particular, when the order is one and $\chi \neq 1$, there is a unique real place at which χ is even. In this talk, we present a relation between that place and the derivative $L'(0, \chi)$, which is equivalent to a formula for Shintani's ray class invariants.