

ON THE VALUE-DISTRIBUTION OF EPSTEIN ZETA-FUNCTIONS

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Abstract

We investigate the value-distribution of Epstein zeta-functions $\zeta(s; \mathcal{Q})$, where \mathcal{Q} is a positive definite quadratic form in n variables. We prove an asymptotic formula for the number of c -values, i.e., the roots of the equation $\zeta(s; \mathcal{Q}) = c$, where c is any fixed complex number. Moreover, we show that, in general, these c -values are asymmetrically distributed with respect to the critical line $\operatorname{Re} s = \frac{n}{4}$. This complements previous results on the zero-distribution [30].

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Key words. Epstein zeta-functions, quadratic forms, value-distribution, Nevanlinna theory.