

Kurt Falk: Conformal measures associated to ends of hyperbolic manifolds

Let Γ be a non-elementary Kleinian group acting on the closed n -dimensional unit ball and assume that its Poincaré series converges at the exponent α . Let M_Γ be the Γ -quotient of the open unit ball. We consider certain families $E = \{E_1, \dots, E_p\}$ of open subsets of M_Γ such that M_Γ minus the union of all E_i is compact. The sets E_i are called ends of M_Γ and E is called a complete collection of ends for M_Γ . We show that we can associate to each end in E a conformal measure of dimension α such that the two measures corresponding to different ends are mutually singular if non-trivial. Each conformal measure for Γ of dimension α on the limit set $\Lambda(\Gamma)$ of Γ can be written as a sum of such conformal measures associated to ends in E . In dimension 3, our results overlap with some results of Bishop and Jones.