Arithmetic properties of coefficients of Maass Poincaré series of half-integral weight

K. Bringmann
`bringman@math.wisc.edu`
Department of Mathematics
University of Wisconsin
Van Vleck Hall
Madison, WI 53706
USA

Abstract

We generalize a result of Zagier, describing the duality of weakly holomorphic modular forms of weight 1/2 and 3/2. We show that Zagier's result is a special case of a generic duality for general weight. For this we consider Maass Poincaré series and conclude the duality by comparing Fourier coefficients. Moreover we write these coefficients as traces of singular moduli. As a plus we obtain exact formulas for these traces.

This is joint work with Ken Ono.