

J. Mashreghi, **Hilbert transform of  $\log|f|$** , *Proc. Am. Math. Soc.*, 130 (2002), 683–688.

**Abstract**

There are two general ways to evaluate the Hilbert transform of a function of real variable  $u(x)$ . We can extend  $u$  to a harmonic function in the upper half plane by the Poisson integral formula. Non-tangential limit of its harmonic conjugate exists almost everywhere and is defined to be the Hilbert transform of  $u(x)$ . There is also a singular integral formula for the Hilbert transform of  $u(x)$ . It is fairly difficult to directly evaluate the Hilbert transform of  $u(x)$ . In this paper we give an explicit formula for the Hilbert transform of  $\log|f|$ , where  $f$  is a function in the Cartwright class.