A NEW IMPROVED FORM OF THE HILBERT INEQUALITY AND ITS APPLICATIONS

XUHEMEI GAO AND MINGZHE GAO

Abstract. In this paper, it shows a new improved form of the Hilbert inequality by introducing a proper weight function $\Omega(\lambda,x)$ with a parameter $\lambda (\lambda > \frac{1}{2})$. As applications, a new refinement of Widder’s inequality and an extension of Hardy-Littlewood’s inequality are given.

Keywords and phrases: Hilbert inequality, parameter, Widder inequality, Hardy-Littlewood inequality.

REFERENCES