REVERSE HARDY–TYPE INEQUALITIES FOR SUPREMAL OPERATORS WITH MEASURES

RZA MUSTAFAYEV AND TUÇE ÜNVER

Abstract. In this paper we characterize the validity of the inequalities

$$\|g\|_{p,(a,b),\lambda} \leq c \|u(x)\|_{\infty,(a,b),\mu} \|g\|_{q,(a,b),\nu}$$

and

$$\|g\|_{p,(a,b),\lambda} \leq c \|u(x)\|_{\infty,(a,x),\mu} \|g\|_{q,(a,b),\nu}$$

for all non-negative Borel measurable functions $g$ on the interval $(a,b) \subseteq \mathbb{R}$, where $0 < p \leq +\infty$, $0 < q \leq +\infty$, $\lambda$, $\mu$ and $\nu$ are non-negative Borel measures on $(a,b)$, and $u$ is a weight function on $(a,b)$.


Keywords and phrases: Supremal operator, reverse Hardy-type inequality, Borel measures, weight functions, discretization.

REFERENCES