

MULTIVARIATE HARDY TYPE INEQUALITIES ON MONOTONE FUNCTIONS

SORINA BARZA
(University of Karlstad)

We present the necessary and sufficient conditions for the boundedness of the multidimensional Hardy operator on Lebesgue spaces restricted to the cone of positive decreasing functions on each variable. We will give some properties of the new B_p classes and present some connections of our results with the normability property of multidimensional analogue of Lorentz spaces. The talk is based on the paper “Hardy’s inequalities for monotone functions on partly ordered measure spaces”, joint work with N. Arcozzi, J.L. Garcia-Domingo, J. Soria.