MARCINKIEWICZ FUNCTIONS WITH HARDY SPACE KERNELS

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Abstract. In this paper we prove $L^p$ estimates of Marcinkiewicz integral operators with kernels in the Hardy space and supported on general subvarieties. The considered subvarieties are of the type that carries partially the polynomial behavior as well as the behavior of convex functions. Results obtained in this paper improve as well as generalize known results.


Keywords and phrases: Marcinkiewicz integrals, rough kernels, Hardy space, convex functions, Fourier transform, area integral, Littlewood-Paley $g^*_λ$ functions.

REFERENCES