

***n*-Dimensional Hankel transform and complex powers of Bessel operator**

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Pages 897-911 | Received 02 Apr 2007, Published online: 07 Dec 2007

Abstract

In this paper, we study a version of the n -dimensional Hankel transform on certain spaces \mathcal{H}_μ which were studied in [Molina, S., 2003, A generalization of the spaces \mathcal{H}_μ and \mathcal{H}'_μ and the space of multipliers. Actas del VII Congreso Dr. Antonio Monteiro, pp. 49–56.]. Moreover, we introduce an n -dimensional generalization of Bessel operator and we have studied its properties in relation to the Hankel transform. Moreover, we study some application to the study of the fractional powers of Bessel operator on $L^2(\mathbb{R}_+^n)$.