

ON FRACTIONAL POWERS OF THE DUNKL LAPLACIAN

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ABSTRACT

In this talk we will provide a singular integral formula for fractional powers of the Dunkl Laplacian $-(-\Delta_k)^{\alpha/2}$, with $0 < \alpha < 2$, by the use of Bochner's subordination. We will characterize the domain of definition of the operator $-(-\Delta_k)^{\alpha/2}$ on several function spaces and discuss the convergence of the singular integral in the pointwise sense. Basic properties of the heat and potential kernels of $-(-\Delta_k)^{\alpha/2}$ will also be described.

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