Smoothness of the Dunkl analytic functions

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Abstract. For the reflection group W associated with a finite root system and a W-invariant weight function ω_κ Dunkl introduced a differential-difference operators T_j, $j = 1, \ldots n$, and the Dunkl Laplacian $\Delta_\kappa = \sum_{j=1}^n T_j^2$. A continuous function on a W-invariant set Ω is called Dunkl analytic if its mean value function over balls in Ω of radius R with respect to the measure $\omega_\kappa(x)dx$ is convergent for small $R > 0$. During the talk we shall show that Dunkl analytic functions are smooth and real analytic in the case $W = \mathbb{Z}_2^n$.