

# REPRESENTATION-VALUED DUNKL EIGENFUNCTIONS

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## ABSTRACT

Given a reflection group  $W$  on a vector space  $V$  and a representation  $E$  of  $W$ , the space of formal analytic functions from  $V$  to  $E$  carries an action of Dunkl operators which reduces to the usual one in case  $E$  is the trivial one-dimensional representation of  $W$ . Fixing potential eigenvalue (a point in the dual space  $V^*$ ), the corresponding space of generalized formal analytic eigenfunctions for the Dunkl operators is of interest in representation theory. I will present an automatic convergence theorem for these generalized eigenfunctions that implies that they are all in fact entire, and indicate how the result applies to the representation theory of rational Cherednik algebras.

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