

# Mixed norm estimates for Cesàro means associated with Dunkl–Hermite expansions

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ABSTRACT: In this talk we would like to present some recent results on mixed norm estimates for the Cesàro means associated with Dunkl–Hermite expansions on  $\mathbb{R}^d$ . These expansions arise when one consider the Dunkl–Hermite operator (or Dunkl harmonic oscillator)  $H_\kappa := -\Delta_\kappa + |x|^2$ , where  $\Delta_\kappa$  stands for the Dunkl–Laplacian. It is shown that the desired mixed norm estimates are equivalent to vector-valued inequalities for a sequence of Cesàro means for Laguerre expansions with shifted parameter. In order to obtain the latter, we develop an argument to extend these operators for complex values of the parameters involved and apply a version of three lines lemma. This is a joint work with Pradeep Boggarapu and Luz Roncal.