

MIXED NORM ESTIMATES FOR THE RIESZ TRANSFORMS ON $SU(2)$

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Abstract: In this paper we prove mixed norm estimates for Riesz transforms on the group $SU(2)$. From these results vector valued inequalities for sequences of Riesz transforms associated to Jacobi differential operators of different types are deduced.

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Key words: Riesz transforms, the group $SU(2)$, Jacobi polynomials, Jacobi differential operator, mixed norm inequalities.