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COMMUTATORS OF VECTOR-VALUED INTRINSIC SQUARE FUNCTIONS ON VECTOR-VALUED GENERALIZED MORREY SPACES

Abstract

In this paper, we will obtain the strong type and weak type estimates for vector-valued analogues of intrinsic square functions in the generalized Morrey spaces $M^{\Phi,\varphi}(l^2)$. We study the boundedness of intrinsic square functions including the Lusin area integral, Littlewood-Paley g-function and g^*_λ -function and their commutators on vector-valued generalized Morrey spaces $M^{\Phi,\varphi}(l^2)$. In all the cases the conditions for the boundedness are given either in terms of Zygmund-type integral inequalities on $\varphi(x,r)$ without assuming any monotonicity property of $\varphi(x,r)$ on r.