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SUFFICIENCY AND DUALITY OF SET-VALUED OPTIMIZATION PROBLEMS VIA HIGHER-ORDER CONTINGENT DERIVATIVE

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Abstract. In this paper, we study set-valued optimization problems via higher-order contingent derivative and establish the sufficient Karush-Kuhn-Tucker (KKT) optimality conditions under generalized convexity assumptions. We also prove weak, strong and converse duality theorems of Mond-Weir, Wolfe and mixed types. As a special case, our results coincide with the existing ones available in vector optimization.

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