Lagrange Multipliers Theorem and Applications in Mathematical Programming

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Abstract: We prove a discrete implicit mapping theorem and apply it to extend the results in [1] to the case of vector constraint functions. Our results can be applied to functions which are not C^1-Frechet differentiable neither Lipschitz continuous, even they are not continuous. Applying these results, we extend some results in [2].

References:

[1] L.H. An, P.X. Du, D.M. Duc and P.V. Tuoc, *Lagrange multipliers for functions derivable along directions in a linear subspace*, Proc. Amer. Math. Soc.**133** (2005), 595-604.

[2] C.R. Bector, S. Chandra and Abha,*On incomplete Lagrange function and saddle point optimality criteria in mathematical programming* , J. Math. Anal. Appl. **251**(2000), 2-12.

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