

# On quasidifferentiable mathematical programs with equilibrium constraints

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## Abstract

The aim of this paper is to study mathematical programs with equilibrium constraints [2] involving quasidifferentiable functions [1] and to synthesize suitable optimality conditions. We derive Fritz-John (FJ) and Karush-Kuhn-Tucker (KKT) type necessary optimality conditions at an optimal point in the framework of the quasidifferentiable analysis. Further, we prove several sufficient optimality conditions for a stationary point to be an optimal solution of the quasidifferentiable mathematical program with equilibrium constraints under suitable choice of generalized convex functions.

## References

- [1] DEMYANOV, V.F. & RUBINOV A.M., On Quasidifferentiable Functionals, *Soviet Mathematics Doklady* **21** : 14 – 17, 1980.
- [2] LUO Z.Q., PANG J.S., & RALPH D., Mathematical programs with equilibrium constraints, *Cambridge University Press*, 1996.

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