## Quasi efficient solutions in multiobjective optimization

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## Abstract

This talk focuses on the notion of quasi efficient solution in the setting of a vector optimization problem between finite dimensional spaces whose preference structure is defined by a pointed closed convex cone. Namely, by considering a new quasi efficiency concept, it is showed that this kind of solutions allow approximating weak efficient solutions of the problem. In addition, linear scalarization results are stated, which characterize weak quasi efficient solutions under certain convexity assumptions through quasi solutions of associated scalar optimization problems. The results are mainly derived by basic variational mathematical tools and clarify and generalize many others of the literature.

## References

- [1] GUTIÉRREZ C., Further results on quasi efficient solutions in multiobjective optimization, *J. Nonlinear Var. Anal.*, in press.
- [2] LORIDAN P., Necessary conditions for ε-optimality, Math. Programming Stud.
  19: 140 152, 1982.

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