

**Bonnell, Henri**

**Optimality conditions for the semivectorial bilevel optimization problem.** (English)

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Necessary optimality conditions for the optimistic bilevel programming problem with a parametric convex multiobjective programming problem in the lower level are derived. The optimality conditions use the contingent cone to the graph of the mapping of (weakly or properly) efficient solutions of the lower level problem which in general is difficult to compute. For the case of a parametric linear multiobjective lower-level problem the obtained conditions can be formulated as Karush-Kuhn-Tucker type conditions.

Reviewer: [Stephan Dempe \(Freiberg\)](#)

**MSC:**

[90C29](#) Multi-objective and goal programming

[90C46](#) Optimality conditions and duality in mathematical programming

[90C48](#) Programming in abstract spaces

[91A65](#) Hierarchical games (including Stackelberg games)

Cited in **18** Documents

**Keywords:**

[bilevel programming](#); [necessary optimality conditions](#); [contingent cone](#)

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