Strong KKT type conditions for nonsmooth semi-infinite multi-objective optimization problems. (Chinese. English summary) [Zbl 07404461]

Summary: In this paper, we consider a class of nonsmooth semi-infinite multi-objective optimization problems. By using Clarke subdifferential and generalized Guignard constraint qualification (GGCQ), we establish strong Karush-Kuhn-Tucker (KKT) necessary conditions for efficient solutions of nonsmooth semi-infinite multi-objective optimization problems. Further, the sufficient conditions for (weak) efficient solutions are proved under conditions of \( \eta \)-quasi-invexity and (strictly) \( \eta \)-pseudo-invexity.

MSC:
90C46 Optimality conditions and duality in mathematical programming
90C29 Multi-objective and goal programming
90C34 Semi-infinite programming

Keywords:
semi-infinite multi-objective optimization; Clarke subdifferential; efficient solution; strong KKT condition