论文

OPTIMALITY CONDITIONS FOR NONCONVEX BILEVEL PROGRAMMING PROBLEMS

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摘要   In this paper, we derive an exact penalty function for nonconvex bilevel programming problem based on its KS form. Based on this exact penalty function a sufficient condition for KS to be partially calm is presented and a necessary optimality condition for nonconvex bilevel programming problems is given. Some existing results about the differentiability of the value function of the lower level programming problem are extended and a sufficient condition for CRCQ to hold for VS form of BLPP with linear lower level programming problem is also given.

关键词   Optimality conditions, nonconvex bilevel

分类号

Abstract In this paper, we derive an exact penalty function for nonconvex bilevel programming problem based on its KS form. Based on this exact penalty function a sufficient condition for KS to be partially calm is presented and a necessary optimality condition for nonconvex bilevel programming problems is given. Some existing results about the differentiability of the value function of the lower level programming problem are extended and a sufficient condition for CRCQ to hold for VS form of BLPP with linear lower level programming problem is also given.

Key words   Optimality conditions   nonconvex bilevel programming problem   exact penalty function value function

DOI:

通讯作者