

论文

## OPTIMALITY CONDITIONS FOR NONCONVEX BILEVEL PROGRAMMING PROBLEMS

LIU Guoshan, HAN Jiye

Institute of Aolied Mathematics, Academia Sinica, Beijing 100080, China

收稿日期 修回日期 网络版发布日期 接受日期

**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

## OPTIMALITY CONDITIONS FOR NONCONVEX BILEVEL PROGRAMMING PROBLEMS

LIU Guoshan, HAN Jiye

Institute of Aolied Mathematics, Academia Sinica, Beijing 100080, China

**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

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中 包含“Optimality conditions, nonconvex bilevel”的 相关文章](#)
- ▶ [本文作者相关文章](#)
- [LIU Guoshan](#)
- [HAN Jiye](#)