

论文

## 一类非线性两级整数规划问题的全局优化方法

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摘要 本文研究了整数规划连续化的途径,

对一类非线性两级整数规划问题的上级规划连续化以后采用模拟退火算法;

其对应的下级规划问题采用离散搜索法求解,

从而给出了求解一类非线性两级整数规划问题的一种全局优化算法,

并通过算例验证了该算法是有效的.

关键词 [二级整数规划](#) [连续化](#) [模拟退火算法](#) [离散搜](#)

分类号

## A GLOBAL OPTIMIZATION METHOD FOR A CLASS OF NONLINEAR BILEVEL INTEGER PROGRAMMING

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**Abstract** A nonlinear integer bilevel programming is well tackled by means of a new global optimization method proposed herein. The proposed method is performed within a two-level frame. The upper-level problem is first made continuity, and the continued problem is solved using the simulated annealing algorithm. On the other hand, given the information from the upper level, the lower level programming is easy solved after being changed into a non-constrained optimization problem and using a discrete searching technique. The resultant solution from the proposed method is the global optimum. The new method is demonstrated by a numerical example, with the solution satisfied and the method well verified.

**Key words** [The bilevel integer programming](#) [continuity](#) [simulated annealing algorithm](#) [discrete searching metho](#)

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