

Название публикации:

Nonlinear Resolving Functions for the Travelling Salesman Problem

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Сведения об издании:

Automation and remote control

Том: 74 Выпуск: 6 Стр.: 978-994

DOI: 10.1134/S0005117913060088

Опубликовано: JUN 2013

Тип документа: Article

Аннотация:

We propose two approaches to finding lower bounds in the traveling salesman problem (TSP). The first approach, based on a linear specification of the resolving function $\phi(t, y)$, uses a two-index TSP model in its solution. This model has many applications. The second approach, based on a nonlinear specification of the resolving function $\phi(t, y)$, uses a single-index TSP model. This model is original and lets us significantly reduce the branching procedure in the branch-and-bound method for exact TSP solution. One cannot use the two-index TSP model here due to the nonlinear specification of the resolving function $\phi(t, y)$.

Ключевые слова:

Computing algorithms