

Oberseminar Theoretische Informatik
Sommersemester 2008

Tobias Berg

Reoptimization of MaxTSP: Changing single edge weights

Monday, July 14 at 2pm (c.t.) in room 3319 (Ernst-Abbe-Platz 2, floor 3).

We consider the following optimization problem: Given an instance of an optimization problem and some optimum solution for this instance, we want to find a good solution for a slightly modified instance. In this context, we examine the MaximumTravellingSalesperson problem (MaxTSP), as well as its metric version, with respect to modifications that involve changes of single edge weights. We show that if we increase the weight of an edge then reoptimization leads to a $5/4$ -approximation for MaxTSP. For the metric version of MaxTSP we show existence of a PTAS when decreasing or increasing the weight of an edge.

Homepage:

<http://theinfl.informatik.uni-jena.de/teaching/ss08/oberseminar-ss08>