

Oberseminar Theoretische Informatik
Sommersemester 2008

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Approximating Alternative Solutions

Monday, June 23 at 2pm (c.t.) in room 3319 (Ernst-Abbe-Platz 2, floor 3).

In this talk we will review some results on the approximability of alternative solutions for NP problems. In particular, we show that approximating the second best solution is in many cases, such as MAX CUT, MAX SAT, MINIMUM STEINER TREE, and others, substantially easier than approximating a first solution. We prove that our polynomial-time approximation scheme for the second best solution of MINIMUM STEINER TREE is optimal. In contrast we also argue that for the problems MINIMUM INDEPENDENT DOMINATING SET and MINIMUM TRAVELING SALESPERSON a given optimal solution does not simplify finding a second best solution.

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