FMI, CS, Master I
Winter Term 2015/2016
Techniques of Combinatorial Optimization
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21.01.2016

Seminar 4

(S4.1) Let $N = (D, c, s, t)$ be a flow network with the property that all capacities are even natural numbers. Prove that the value of the maximum flow is even.

(S4.2) Let $D = (V, A)$ be a digraph. Assume that $v \in V$ and $f_1, \ldots, f_n : A \to \mathbb{R}$ are mappings satisfying the flow conservation law at v. Then any linear combination of $f_1, \ldots, f_n$ satisfies the flow conservation law at v.

(S4.3) Prove Proposition 3.4.2..

(S4.4) For any s-t path P in D, prove that χ^P satisfies the flow conservation law at every $v \neq s, t$ and that value$(\chi^P) = 1$.