



Assignment 6, Selected Topics in Combinatorial Optimization, Summer term 2014

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Due: 28 May 2014

Exercise 6.1 (10 Points) Let $G = (V, E)$ be an undirected graph with $T \subset V$, $|T|$ even and let $F \subseteq E$. Show that

- F has nonzero intersection with every T -join if and only if F contains a T -cut
- F has nonzero intersection with every T -cut if and only if F

contains a T -join.

Exercise 6.2 (10 Points) Let $G = (V, E)$ be a graph with $F \subseteq E$. Show that there is a set A with $F \subseteq A \subseteq E$ such that (V, A) is an Eulerian graph if and only if G contains no cut B with $B \subseteq F$ and B odd.