

## Homework for CS 2510: Approximation Algorithms

Due May 4, 2018, at 11:00 am at fourth floor receptionist's desk

For each of the following optimization problems, we studied an approximation algorithm that involved solving a linear program. You are to show how finding an approximately optimal solution to that linear program can be fit in to the framework discussed in class and outlined in notes

`Young-packing-covering-notes.pdf` in the Dropbox folder. Describe how to find an optimal solution to the relaxation and state and justify a running-time bound for the approximation scheme.

1. Group Steiner for rooted trees (see the paper `group-Steiner` in Dropbox folder).
2. Multicut (see Section 8.3 in the textbook)
3. Integer multicommodity flows (see Section 5.11 in the textbook)