

Applied Convex Optimization, EE4530, 2015

Homework Set 3

Exercise 1. [2pt.]

Solve Exercise 4.1 of Boyd, Vandenberghe, CO.

Exercise 2. [3pt.]

Solve Exercise 4.5 of Boyd, Vandenberghe, CO.

Exercise 3. [1pt.]

(*Matlab*) Download the Yalmip/SeDuMi (or CVX) package for Matlab and get acquainted with it. Solve the random generated instances of LP and QP of Homework set 2 with Yalmip/SeDuMi (or CVX). Comment on computational time vs. n , also in comparison with *linprog* and *quadprog*.

Exercise 4. [2pt.]

Solve Exercise 4.26 of Boyd, Vandenberghe, CO. In addition, (*Matlab*), generate random instances of the problem in point (a) and solve it via Yalmip/Sedumi (or CVX) for different values of m . Comment on the computational time varying m .

Exercise 5. [2pt.]

Solve Exercise 4.28 of Boyd, Vandenberghe, CO. In addition, (*Matlab*), generate random instances of the problem in point (b) or (c) and solve it via Yalmip/Sedumi (or CVX) for different values of n . Comment on the computational time varying n .