

Problem Set 4

1. Consider Example 1 in Lecture 5 (page 41)

1.a. Rewrite the SOS SDP in the standard form.

1.b. Rewrite the Moment SDP in the standard form.

1.c. Show that SOS SDP and Moment SDP are dual.

1.d. Write the equivalent problem in terms of probability measures and put it in the form of standard conic program.

1.e. Follow the steps explained in Appendix I of Lecture 5, to obtain the dual problem of 1.d.

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