

Fourth Homework Assignment for Math 496 and 827

Due: Friday, March 13th, in class.

All references are to the Bertsimas and Tsitsiklis text.

Problems for Math 496 and 827:

1. Exercise 5.10.
2. Exercise 5.13.
3. Exercise 6.2.
4. Exercise 6.3.

Problems mainly for Math 827:

5. Exercise 5.14.
6. Exercise 6.5.
7. Exercise 8.2.

Reading:

Chapters 8 and 9.

Reminder:

The final exam is scheduled for **Monday, April 20th** at 3:30 p.m. in SUR 3010. This is quite a long time after we finish covering the material, so it may be preferable to move it to April 8th or 9th. Please let me know if you would prefer to take the exam on Thursday, April 9th at 3:30 p.m. or at a another time close by.

Presentations:

Please check the tentative schedule of presentations on the back of this page. Let me know ASAP if there are any errors.

As part of the grading of this project, please send me a digital copy of your overheads following the talk following your presentation.

Tentative schedule of presentations:

Monday, March 30th, 3:30: Sareh Nabi-Abdolyousefi. (O.R. Seminar, SUR 15-300).

To be determined.

Wednesday, April 1st, 2:30: John LaRusic.

Gil Kalai, *A subexponential randomized simplex algorithm*, Proceedings of the Twenty Fourth Annual ACM Symposium on Theory of Computing (STOC), 1992, pp. 475–482.

Wednesday, April 1st, 3:20: Brad Woods.

John Dunagan and Santosh Vempala, *A simple polynomial-time rescaling algorithm for solving linear programs*, Math. Program. **114** (2008), no. 1, Ser. A, 101–114.

Thursday, April 2nd, 3:30: Arman Kaveh. (O.R. Seminar, SUR 15-300).

Sanjay Mehrotra, *On the implementation of a primal-dual interior point method*, SIAM J. Optim. **2** (1992), no. 4, 575–601.

Friday, April 3rd, 2:30: Hengameh Vahabzadeh.

Antoine Deza, Eissa Nematollahi, and Tamás Terlaky, *How good are interior point methods? Klee-Minty cubes tighten iteration-complexity bounds*, Math. Program. **113** (2008), no. 1, Ser. A, 1–14.

Friday, April 3rd, 3:20: Hua Zheng.

Shinji Mizuno, Michael J. Todd, and Yinyu Ye, *On adaptive-step primal-dual interior-point algorithms for linear programming*, Math. Oper. Res. **18** (1993), no. 4, 964–981.