Handout #1: Course information
August 30, 2007

EE 381K-6 Estimation Theory

Tue, Thu 3:30-4:45pm

CPE 2.220

Instructor: Haris Vikalo

- Email: hvikalo@ece.utexas.edu
- Office: ACES 3.110
- Hours: Tue, Thu 5pm-6pm

Teaching Assistant: TBA

Class web page: www.ece.utexas.edu/~hvikalo/ee381k6.html.

Textbook: *Linear Estimation* (T. Kailath, A.Sayed, and B. Hassibi), Prentice-Hall, 2000.

Grading (tentative):

- Homeworks: 20%
- Midterm exams: 35%
- Final exam: 45%

Homework policy: You are allowed, even encouraged, to discuss homework questions, but please be sure to submit your own independent solution. Late homework assignments will not be accepted.

Prerequisites: Background in random processes (EE 381J or equivalent), linear dynamical systems (EE 380K or equivalent), and digital signal processing is required.

Course description: Introduction to the fundamentals of linear estimation theory, with applications to stochastic and adaptive signal processing. Topics include deterministic and stochastic least-squares estimation; the innovation process; spectral factorization and Wiener filtering; state-space structure and Kalman filters; array and fast array algorithms; displacement structure and fast algorithms; LMS and RLS adaptive filters.