Department of Electrical and Computer Engineering
The Johns Hopkins University
520.645 Adaptive Filtering – Fall 2001

Problem Set III

1. Problem 6.20 (a)-(c) Haykin.
2. Problem 6.9 Haykin.
   Hint: First, show $\Delta_{m-1} = E[u[n-m]f^*_{m-1}[n]]$, then use $E[f_{m-1}[n]u^*[n-k] = 0; 1 \leq k \leq m-1$ (as proven in 6.20) to finish the problem.
3. Problem 8.1 Haykin.
   Use Matlab to explore the behavior of the steepest descent algorithm.
4. Problem 8.7 Haykin.

Due date: **October 12** in class