ESE 547 Fall 2009; October 21

Class	Topics	Sections	Reading
8	Hilbert Transformer Example	10.2.2 & Notes	Sec. 15.7
	Differentiator Example	10.2.2 & Notes	Sec. 10.5.2
	Equiripple FIR Filter Design	10.3	Sec. 10.5
	Impulse-Invariance IIR Filter Design	Notes	Probs. 9.6, 9.7

Homework:

1. Chapter 10: Problems 36, 37, and 38, p. 583 (For previous edition, try Chapter 7: Problems 34, 35, and 40, p. 503.)

2. (MATLAB) In a system with sampling frequency 88.2kHz, a lowpass filter is needed with the following specifications: passband 0 – 20kHz, with at most 1% gain error; stopband 24.1kHz up, with at least 60dB rejection. Use MATLAB to find the coefficients of such a filter using the Parks-McClellan algorithm.

3. (MATLAB): Do problems M10.23, M10.25, and M10.27, p. 586. (For previous edition, try M7.33, M7.35, and M7.37, p. 513.)