

ECEn 487 - Introduction to Digital Signal Processing

Winter 2013

Homework 13 (the last one)

Due at midnight on Tuesday, April 9, 2013.

All problems come from *Discrete-Time Signal Processing* by Alan V. Oppenheim and Ronald W. Schaffer unless otherwise specified.

1. Problem 10.33
2. Problem 10.40
3. Problem 10.42
4. Since this is your last homework (I know you are very sad about that), I would like you to take some audio source and then analyze it in MATLAB using the techniques we have discussed in class and on the homework. Look at what happens to the signals when you apply different window lengths and types. Compute some different spectrograms and periodograms of the signals. While I know that you will turn in a hard copy, I want you to e-mail me (bmazzeo@ee.byu.edu) and the TA a clip of the sound source, your code, and the spectrograms/periodograms (in PDF form) and the processing you did on it. I will share the interesting ones in class.