

ECE 8440 Spring 2017 Final Exam

Complete the following written problems from Oppenheim and Schaffer, third edition:
2.36, 4.32, 5.45, 6.25, 7.34

MATLAB:

6. Build Example 8.13 from Oppenheim and Schaffer, generating plots similar to Figures 8.27, 8.28, and 8.29.

7. Build section 13.9.2 and 13.9.3 (Cepstrum of multi-path model using DFT). Generate plots similar to Figures 13.13, 13.14, 13.17, and 13.18

8. Build an example of homomorphic deconvolution of speech similar to the discussion in section 13.10.2 but using a recorded segment of your own speech, vocalizing a vowel sound. Estimate your pitch. Can you mimic the system output response when excited by a different synthetic $p[n]$? How does this sound?