Practical Homework 3

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CE 40242: Signals and Systems

Please consider the following:

- Attach your results, codes and report to your homework.

- Zip your homework files under the name "PracticalHW3-YourStudentID" and mail your homework with subject same as the file name to rsoltani97@gmail.com

- For any question contact me at rsoltani97@gmail.com

In this homework were going to implement Spectral Subtraction algorithm. Spectral Subtraction is a simple algorithm for speech enhancement.

(a) Read about Spectral Subtraction. Describe this algorithm and its different variants.

(b) Choose an arbitrary variant of algorithm and implement it. A file with the name Test.wav is attached to your homework. Use awgn matlab function to add noise to this speech signal and then test your code against different powers of noise. Report the results.

(c) Spectral Subtraction usually creates a different type of noise called Musical Noise. Listen to the enhanced signals accurately. Can you hear this noise? What is the source of this noise?