

EE 5345

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### **Subband and Transform Coding**

Download the ECG and EEG data from the course web page and for each data set. Implement a 4-band subband coder (use 4 equal subbands) and a 4-band transform coder using the DCT. First make sure you get perfect reconstruction. Then find the bit allocation (use formulas for optimum allocation for each coder), and compute the SNR. Use a total of 8 bits per sample for each coder. Compare the results with 8 bit PCM.

Turn in plots of the quantized and unquantized signals as well as a plot of the quantization error signal for the EEG and ECG data.