Department of Electronics and Electrical Engineering
Indian Institute of Technology Guwahati

Lab Sheet 3 (Source Coding)

EE333: Communication and DSP Laboratory Tuesday, January 19, 2021

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1) Take a 5 second sample of your speech, sampled at 8 kHz, and perform linear predictive coding with predictor lengths 4,8,16 on it. Calculate the processing gain in each case.
2) Interpolate same speech signal used in Question 1 to generate its over-sampled version, and use it to obtain a delta modulated speech signal. Calculate the SNR for the signal reconstructed from this delta modulated signal, and plot the SNR as
   a) A function of the interpolation factor.
   b) A function of the step size.