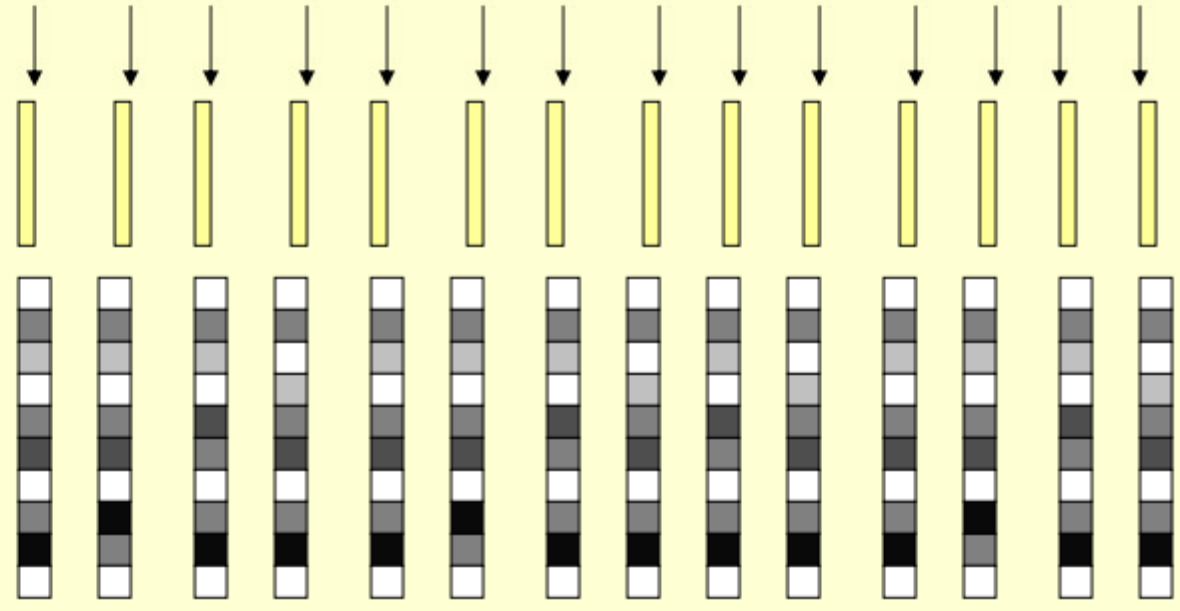


FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT

Spectrum

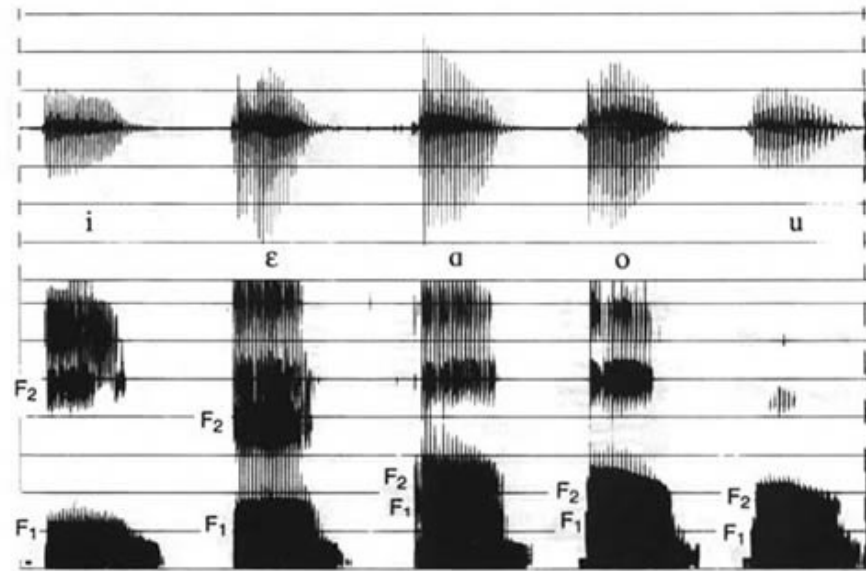
Hz

Time

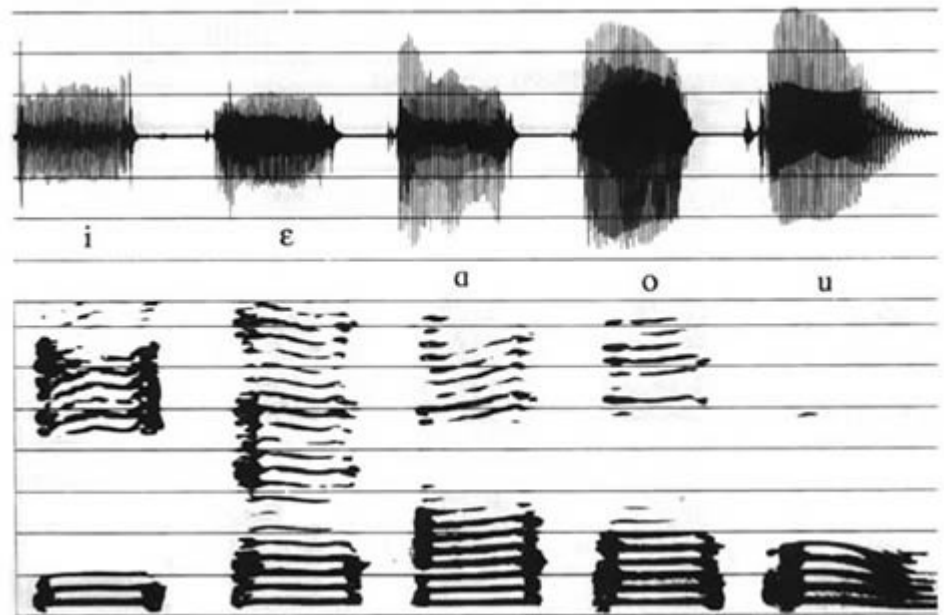


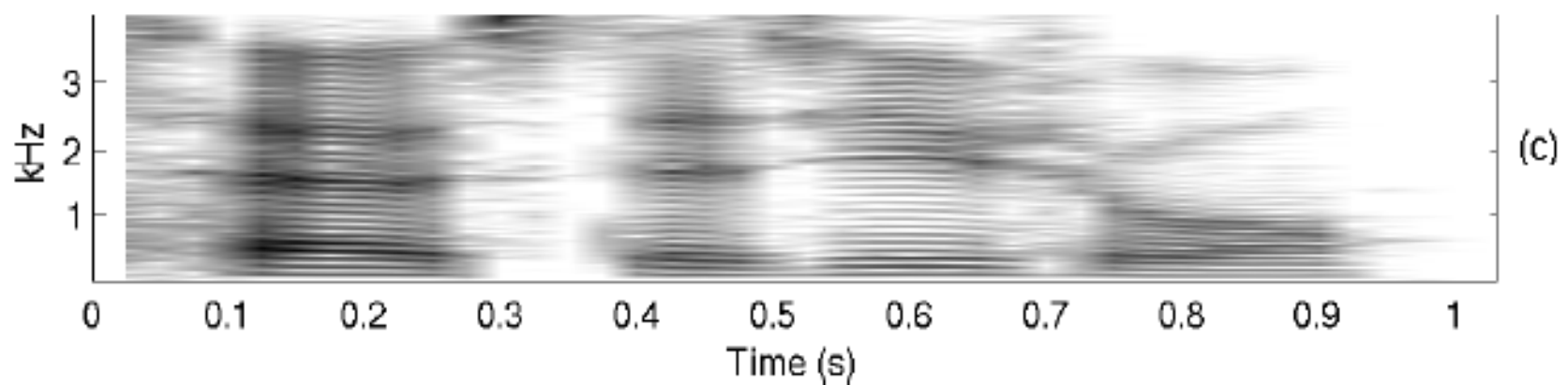
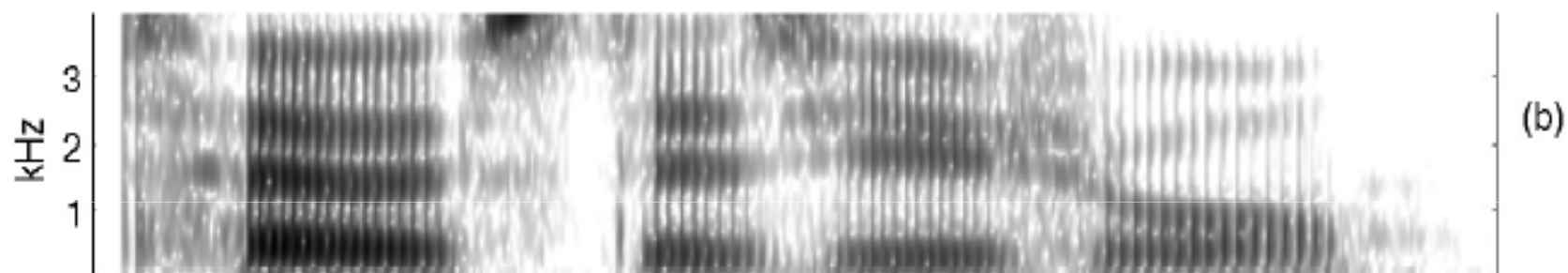
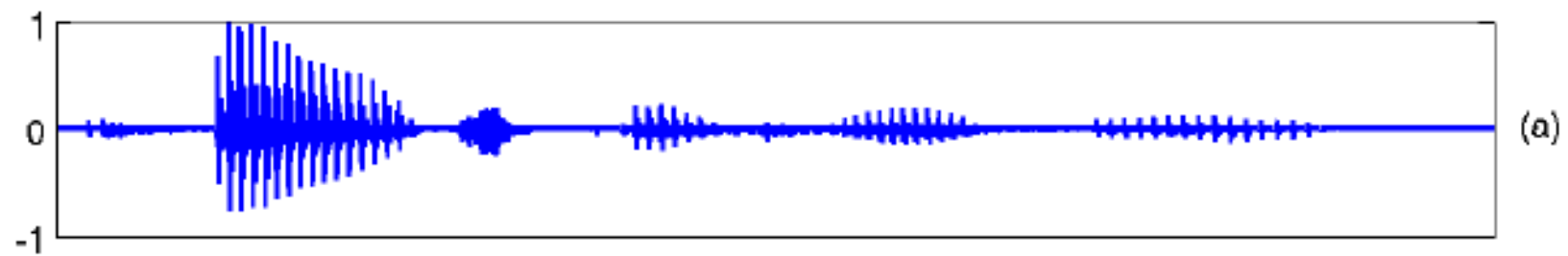
<https://www.phon.ucl.ac.uk/courses/spsci/acoustics/week1-10.pdf>

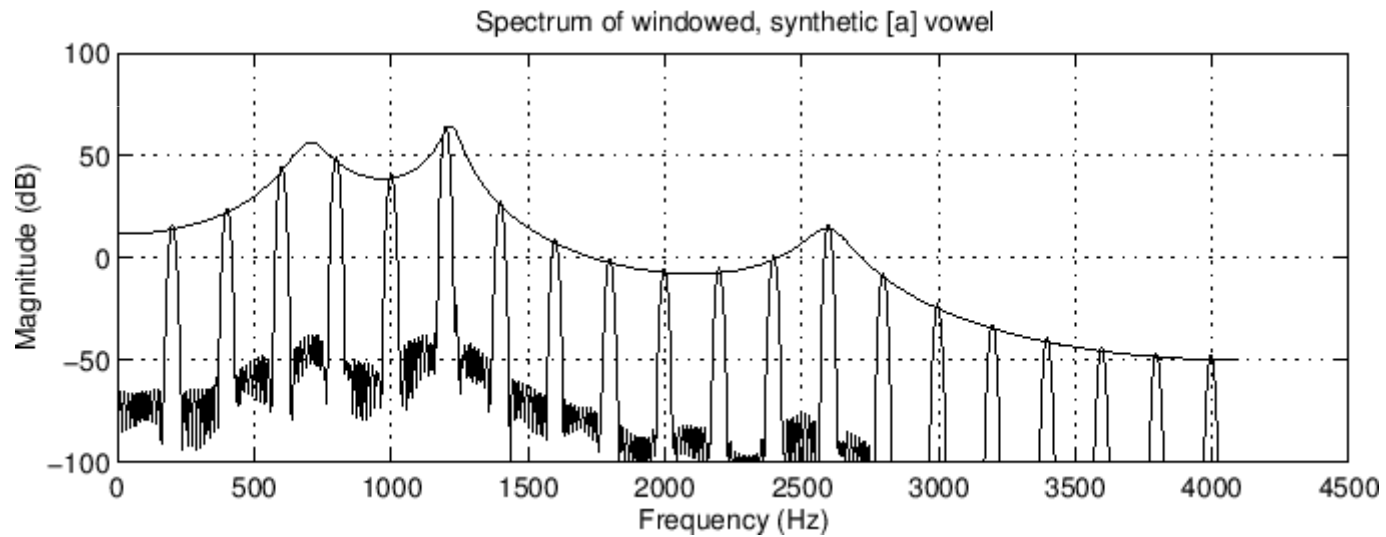
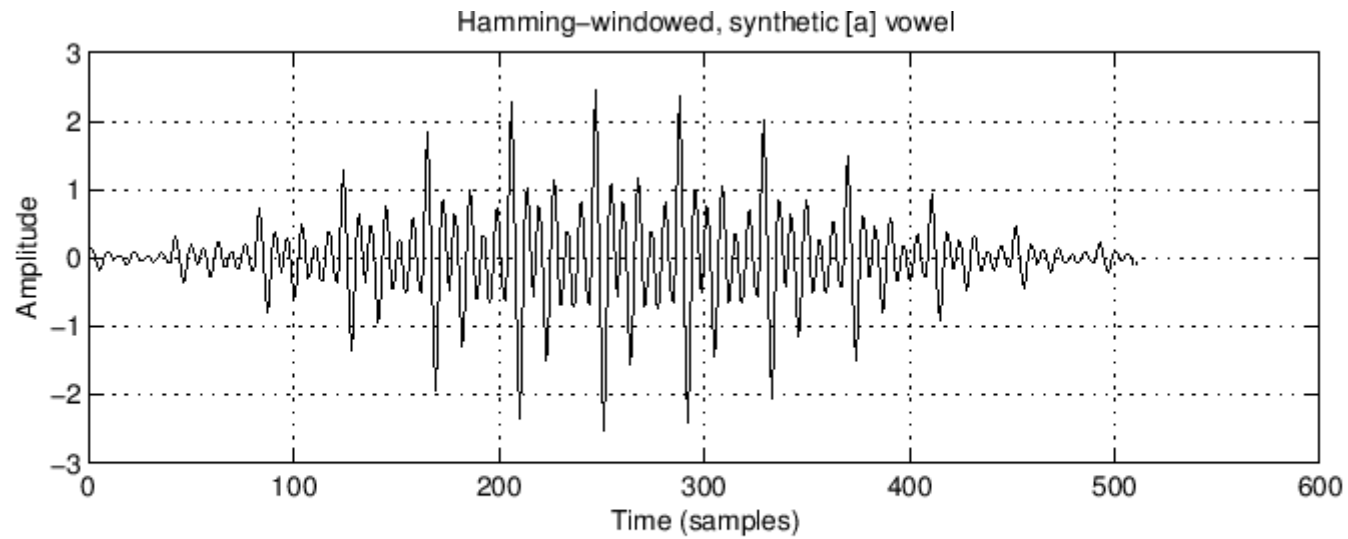
Time waveform and broadband spectrogram of [i e a o u].



Time waveform and narrowband spectrogram of [i e a o u].



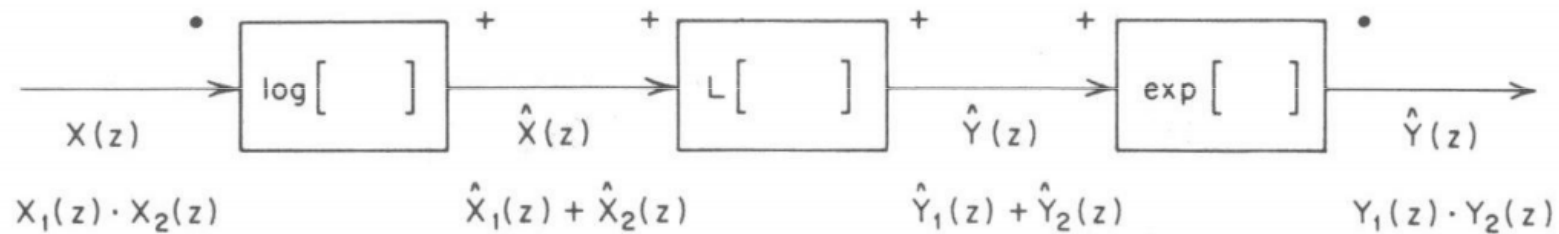


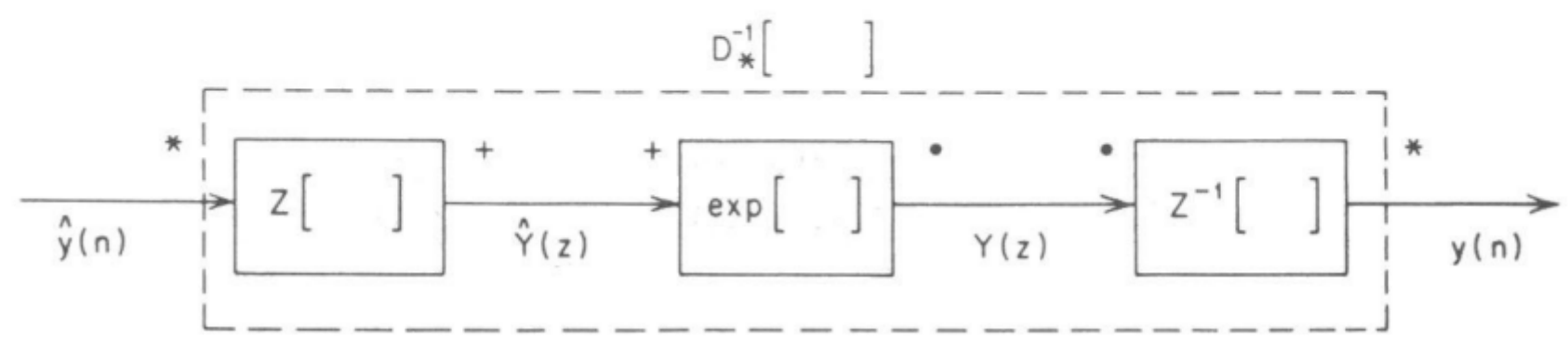
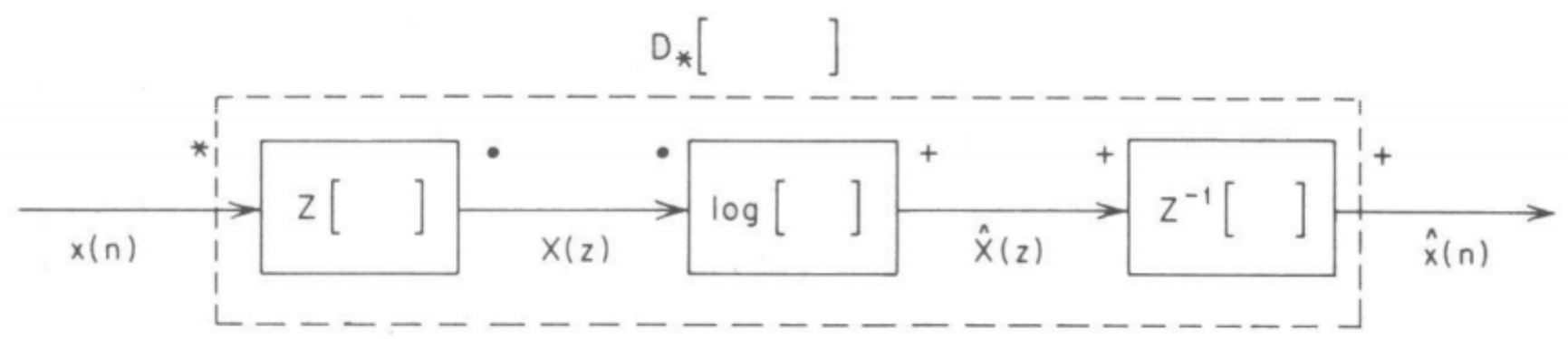
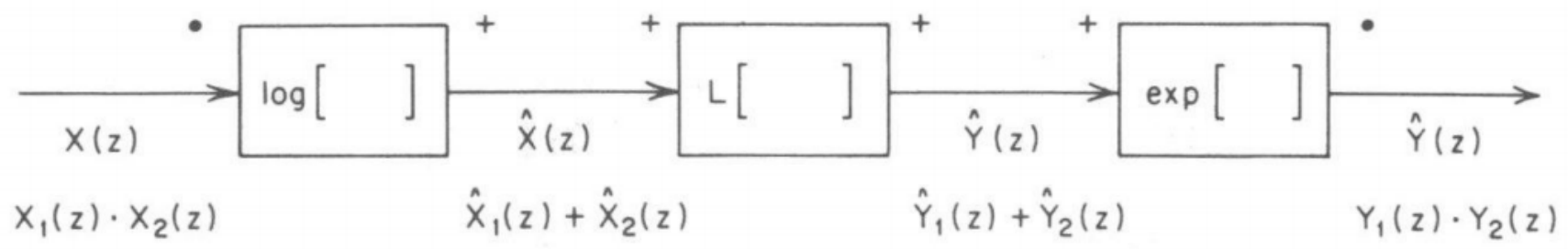


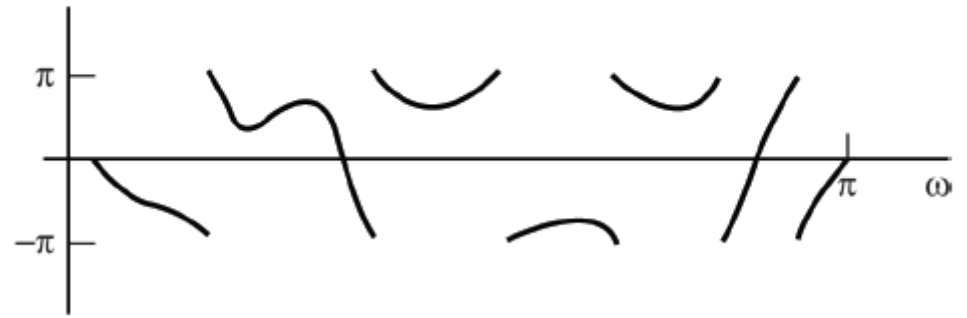
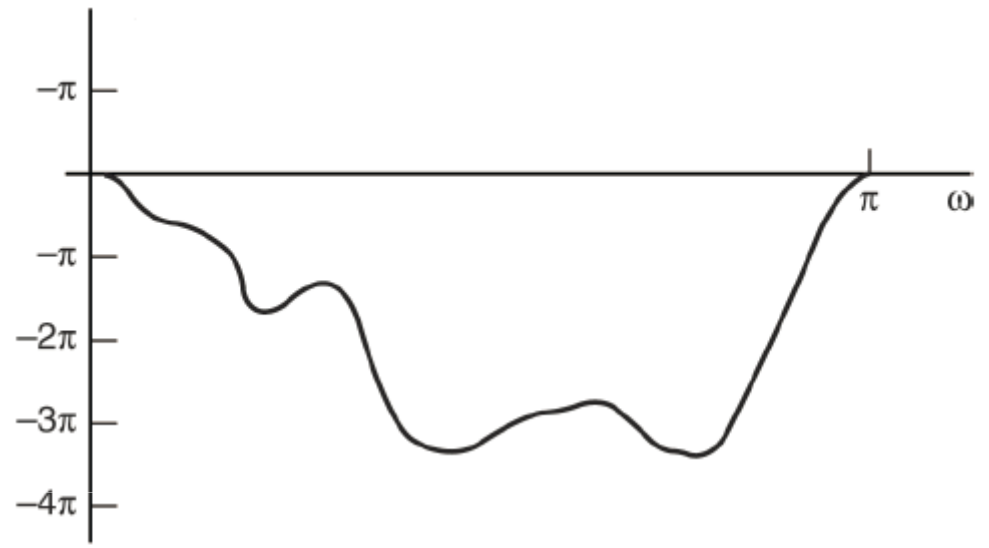
Can we separate into excitation and vocal tract response – deconvolution.

https://ccrma.stanford.edu/~jos/SpecEnv/LPC_Envelope_Example_Speech.html

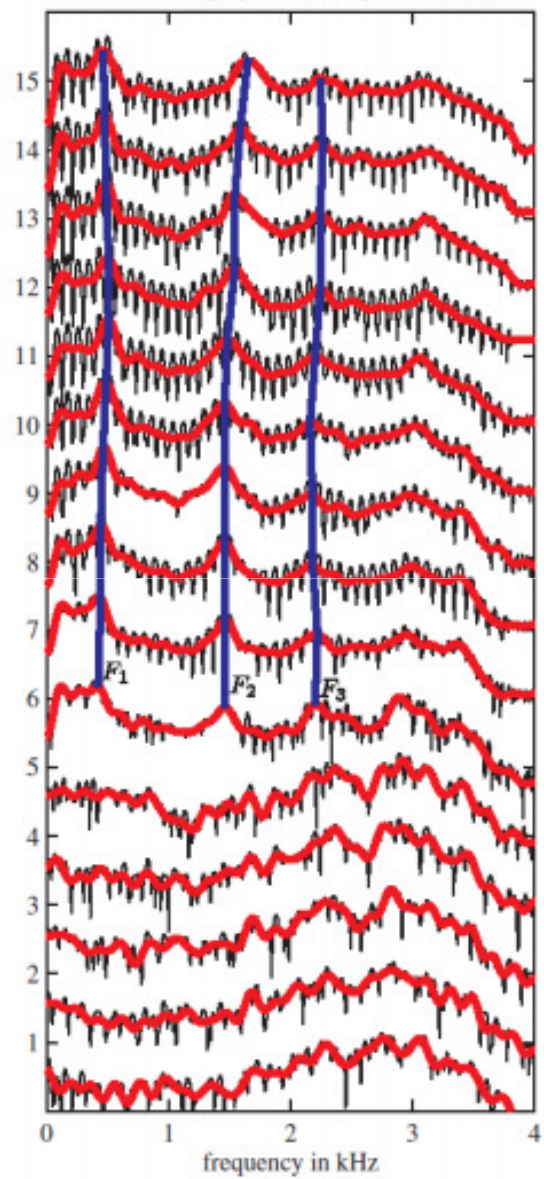
Thus, the frequency domain representation of a homomorphic system for deconvolution can be represented as



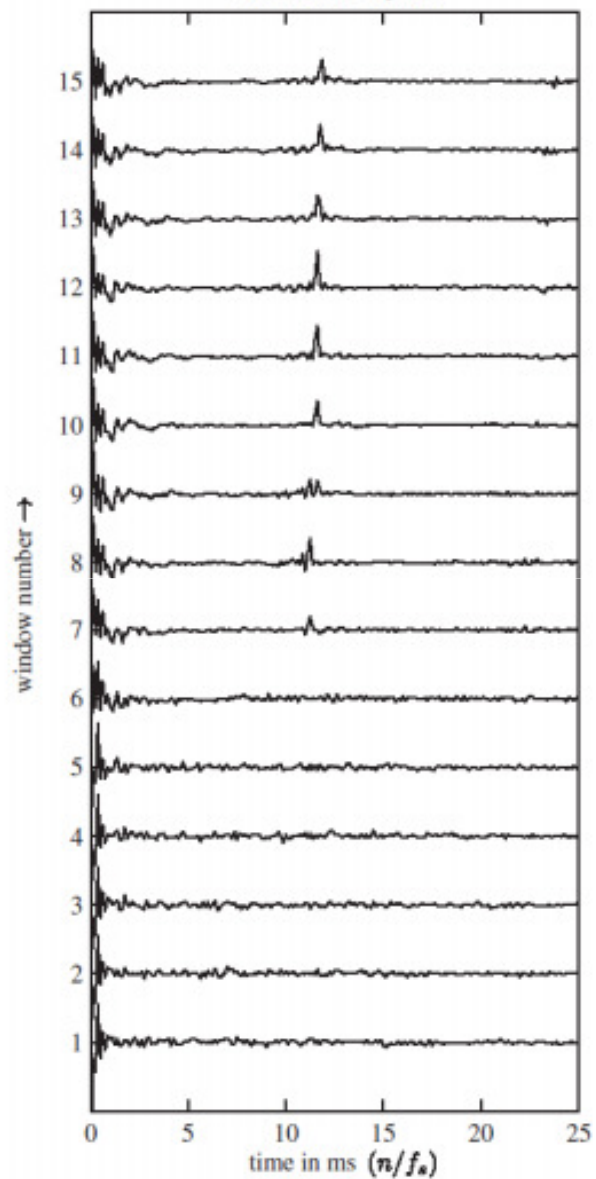


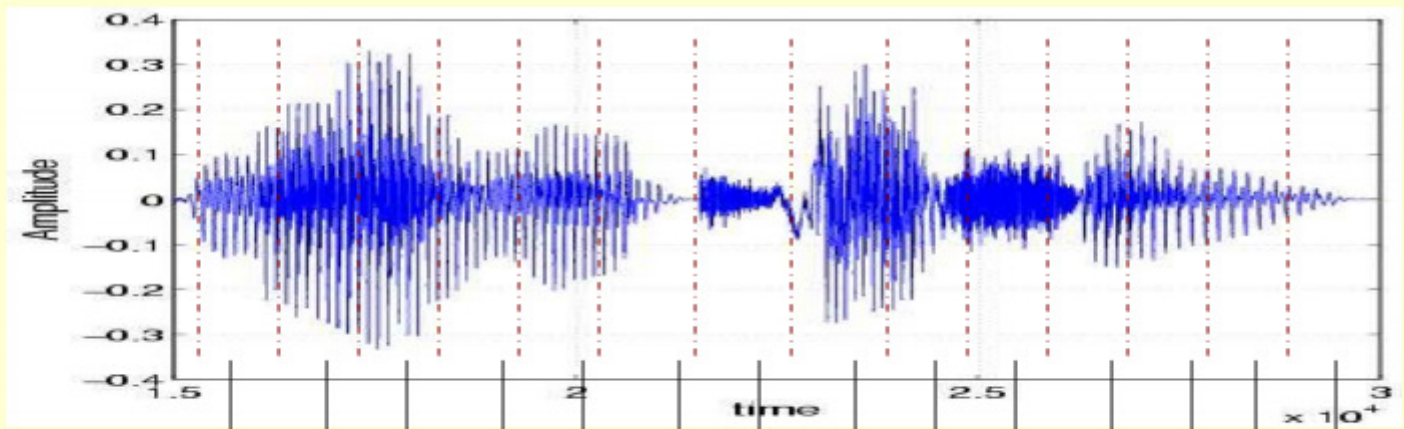


Short-Time Log Spectra in Cepstrum Analysis



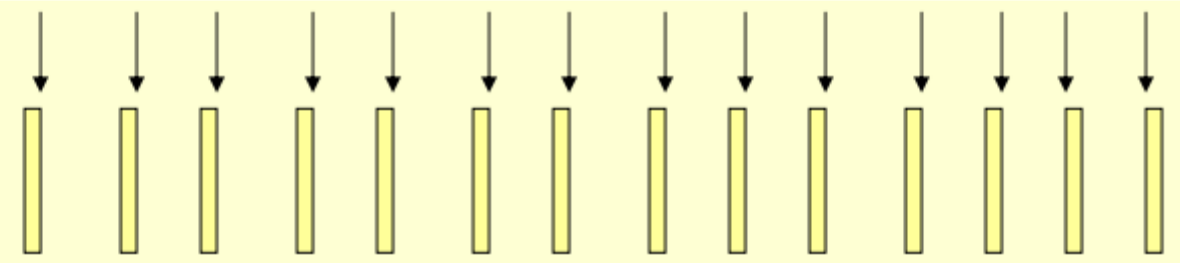
Short-Time Cepstra





FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT FFT

Spectrum



Cepstral Vectors

