

EE 5368 HW # 2

- (1) What does Negative Frequency mean in the exponential Fourier spectra? (ie, $e^{\pm j\omega_0 t}$)
- (2) What's the difference between convolution and cross-correlation. Use mathematics expression and/or Geometry expression to explain them.
- (3) For a signal $g(t)$, the Energy spectral Density is equal to $|G(f)|^2$ which is enough to determine its Energy spectral Density. Why we need to find the Energy spectral Density by taking the Fourier transform of its autocorrelation function.
- (4) What is Nyquist's First criterion for zero ISI?
- (5) What is Nyquist's second criterion?