

PHYS 233A, ECE 237A & PHYS 147A

Lecture #1

Mathematical Preliminaries -I

Concepts to be Learned:

1. Fourier Transform(FT)
 - a. Oddness and evenness
 - b. Complex conjugates
 - c. Cosine and sine transforms
2. Convolution
 - a. Examples
 - b. Autocorrelation function
 - c. Cross-correlation
 - d. Energy spectrum
3. Impulse symbol
 - a. Sifting property
 - b. Even and odd impulse pairs
 - c. derivatives of the impulse function

Reading assignment:

Bracewell, Chapters 2,3, and 5.