

California State University, Fresno  
Electrical and Computer Engineering Department  
ECE 124 – Fall 2008  
Professor Kriehn

Homework Assignment #2 (Due September 16, 2008)

**BOX YOUR ANSWERS!**

**Extra Credit Problem 1.)** Create a function that performs an animation that illustrates a convolution operation between an input  $x(t)$  and an impulse response function  $h(t)$ . The animation should plot the following:

$$x(\lambda) \tag{1}$$

$$h(\lambda) \tag{2}$$

$$h(-\lambda) \tag{3}$$

$$h(t - \lambda) \text{ as } t \text{ increments} \tag{4}$$

$$\text{Overlap of } x(\lambda) \text{ with } h(t - \lambda) \text{ as } t \text{ increments} \tag{5}$$

$$x(\lambda) \times h(t - \lambda) \text{ as } t \text{ increments} \tag{6}$$

$$x(\lambda) * h(t - \lambda) \text{ for a time increment } t \tag{7}$$

$$x(\lambda) * h(t - \lambda) \tag{8}$$

Functions that will be of use to you include: for, conv, pulse, hold on/off, axis.