

Lecture 12 Continuous-Time Signals

Prof. Brian L. Evans

Notes by Mr. Houshang Salimian

Fall 2018

EE 313 Linear Systems and Signals

The University of Texas at Austin

Causal system \rightarrow only depends the current input, past inputs, and past outputs

Causal signal: Amplitude values are zero before time zero

causal signal

$x[n]$



causal signal

$$y[n] = x[n] * h[n]$$

discrete-time

$h[n]$

Impulse Response

$$y(t) = x(t) * h(t)$$

continuous-time

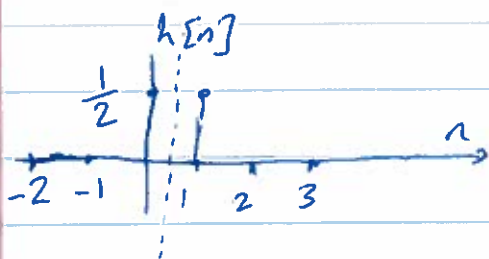
$x(t)$



$y(t)$

$h(t)$

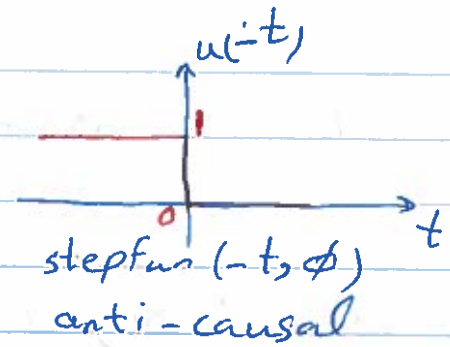
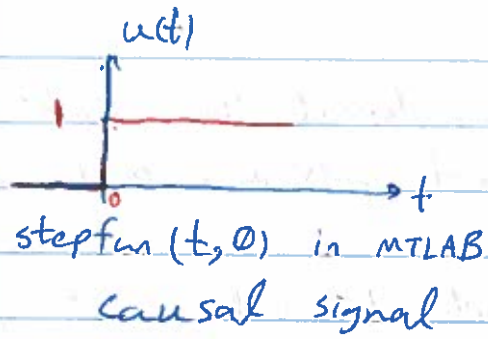
Impulse Response



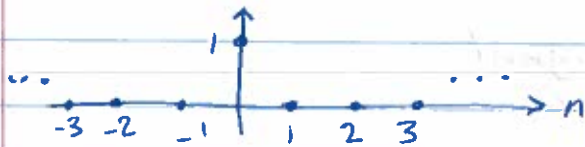
even symmetry around midpoint

Unit step

$\text{stepfun}(t, t_0) \rightarrow t > t_0$ true or false in matlab



Discrete-Time Impulse



Continuous-Time Impulse

