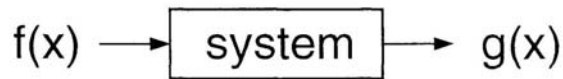


Dwight Hishimura
system



Let $\mathcal{FT}\{f(x)\} = F(s)$ and $\mathcal{FT}\{g(x)\} = G(s)$,

Are the following systems linear? time-invariant?

What is the transfer function?

1.

$$G(s) = |F(s)|^2$$

2.

$$G(s) = F(-s)$$

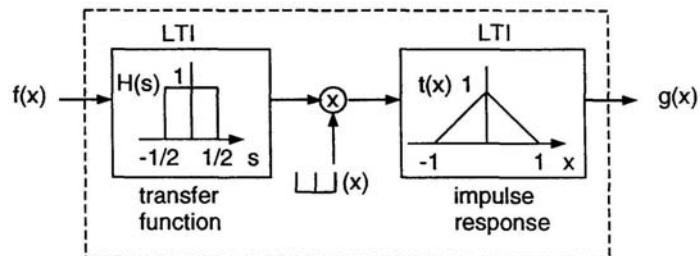
3.

$$g(x) = \frac{df(x-1)}{dx}$$

4.

$$g(x) = \sum_{n=-\infty}^{\infty} f(x-n)$$

5.



6.

$$g(x) = \int_{-\infty}^x f(u) du$$