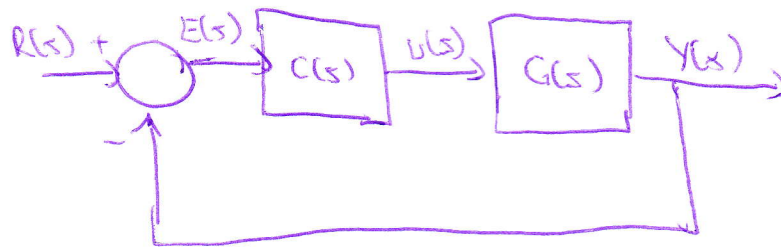


Sorgu 179



$$G(s) = \frac{1}{s(s+2\zeta)}$$

$$\frac{Y(s)}{R(s)} = \frac{G(s)}{1+G(s)} = \frac{1}{s^2+2\zeta s+1}$$

$$\Rightarrow (s^2+2\zeta s+1) Y(s) = R(s)$$

Fiziksel sisteme uygulanan sinyal, eyleyici sinyal (accelerator signal) dir.

$$W(s) = \frac{U(s)}{R(s)} = \frac{\left(\frac{Y(s)}{R(s)}\right)}{\left(\frac{Y(s)}{U(s)}\right)} = \frac{T(s)}{G(s)}$$

Example 3:

Consider the plant TF

$$G(s) = \frac{s-1}{s^2-4}$$

and optimal CLTF as

$$T(s) = \frac{-1.8(s-1)}{s^2+5.2s+5}$$

(a) Can $T(s)$ be implemented by adjusting k_1 and k_2 in the previous conf?

(b) The overall system track asymptotically step ref. i/p?