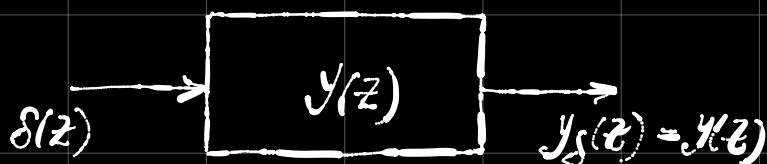


Trabalhando com a anti-transformada

$$Y(z) = \frac{z^2 - 0.9979z + 0}{z^2 - 1.996z + 0.996} \quad \text{tabela}$$



$$\int_0^t \equiv h$$

$$\frac{Y_S(z)}{S(z)} = \frac{z^2 - 0.9979z + 0}{z^2 - 1.996z + 0.996}$$

avanco

$$Y_S(n+2) - 1.996 Y_S(n+1) + 0.996 Y_S(n) =$$

tempo

$$S(n+2) - 0.9979 S(n+1) + 0 S(n)$$

preditor

$$n=0 \quad \therefore \quad Y(2) - 1.996 Y(1) + 0.996 Y(0) =$$

$$S(2) - 0.9979 S(1)$$

entrada

Sistema que estima o presente:

$$\frac{y_s(z)}{s(z)} = \frac{z^2 - 0.9979z + 0}{z^2 - 1.996z + 0.996} \cdot \frac{z^{-2}}{z^{-2}} = \frac{1 - 0.9979z^{-1}}{1 - 1.996z^{-1} + 0.996z^{-2}}$$

$$y_s(n) - \underbrace{1.996 y_s(n-1)}_{\text{passado}} + \underbrace{0.996 y_s(n-2)}_{\text{passado}} = \underbrace{s(n) - 0.9979 s(n-1)}_{\text{passado}}$$

↓ presente

$$y_s(n) = +1.996 y_s(n-1) - 0.996 y_s(n-2) + s(n) - 0.9979 s(n-1)$$

Qr

ATIVIDADE

$$\frac{y(z)}{x(z)} = \frac{z}{z-1}$$

$$\frac{y(z)}{x(z)} = \frac{z^5}{z^2+1}$$

$$\frac{y(z)}{x(z)} = \frac{z}{(z-1)^2}$$

$$\frac{y(z)}{x(z)} = \frac{z^2+2z+1}{z^2+1}$$

$$\frac{y(z)}{x(z)} = \frac{1}{z^2+1}$$

$$\frac{y(z)}{x(z)} = \frac{1}{z^2+2z+1}$$

$$\frac{y(z)}{x(z)} = \frac{1}{z^2+2z+10}$$

$$\frac{y(z)}{x(z)} = \frac{1}{z^2-1.5}$$

$$\frac{y(z)}{x(z)} = \frac{1}{z^2+4}$$

1. Resposta impulsiva
2. Estáveis / instáveis
3. Há alguma relação com os polos?
4. Qual a influência dos zeros?
5. Como saber se haverá oscilação?

$$\underline{T=0.15}$$