



# Controle e Servomecanismo

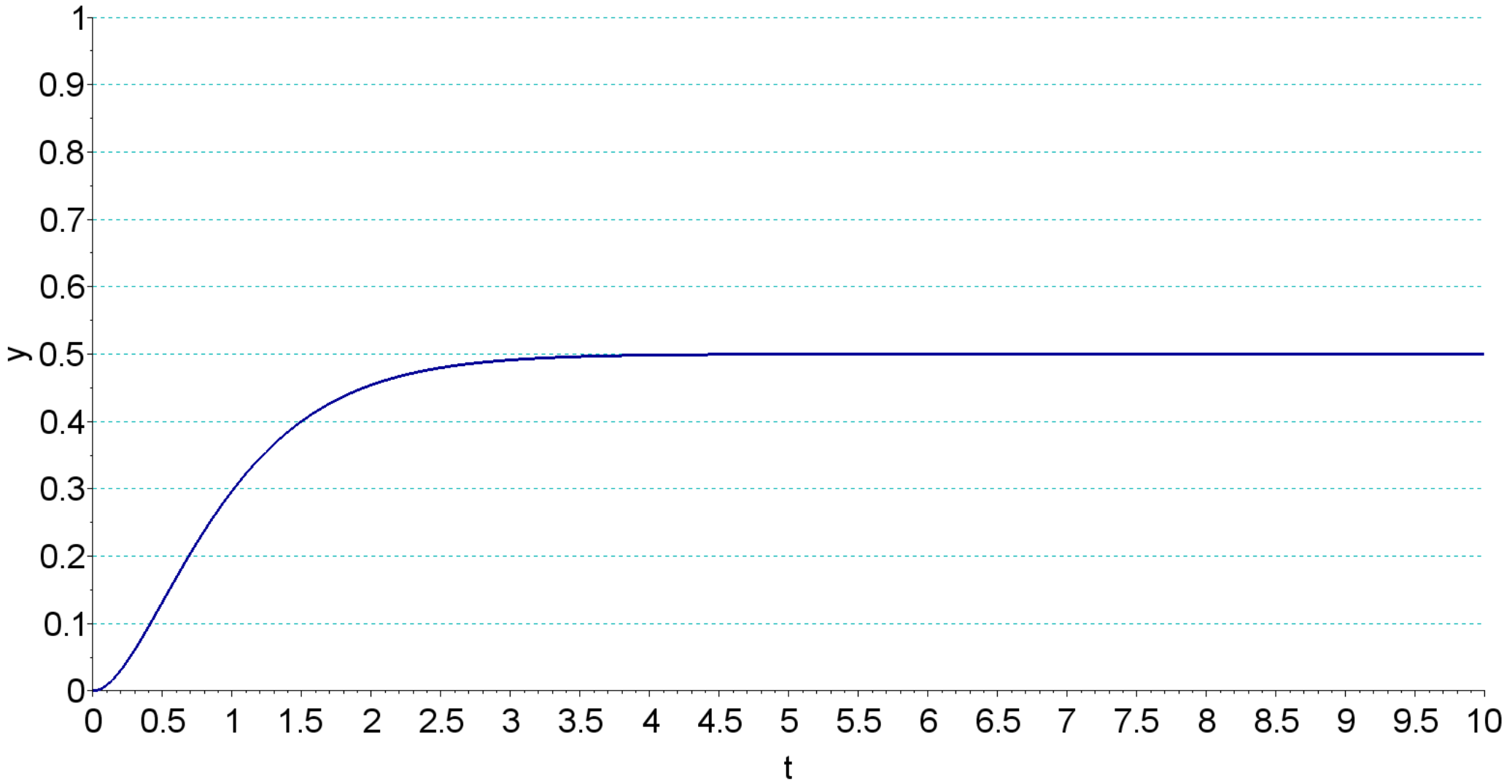
TE240

Controlador PID: exemplo

Juliana L. M. lamamura

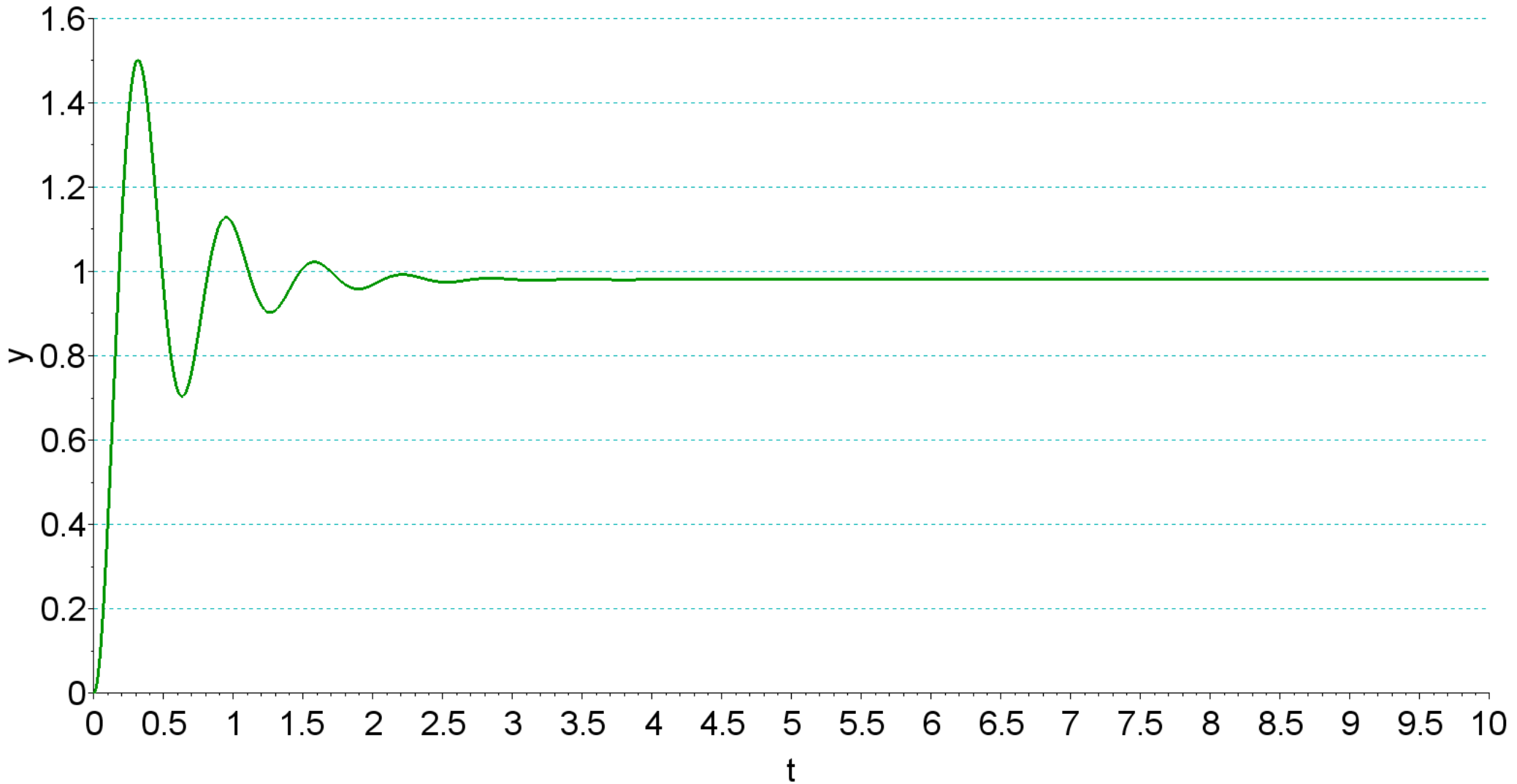
# Controlador P

- $k_p = 1$



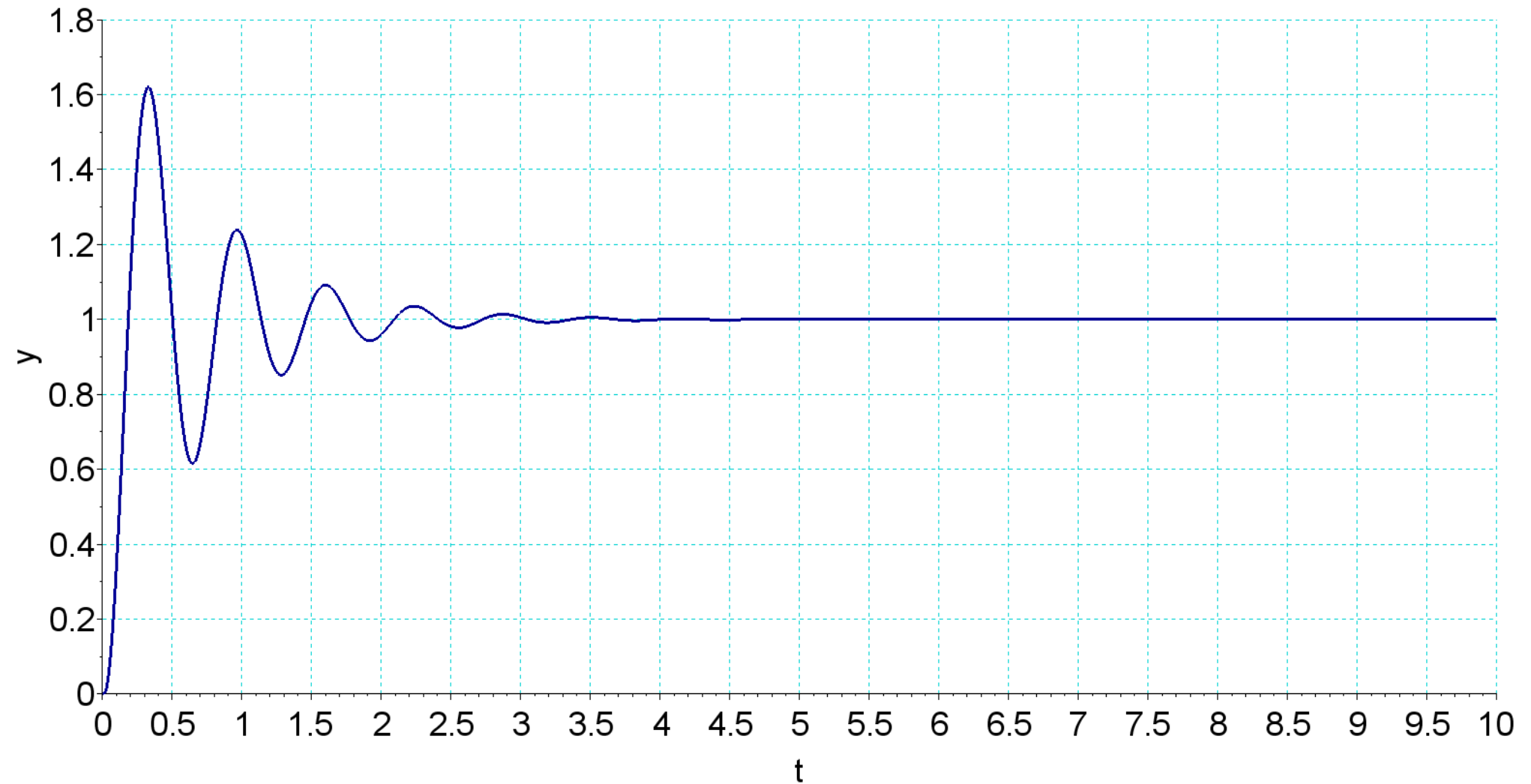
# Controlador P

- $k_p = 100$



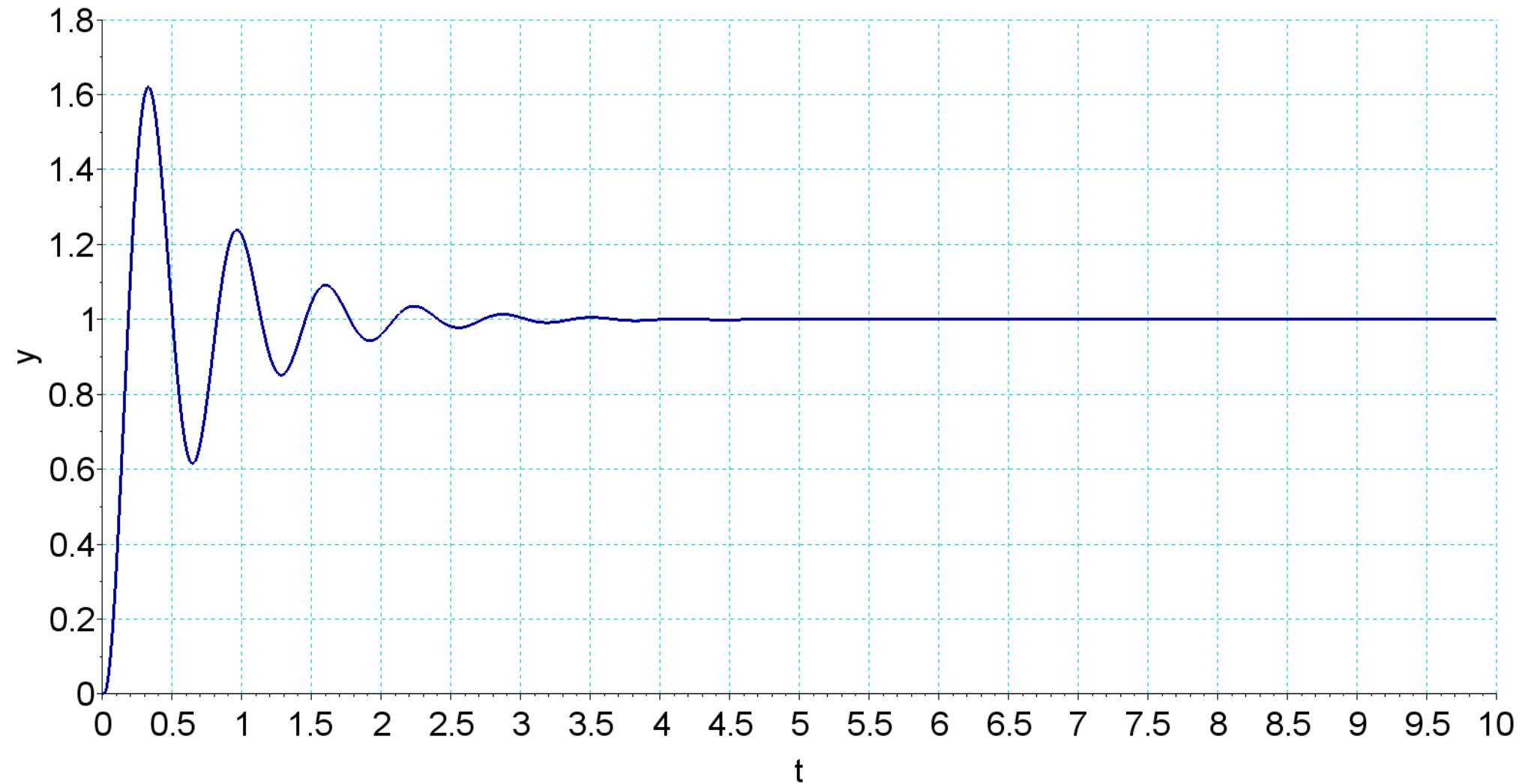
# Controlador PI

- $k_p = 100, T_i = 1$

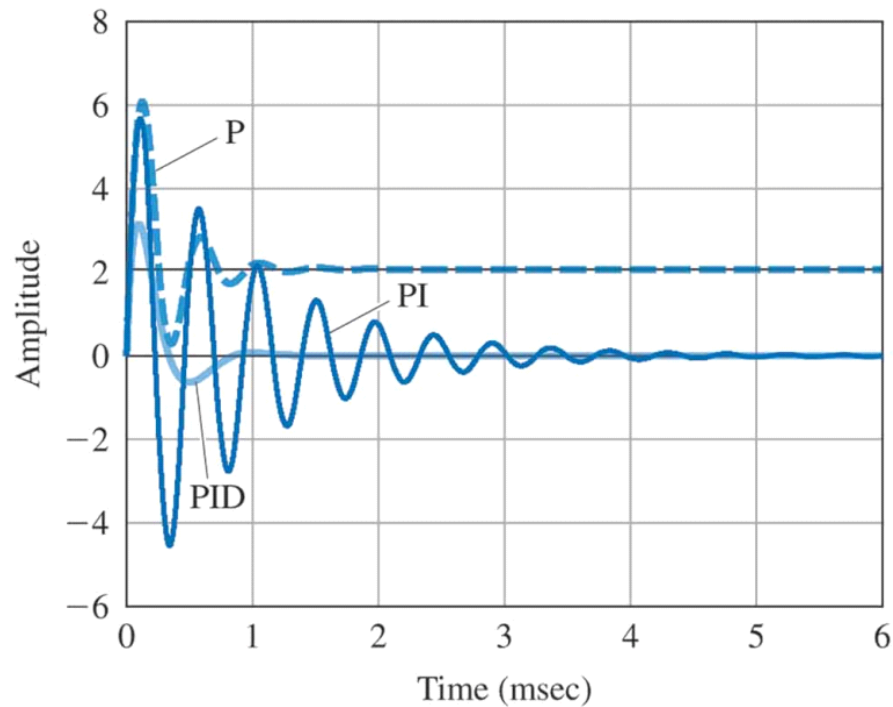


# Controlador PID

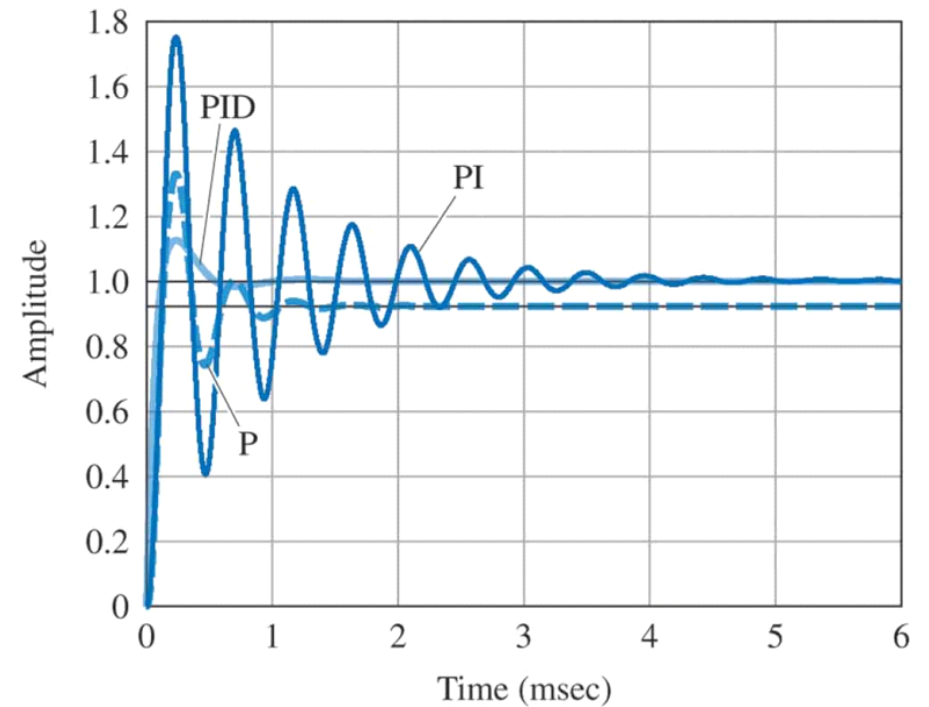
- $k_p = 100$ ,  $k_i = 100$ ,  $k_d = 1$



# Exemplo 4.6 (Franklin)



(a)



(b)

**Figure 4.9** Responses of P, PI, and PID control to (a) step disturbance input (b) step reference input

Juliana lamamura