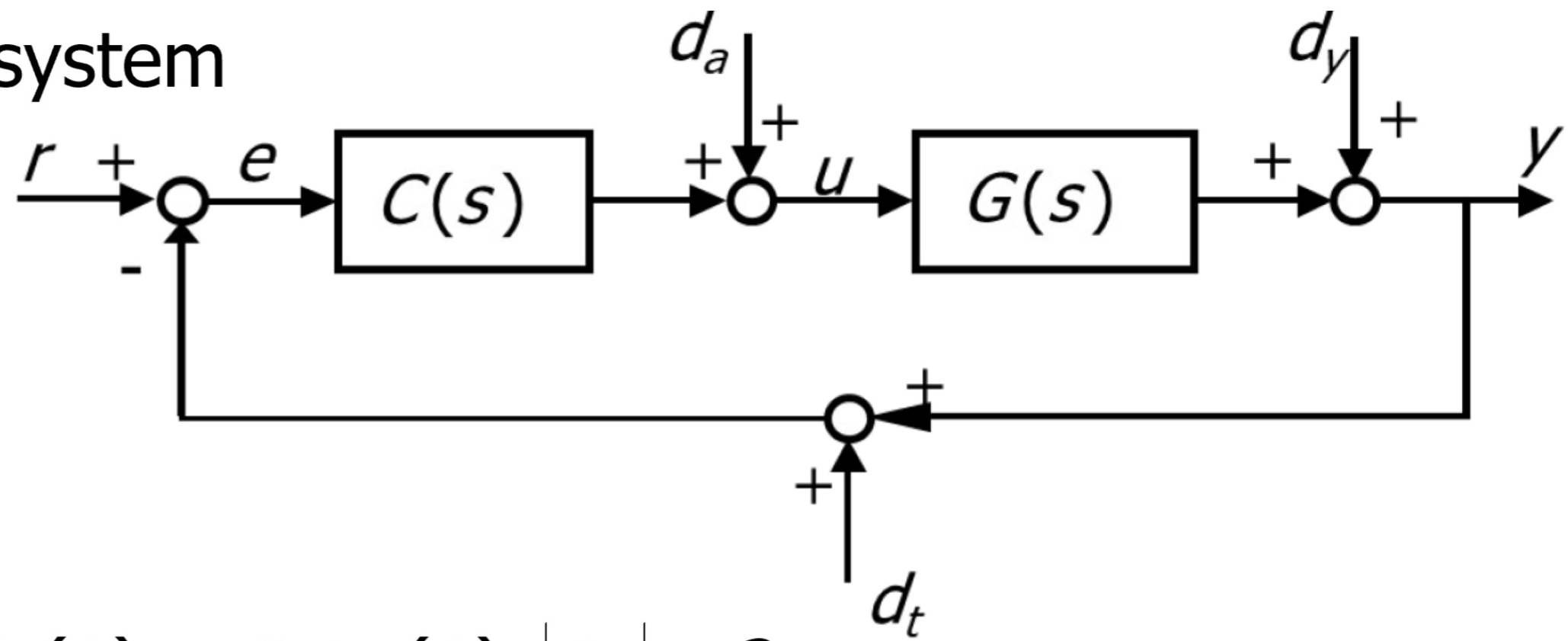


Consider the feedback control system



where

$$G(s) = \frac{0.5}{s(1+s)}, d_y(t) = \delta_y t \varepsilon(t), |\delta_y| \leq 2$$

design the cascade controller $C(s)$ to satisfy the following requirements.

$$\begin{cases} |e_r^\infty| = 0, r(t) = \varepsilon(t) \\ |y_{d_y}^\infty| \leq 0.2 \end{cases}$$

$$\hat{s} \leq 10\%$$

$$t_{s,1\%} \leq 2s$$

