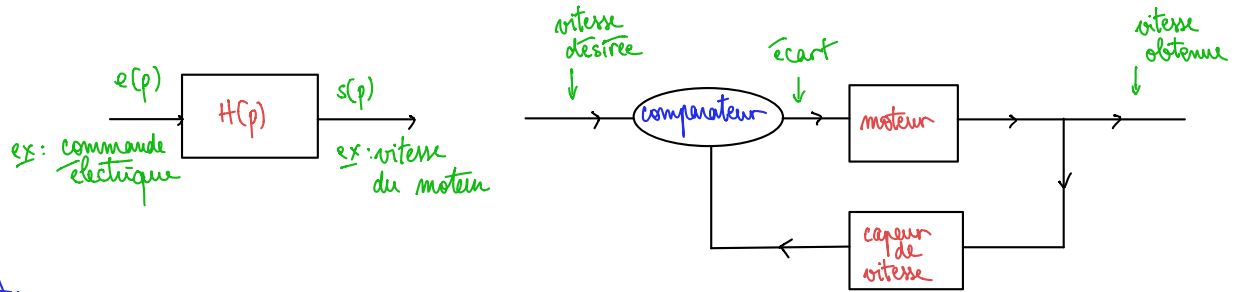
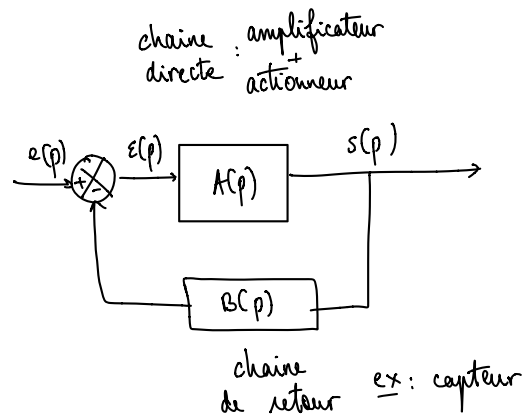


Intro



I.

1.



$$s(p) = A(p) \varepsilon(p) = A(p) (e(p) - B(p) s(p))$$

$$s(p) = \frac{A(p)}{1 + \underbrace{A(p) B(p)}_{H_{\text{bo}}(p)}} e(p)$$

$H_{\text{op}}(p)$

2.

$$s(p) = \frac{V_0}{1 + \frac{p}{\omega_{AL1}}} [e_+(p) - e_-(p)]$$

ODG

$$\omega_{AL1} = 50 \text{ rad/s}$$

$$V_0 = 2.10^5$$

$$ALI : s(p) = \frac{V_0}{1 + \frac{p}{\omega_{AL1}}} [e_+(p) - e_-(p)]$$

ODG

$$\omega_{AL1} = 50 \text{ rad/s}$$

$$V_0 = 2.10^5$$

$$A(p) = \frac{p_0}{1 + \frac{p}{w_{ALI}}}$$

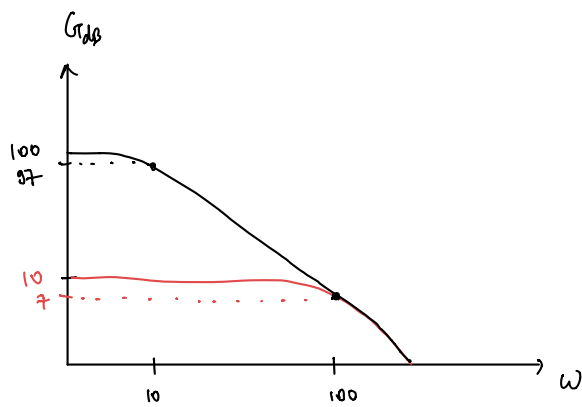
$$B(p) = \frac{R_1}{R_1 + R_2} \equiv B$$

$$H(p) = \frac{A(p)}{1 + A(p)B} = \frac{1}{\frac{1}{A(p)} + B} = \frac{1}{\frac{1 + \frac{p}{w_{ALI}}}{p_0} + B}$$

$$= \frac{p_0}{1 + Bp_0 + \frac{p}{w_{ALI}}} \stackrel{\div (1 + Bp_0)}{=} \frac{\frac{p_0}{1 + Bp_0}}{1 + \frac{p}{w_{ALI}(1 + Bp_0)}}$$

H_0

w_0

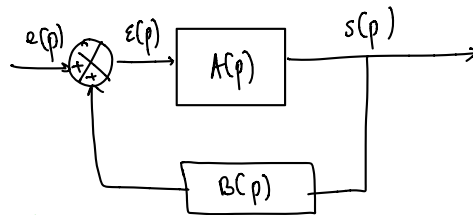


II 2.

$$H = \frac{A}{1+AB} \rightarrow \Delta H = \frac{\Delta A (1+AB) - A \cdot \Delta A \cdot B}{(1+AB)^2} = \frac{\Delta A}{(1+AB)^2} \times \frac{A}{A}$$

$$\hookrightarrow \frac{\Delta H}{H} = \frac{\Delta A}{A} \cdot \frac{1}{1+AB}$$

III 1.



degré de AB

$$s(t) = \sum_{i=1}^N a_i e^{p_i t}$$

$$H = \frac{A}{1-AB} = A \sum_{k=0}^{+\infty} (AB)^k$$

