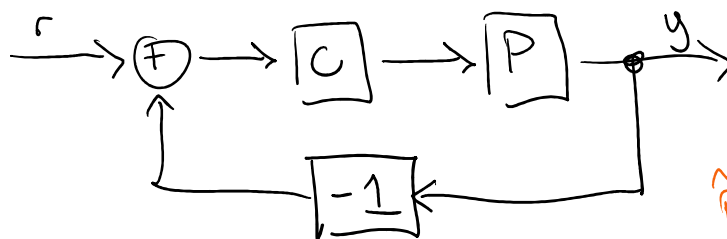# AA/ECE/ME 548   Linear Multivariable Control   Sp 22   Prof Burden
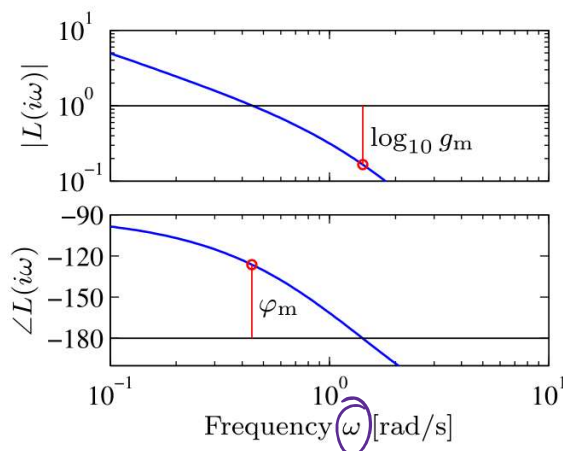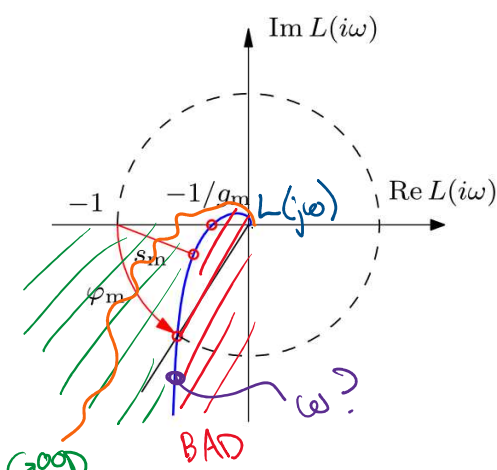
today: ☑ course logistics, Canvas, etc

☑ HW0 self-assessment — due next Monday

☑ HW 1 — due this Friday

☐ week 2 lectures

☐ questions / office hours

TODO: ☐ link notebooks / point to Python intro

$L = PC$ "open loop"

$\tilde{L} = \tilde{P}\,\tilde{C}$ xfer func

$\tilde{P}/\tilde{C}$ = perturbed process / controller

✳ Nyquist tells me to look at $\Omega = \{L(j\omega) : \omega \in \mathbb{R}\} \subset \mathbb{C}$
 & its relation to $-1 \in \mathbb{C}$

L strictly proper:

$$L(s) = \frac{b\,s^m + \cdots}{a\,s^n + \cdots}$$

$n > m$

$$\lim_{|\omega| \to \infty} |L(j\omega)| = 0$$

GOOD

BAD

ω?

Frequency ω [rad/s]