ECE 447: Control Systems (Fall 2020)

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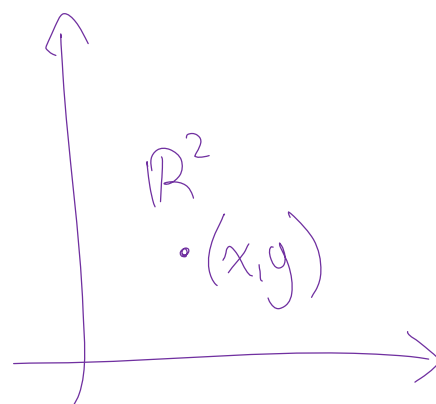
*if/when possible: keep video on; unmute to ask Questions

* update your preferred name at identity.uw.edu

today: ☑ HW2 assigned — due Fri Oct 23

☑ week 3 lectures posted (~2 hours)

☐ office hour

TODO: ~~add book refs to lec 3 (d,e)~~

~~HW1 3e: agreement between sinusoids~~

Thu; HW(N-1) solution

"x" $x \in \mathbb{R}$ $y \in \mathbb{R}$ = $\mathbb{R}^2$ $\cdot (x,y)$

$$A \times B = \{(a,b) : a \in A, \ b \in B\}$$

$$f : \mathbb{R}^2 \times \mathbb{R}^1 \longrightarrow \mathbb{R}^2$$
$$: (x, u) \longmapsto f(x,u) \in \mathbb{R}^2$$
$$\underbrace{}$$
$$= w \in \mathbb{R}^3 \quad ie \quad \mathbb{R}^3 = \mathbb{R}^{2+1} = \mathbb{R}^2 \times \mathbb{R}^1$$

$$f : \mathbb{R}^3 \longrightarrow \mathbb{R}^2$$
$$: w \longmapsto f(w) \in \mathbb{R}^2$$

$$\dot{x}_1 = f_1(x_1, x_2, u)$$
$$\dot{x}_2 = f_2(x_1, x_2, u)$$

$$f_1, f_2 : \mathbb{R} \times \mathbb{R} \times \mathbb{R} \longrightarrow \mathbb{R}$$
$$: (x_1, x_2, u) \longmapsto \dot{x}_1, \dot{x}_2$$