Note Title 9/5/2011

Stability Alysis

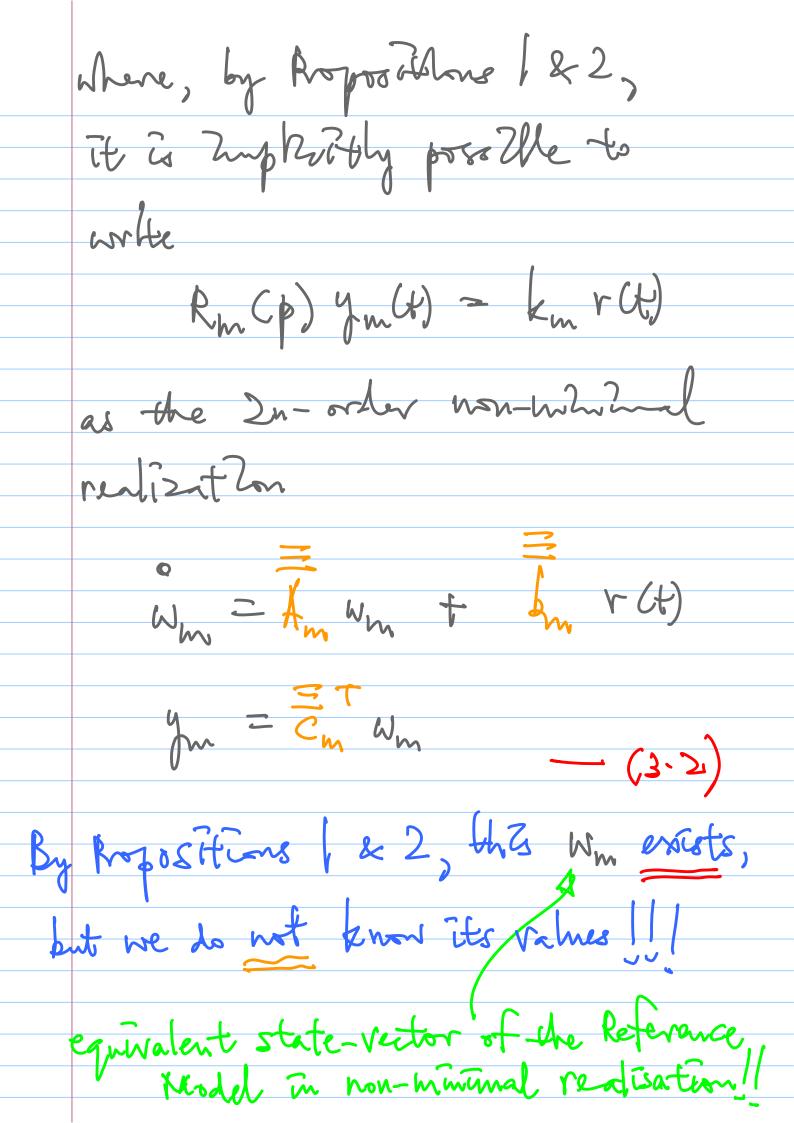
for ht= |

Rp (p) y(t) = k, Z, (p) w(t) from Arposon I, the plant can be re-written as ? $W = \overline{A} W + \overline{b} W$ y = = T

Our control land is

uct) = A(H) w(t) + k(H) r(t)

= { + + + + + + } w(+) t { k*+ f(t) { rGt) Thus, with the control law, we won have N = Fr w(t) y = Ept W $\frac{1}{100} = \frac{1}{100} = \frac{1}$ 中节如此(4) + 节奏(4) 个(4) J= CFW



Then, for e (4) = w(4) - w(4) e, (4) = y(4) - ym(4), Rom (3.1) and (3.2), we have e = Ame + I = m [p d] [w] $e_1 = \frac{1}{c_m} e$ e= Amet Litem Pro e, = Eme

 $\frac{1}{C_{m}} \left\{ \frac{1}{S_{m}} \right\} = \frac{1}{R_{m}(S_{m})}$ is strictly positive-real. case with the hard is alapthre hand is J(+) = J(+) = - sqn(kp) Twe Thus, wend, consider the guadrath form V(e, \$) = ePe+ \$T7\$

Where, from the Kalman-Yaruholh Lanna, we have 7 P + PAm = -90- EL = -Q +2977 = -eTQe + 2 eT L*Pbm FW t 2 \$ T'\$
[Not2] Aso that km = kpk*]

Reall that the Kalman-Taenlov?h the spr transfer fruthen | km | km | Pm(s) | The state-real isother Im, It Im, Cm - = T = - - - = - - = - Q (4) la)

| (4) la)

| (4) lb) Moffing that km=kpki 3 km>0 16 squ(kp) = squ(k)

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