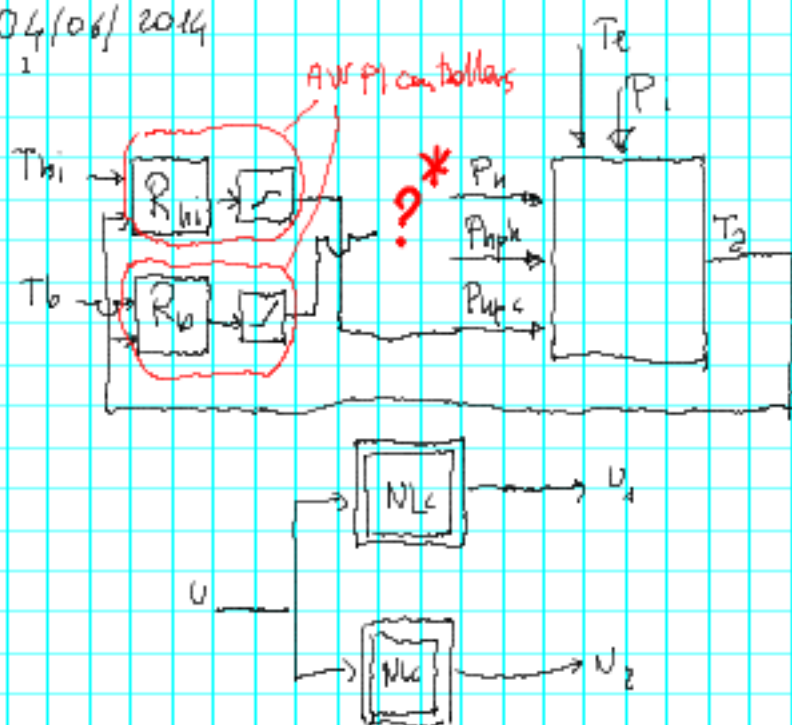
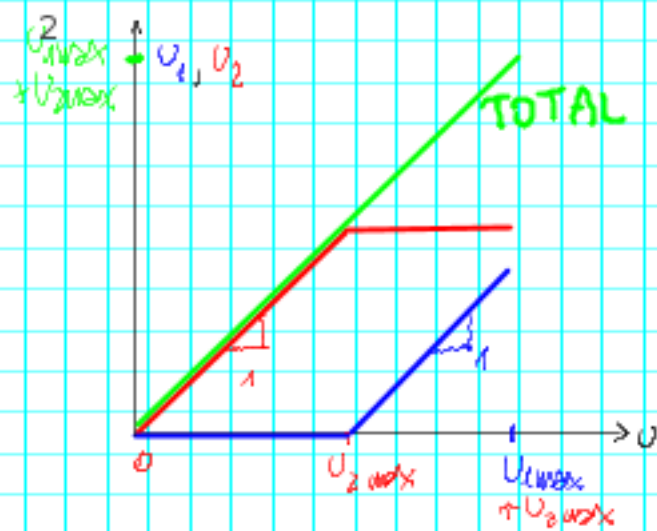


04/06/2014  
1



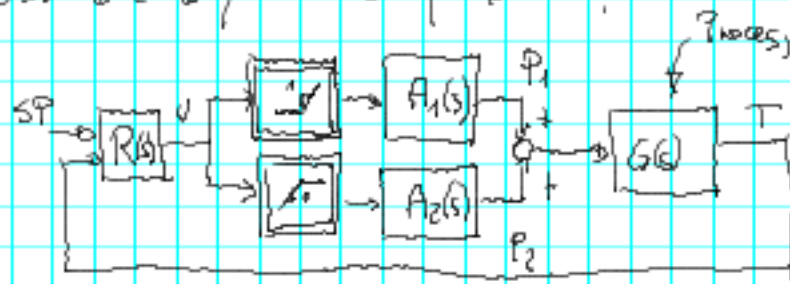
Note: unreviewed material



$U_1$  is precise  
 $U_2$  is cheap

$\Rightarrow$  \*

Possible dynamic problems?

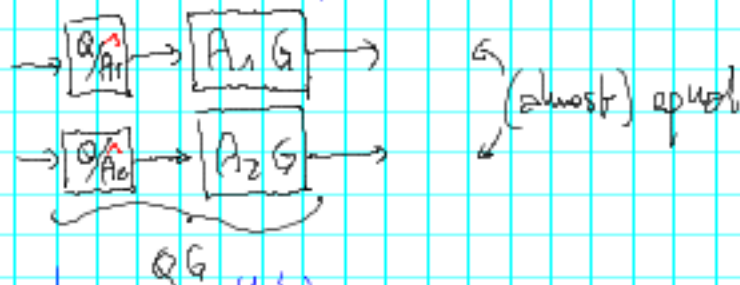


$R$  is seeing  $A_1 \cdot G$  or  $A_2 \cdot G$  depending on the range of  $U$

$A_1$  &  $A_2$  may have different gains  
 $\Rightarrow$  cured by adapting the characteristics slopes or by tolerating the gain of  $R$  different dynamics

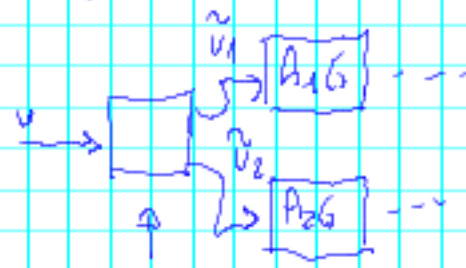
1) True  $L$ , slowest (normally, this is worst case)

2)



Equalise by cancellation  
making  $Q$  "intermediate-speed" wrt  $A_1, A_2$   
BUT need to know  $A_{1,2}$  quite precisely  
otherwise differences remain at frequencies  
above the expected cutoff for the  $T$  loop.

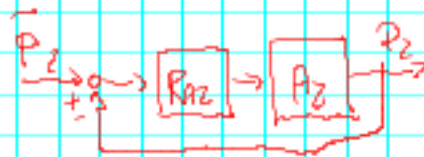
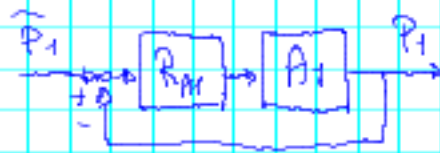
### 3) Adaptive control



NL adaptive block

How to synthesize? what adaptation goal/signal?

- g) How actuators provide a measurement (possibly indirect but reasonably reliable) of the produced thermal power



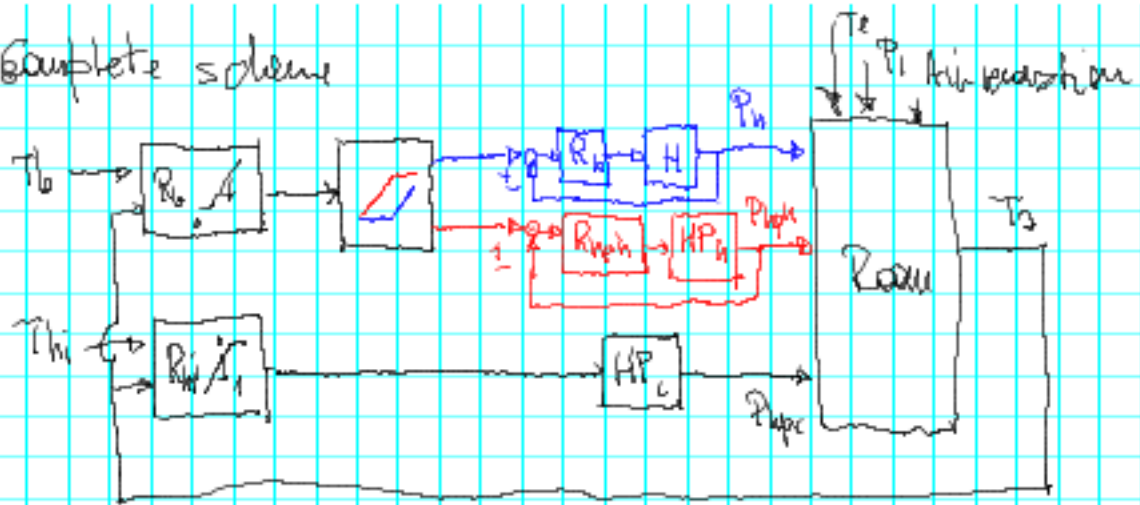
Use  $R_{A1,2}$  to have

$$\frac{P_1}{\hat{P}_1} \sim \frac{P_2}{\hat{P}_2}$$

7



Complete scheme





9

