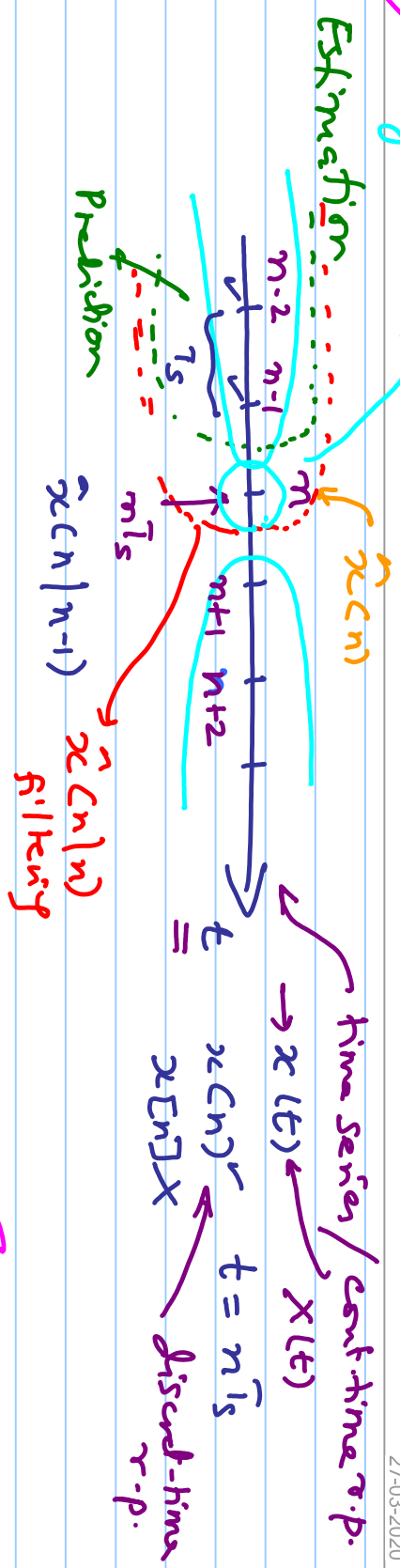
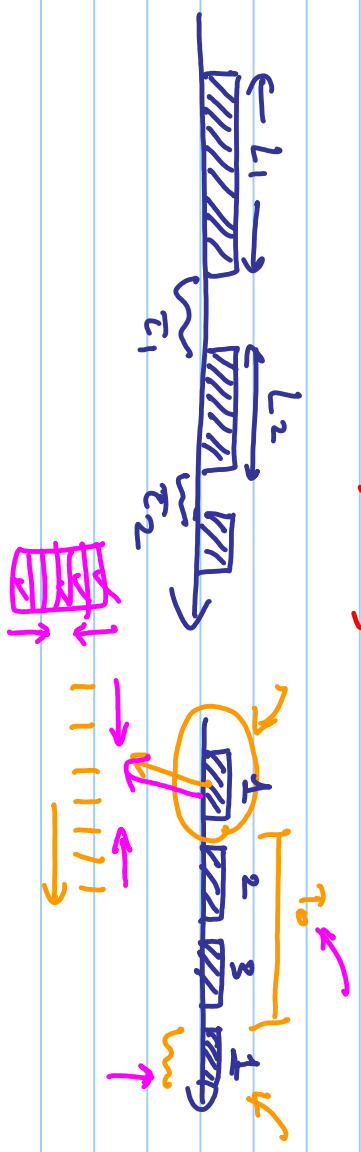


smoothing  $\hat{x}_s(n)$



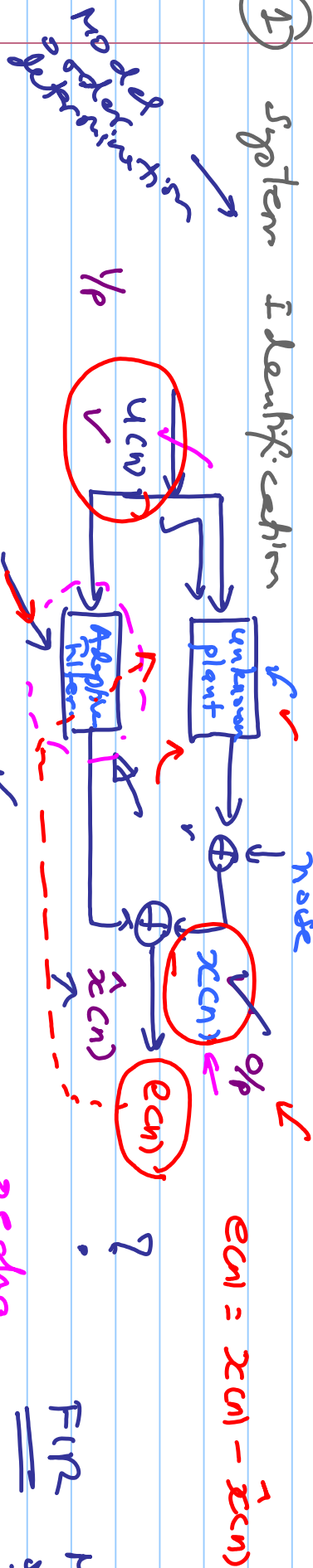
Packet Data



→ Adaptive Filter Theory - S. Haykin. 4th Ed.

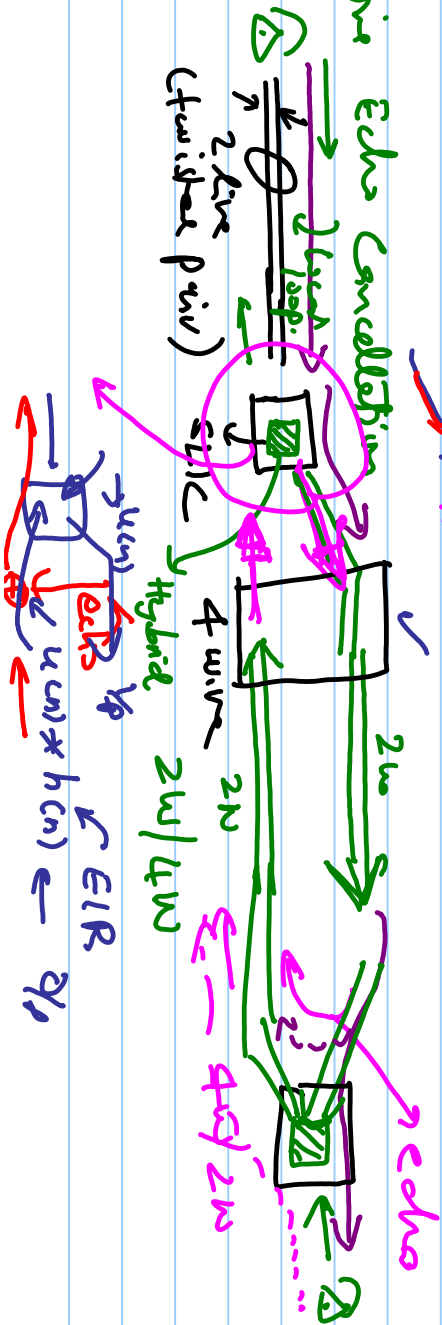
→ 4 major classes of ASP

① system identification



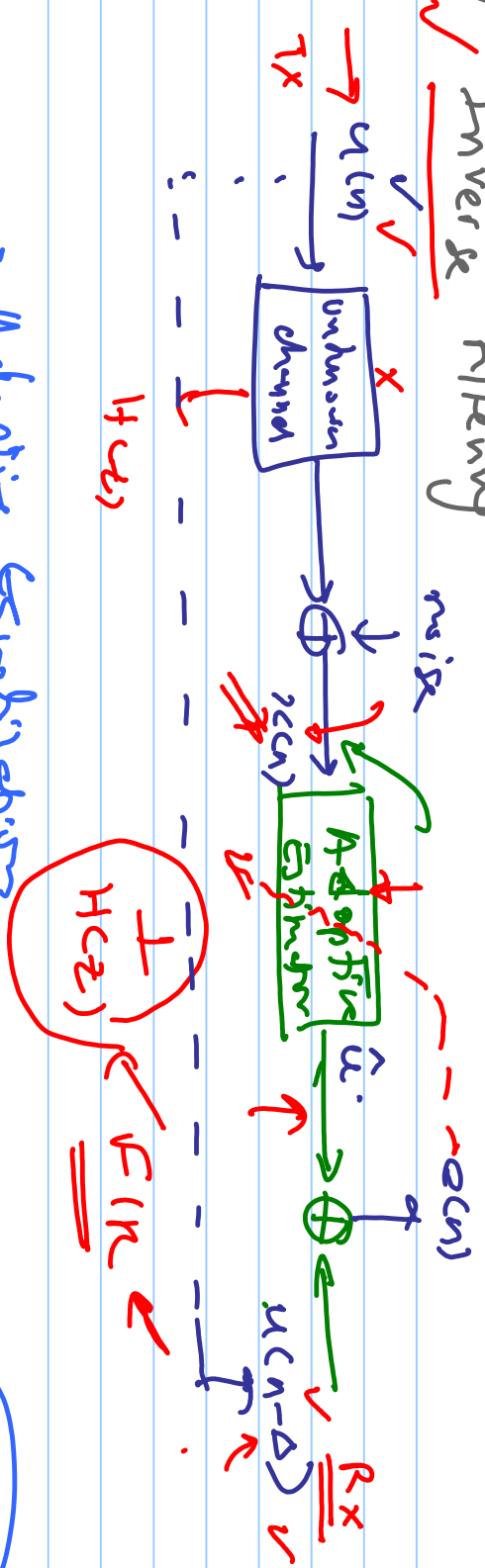
FIR  
Mn? order

Adaptive Echo Cancellation



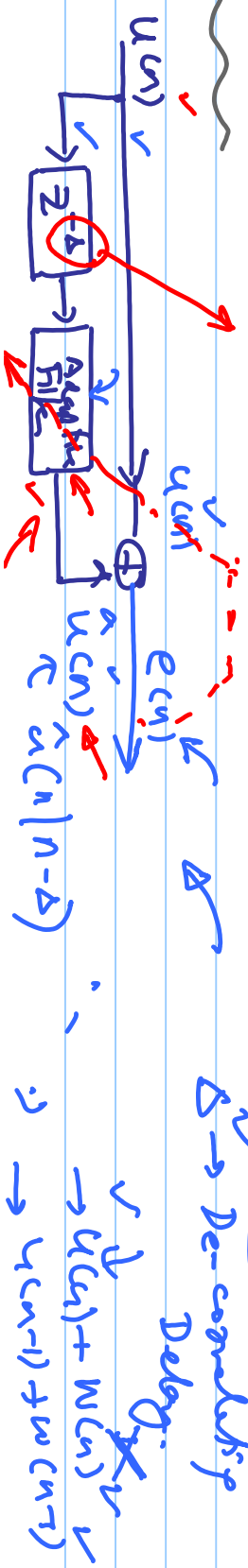
FEIS + eqn 0

② Inverse Filtering



→ Adaptive Equalization

③ Prediction:  $DZD = 1$  → 1-step prediction



ALE

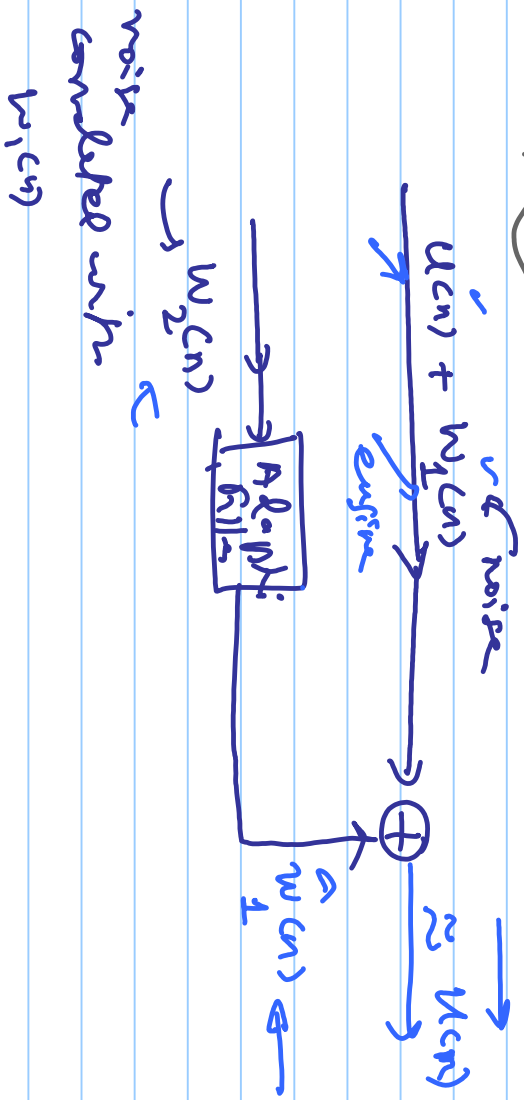
Δ → Decoupling Delay

$$\hat{u}(n) = u(n) + w(n) + w(n-1)$$

$$\Rightarrow u(n-1) + w(n-1)$$

(4)

Interference Cancellation:



noise cancelled with  $w_1(n)$

