

$z_a \quad \text{JIO} \quad \swarrow \text{pol v s-row}$

$$z_i = e^{s_i T}$$

\swarrow pol v z-row

$$s_i = \sigma_i \pm j2\pi f_i$$

$\swarrow \Omega_i = 2\pi f_i$

$$z_i = \underbrace{e^{\sigma_i T}}_{r_i} \cdot e^{\underbrace{j2\pi f_i T}_{s_i}}$$

$$z_i = r_i \cdot e^{j\beta_i} \quad \swarrow \beta_i = \Omega_i \cdot T$$

$$R(s) = \frac{s}{s+a}$$

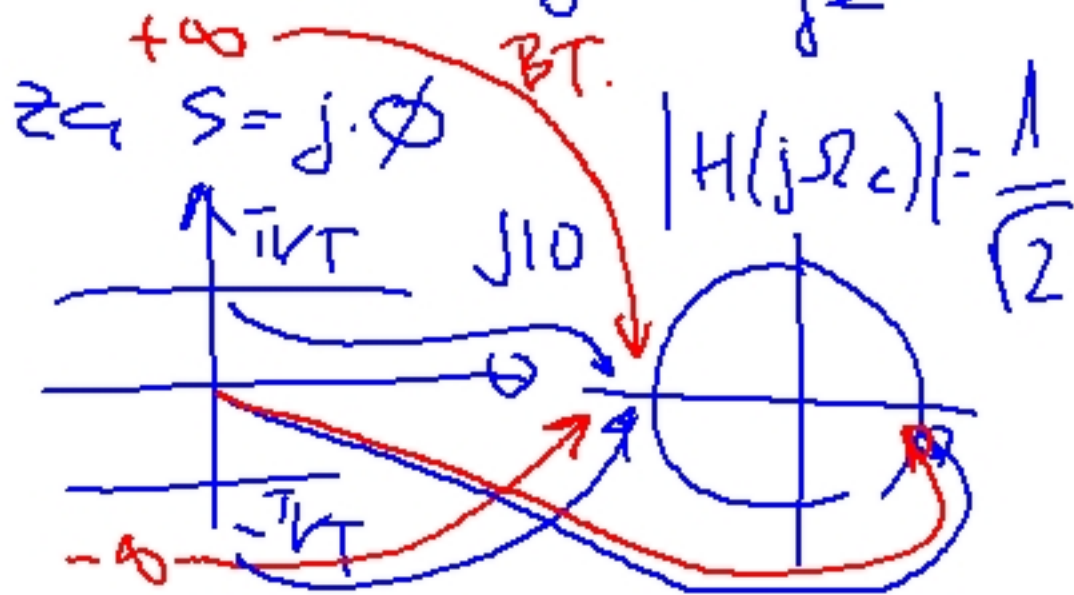
HP fit. 1. reda

a određuje Ω_c (gran. frek.)

$$R(s) = 1 \quad z_c \quad s - j\Omega = j\infty$$

za koju je

$R(s) = \emptyset$
 u z-dome.
 Bilim. transf



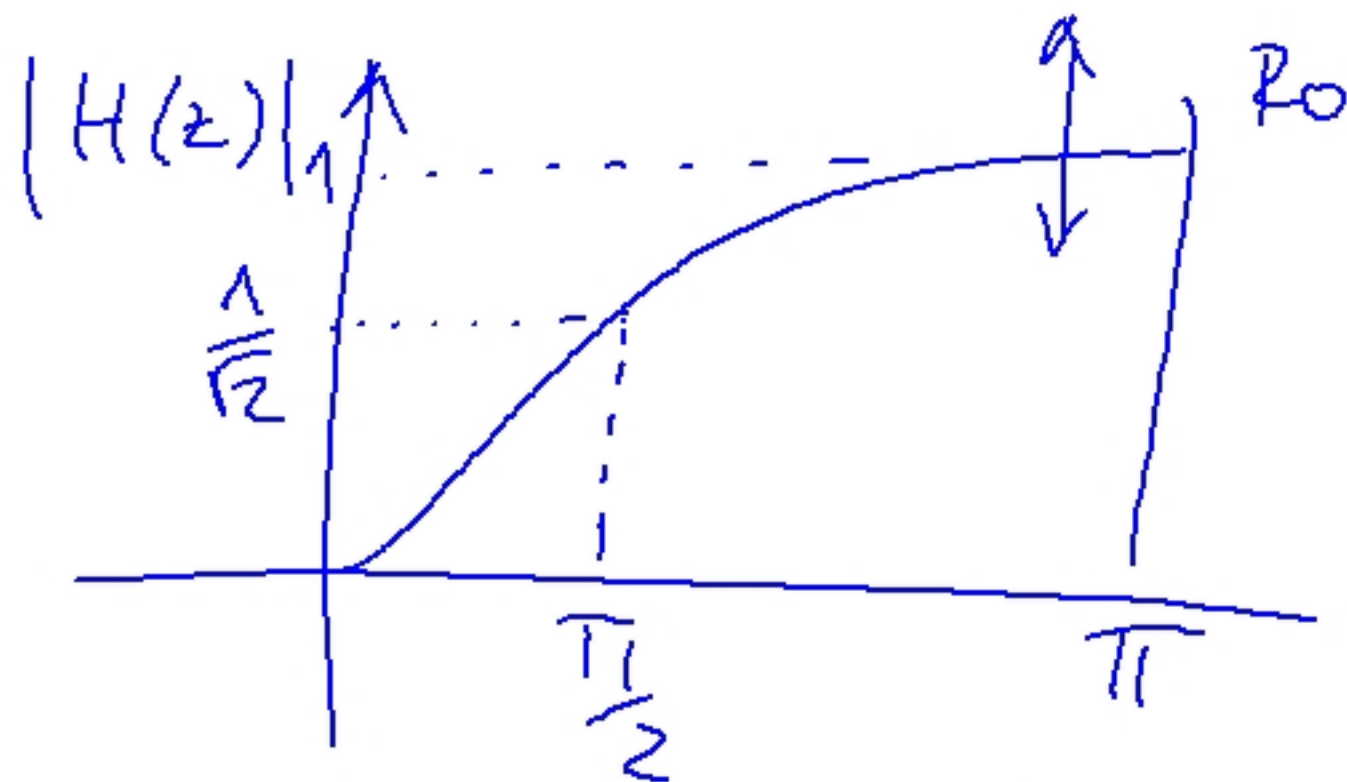
$$T \rightarrow \frac{z}{T} \frac{1-z^{-1}}{1+z^{-1}} \quad \frac{z}{T} \frac{1-z^{-1}}{1+z^{-1}} \frac{T}{2}(1+z^{-1})$$

$$H(z) = \frac{s}{s+a} \Big|_{z \rightarrow \frac{z}{T} \frac{1-z^{-1}}{1+z^{-1}}} = \frac{\frac{z}{T} \frac{1-z^{-1}}{1+z^{-1}} + a \frac{T}{2}(1+z^{-1})}{\frac{z}{T} \frac{1-z^{-1}}{1+z^{-1}} + a \frac{T}{2}(1+z^{-1})}$$

$$H(z) = \frac{1-z^{-1}}{1-z^{-1} + a \cdot \frac{T}{2}(1+z^{-1})}$$

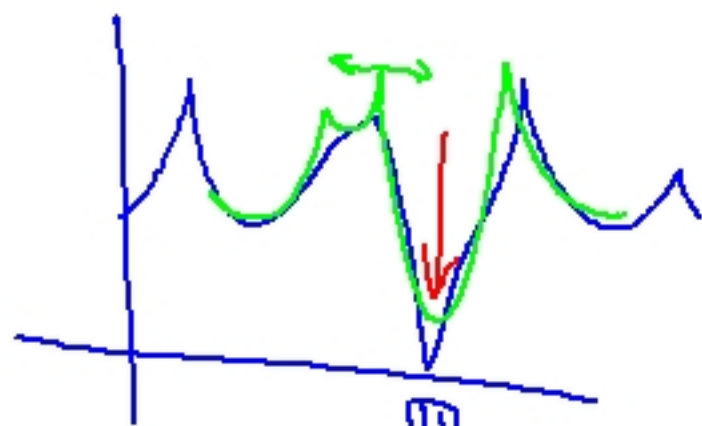
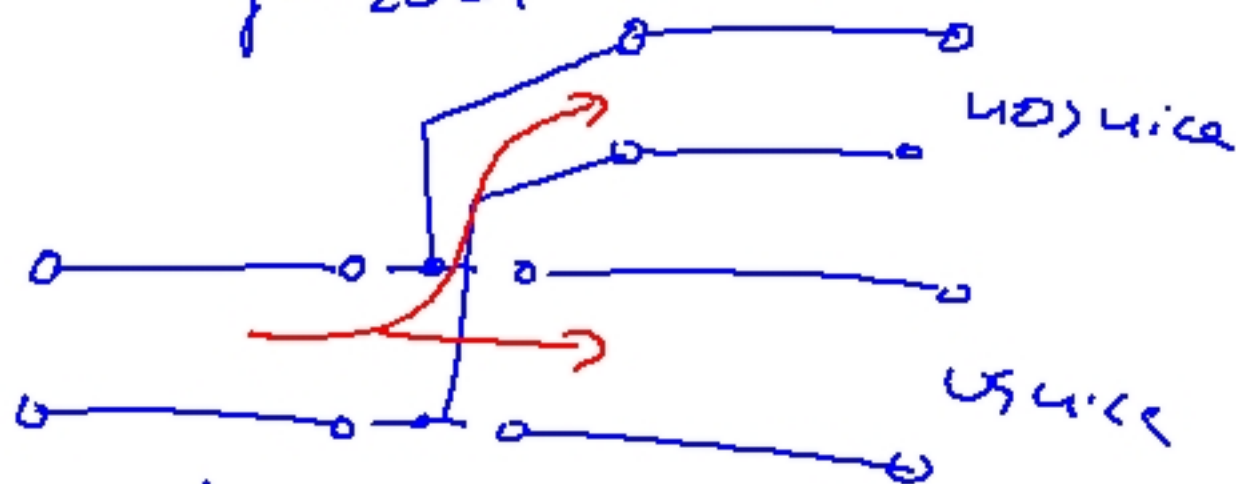
$$2aT = \frac{z}{a} \dots H(z) = \frac{1-z^{-1}}{z}$$

1. differencijs. $y(n) = \frac{1}{2}(v(n) - v(n-1))$



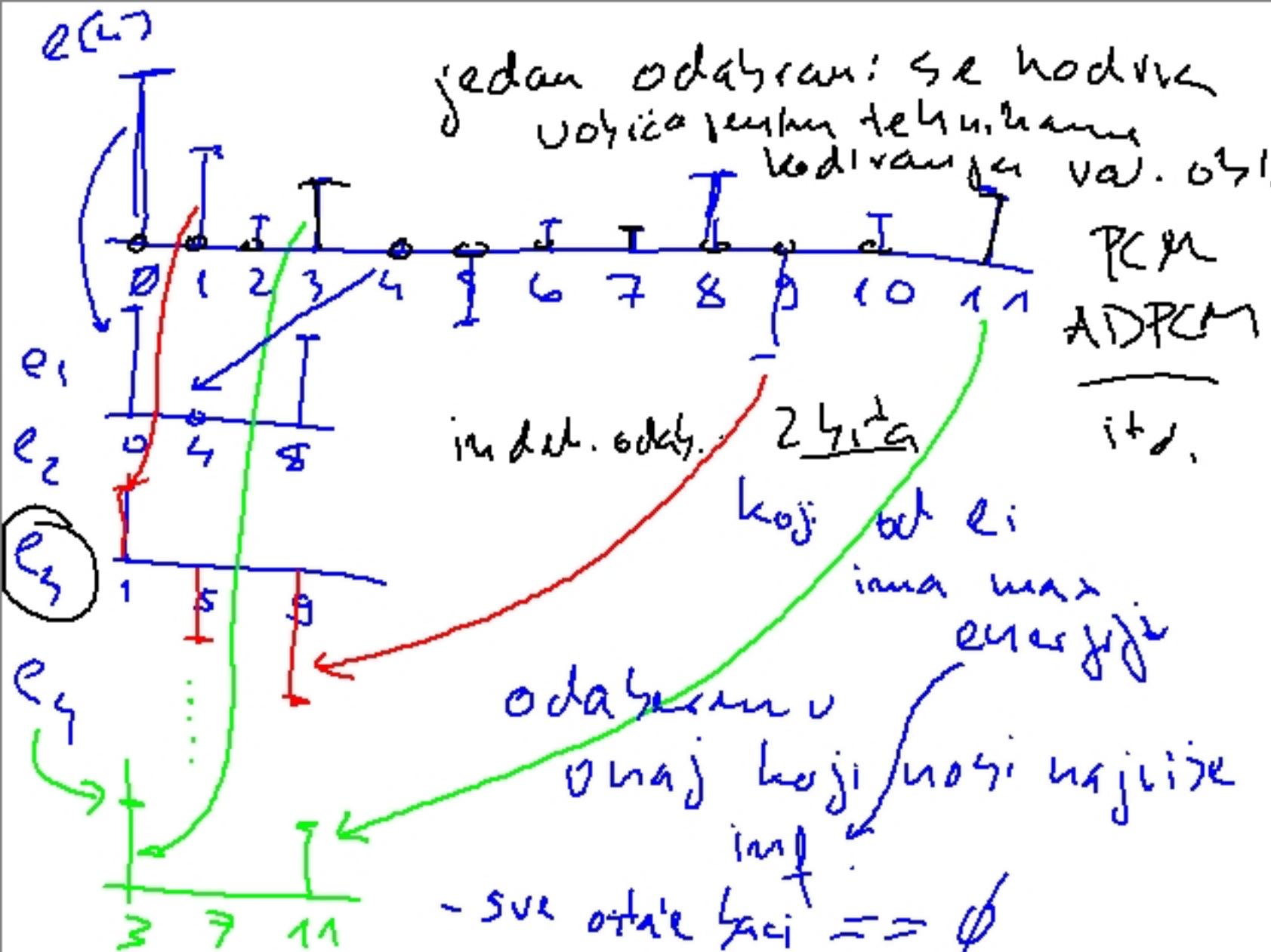
$$R(z) = R_0(1 - z^{-1})$$

Mod na žebnik
glasov



vel. tožba
vstiga vezl
VT : NT

jedan odabrani: se kodiruje
 uočio prilikom teh. namene
 kodiranje var. brz.



20 ms
 okvir analize $V_H(z)$



3 ms (40 uzoraka)
 4 x 5ms

Okvir za modeliranje pot.

inf. o indeksu
 češće
 inf. o energiji
 inf. o decimisu
 sig. uzorkovan
 normaliz.

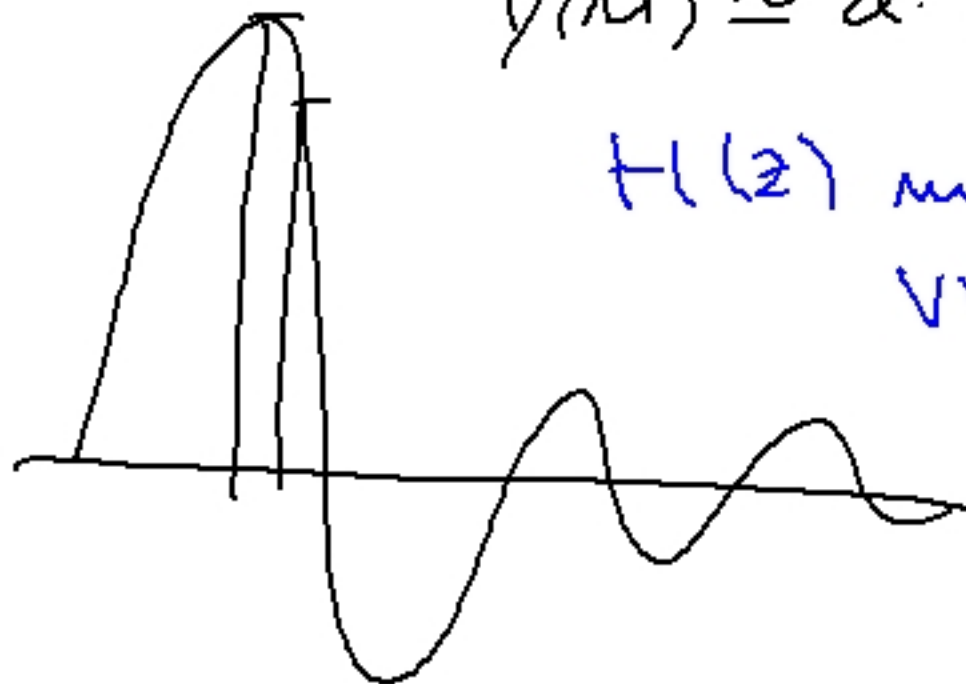
$$y(n) \approx a \cdot y(n-1)$$

$H(z)$ моделю

времяшк

краткотрајн

коп.



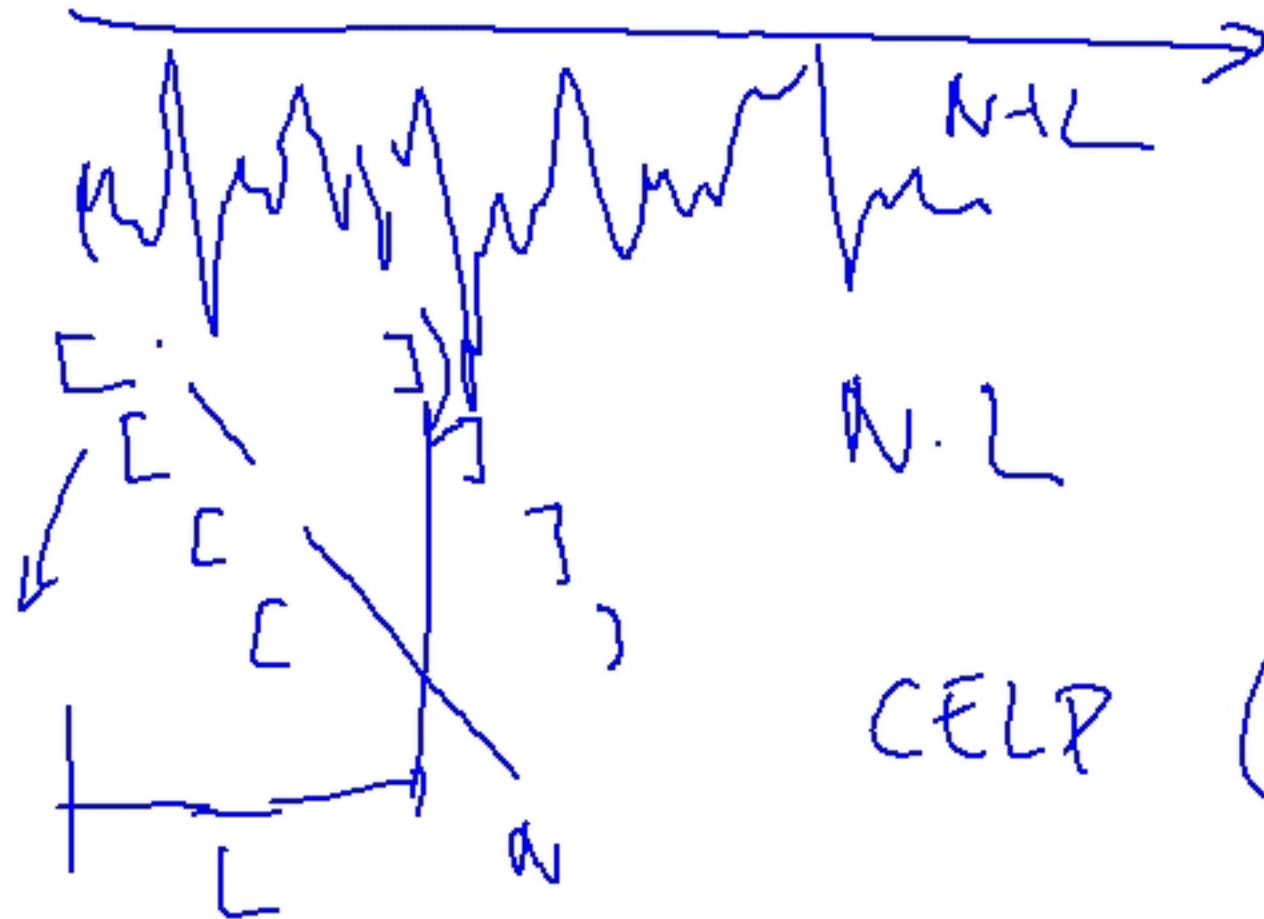
R P (E) L P

↑
regular pulse excited.

~~~~~  
pravilno (isti)

razna imputa multi-pulse

szada u grupu M P E L P



N.L

CELP (90-4.4)  
 god



$e(n)$

→ rezidualni sig

$P(z)$  lin. pred.  
 $f(z)$

PITCH prediktor

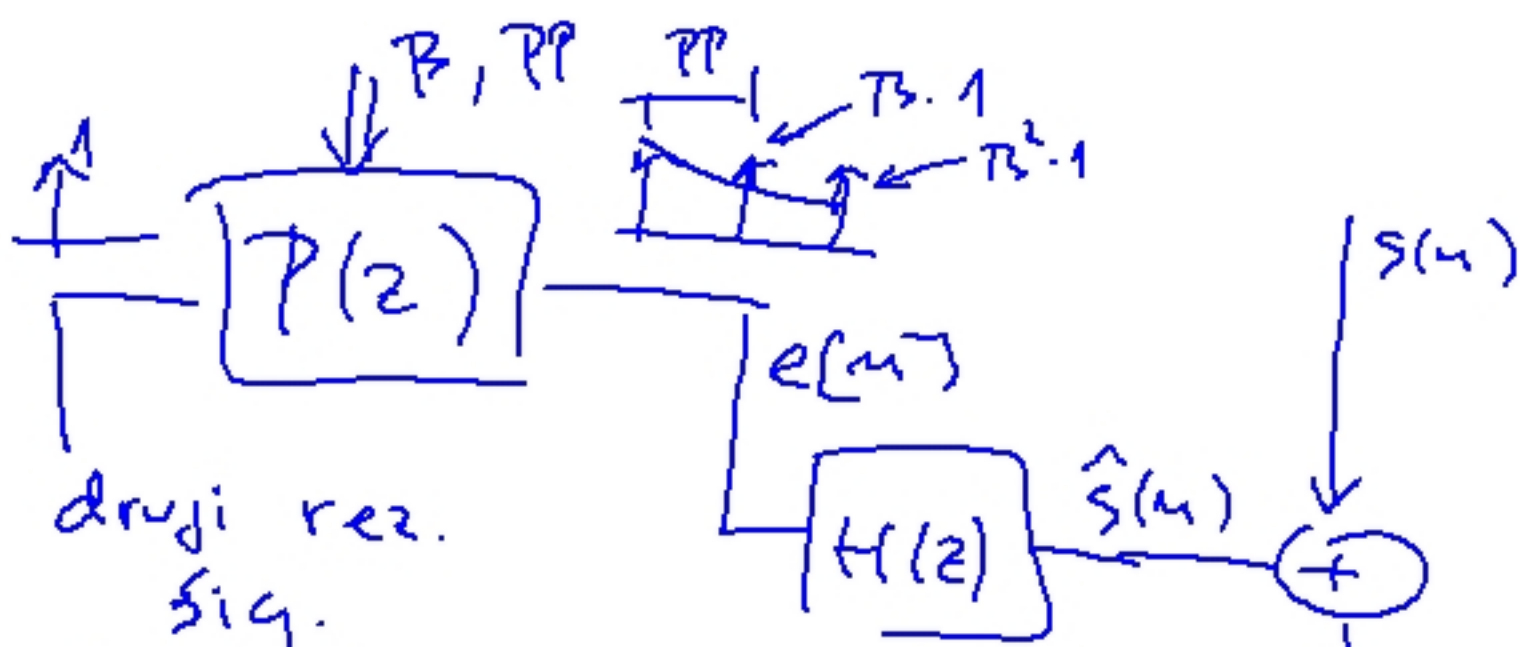
modelira vremensku

dugotrajnu korelaciju

$$\frac{1}{1 - \beta z^{-PP}}$$



← rezidualni sig.  
pitch-predikcije



drugi rez.  
sig.

⇒ ima oblik bipolaj šuma

⇒ ona se modelira vektorom

