

$$\ddot{y} = -k \cdot U_{FC}$$

↳ MOMENTNA KAR. MOTORA U RAČUNJ TOČKI ZA 3V (MOTOR → POJACANJE)

$$\left. \begin{array}{l} x_1 = y \\ x_2 = \dot{y} \end{array} \right\} \quad \begin{array}{l} \dot{x}_1 = x_2 \\ \dot{x}_2 = -k \cdot U_{FC} \end{array}$$

$$e_1 = \text{ref} - x_1 \quad (\text{Pretpostavka } \text{ref} = 0 \text{ i } \dot{e}_1 = -\dot{x}_1)$$

$$e_1 = \dot{e}_1 = -x_1$$

↓

$$\dot{e}_2 = k \cdot U_{FC}$$

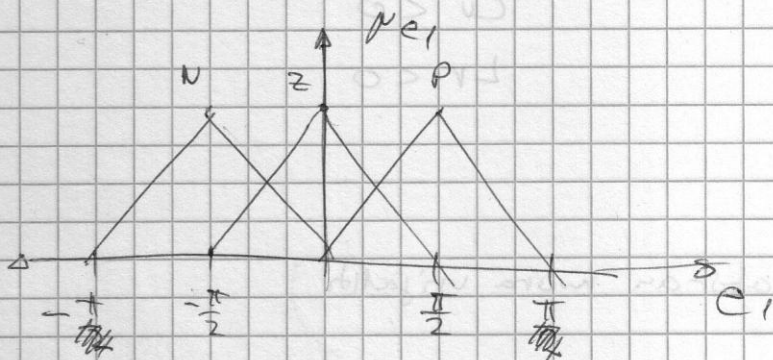
$$\dot{e}_1 = e_2$$

$$\tilde{V} = \frac{1}{2} (\tilde{e}_1^2 + \tilde{e}_2^2)$$

$$\dot{\tilde{V}} = \dot{\tilde{e}}_1 + \dot{\tilde{e}}_2 = 0$$

$$\boxed{\dot{\tilde{V}} = \tilde{e}_2 (\tilde{e}_1 + k \cdot U_{FC})} \leq \hat{\sigma}$$

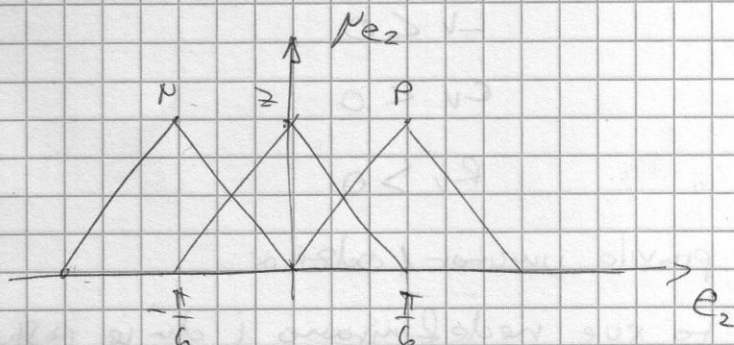
DEFINIRANJE FUZZY BROJEVA



$$\tilde{e}_{1N} < -\pi, -\frac{\pi}{2}, 0 >$$

$$\tilde{e}_{1Z} < \dots >$$

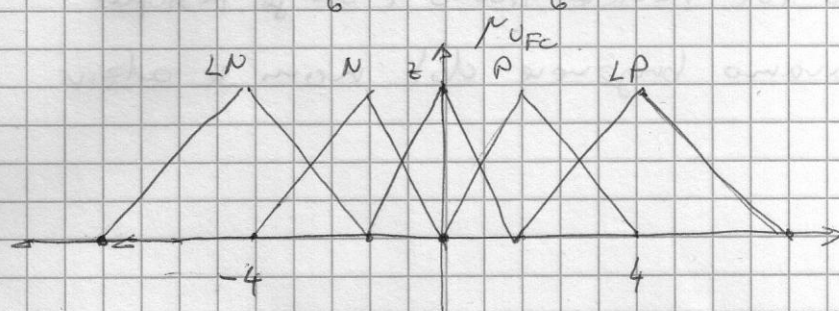
$$\tilde{e}_{1P} < \dots >$$



$$\tilde{e}_{2N} < \dots >$$

$$\tilde{e}_{2Z} < \dots >$$

$$\tilde{e}_{2P} < \dots >$$



$$\tilde{U}_{LN} < \dots >$$

$$\tilde{U}_N < \dots >$$

$$\tilde{U}_Z < \dots >$$

$$\tilde{U}_P < \dots >$$

$$\tilde{U}_{LP} < \dots >$$

ZGUSNUTE
oko
0

DEFINICIJA TABLICE PRAVILA

e_1	e_2	N	Z	P
N	L^P ①	P	N	
Z	P	Z	N	
P	P	N	LN	

$$\hat{V} = \hat{e}_2 (\hat{e}_1 + k \cdot \hat{U}_{Fc}) \leq \hat{0}$$

$$\left. \begin{array}{l} e_2 < 0 \\ e_1 < 0 \end{array} \right\} \hat{U}_{Fc} \gg 0 \quad (1)$$

UVRSTE SE BROJEVI \hat{e}_1 I \hat{e}_2 U \hat{V} I GLEDA SE DALI SU
ZADOVOLJENI UVJETI

UGLAVOM ZA **APERIODSKI** MORA VRIJEDITI

$$\hat{V} = \langle L_V, C_V, R_V \rangle$$

$R_V \rightarrow$ ŠTO BLIŽI 0 ALI NAJBLIŽE 0

$$C_V < 0$$

$$L_V < 0$$

ZA OSCILATORAN MORA VRIJEDITI

$$L_V < 0$$

$$C_V < 0$$

$$R_V > 0$$

PRETPOSTAVKA ZA STABO PRAVILU UNUTAR OBLASTI

POMISLI JE PAR PUTA DAKLI TO JE NEDEFINIRANO I DAKLI POSTUPAK
ITERATIVAN, DAKLI NEŠTIMAVAMO BROJEVE DOK NAM SE OBLAST
NE SUDI :)