

FLC-2: Generator Flux Programming Control

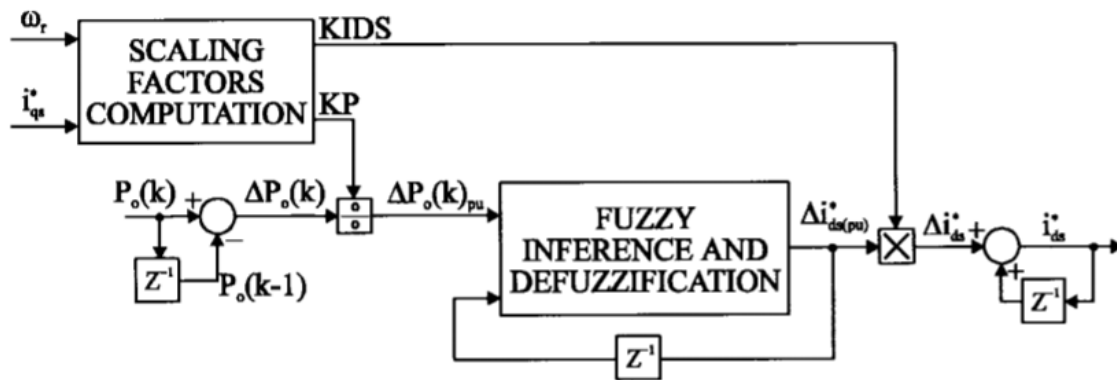


Figure 1 Block Diagram of FLC-2

Inputs to Fuzzy Controller:

- $\Delta P_o(k)$ in pu
- Last Δi_{ds} in pu

Output of the Fuzzy Controller:

- Δi_{ds} in pu

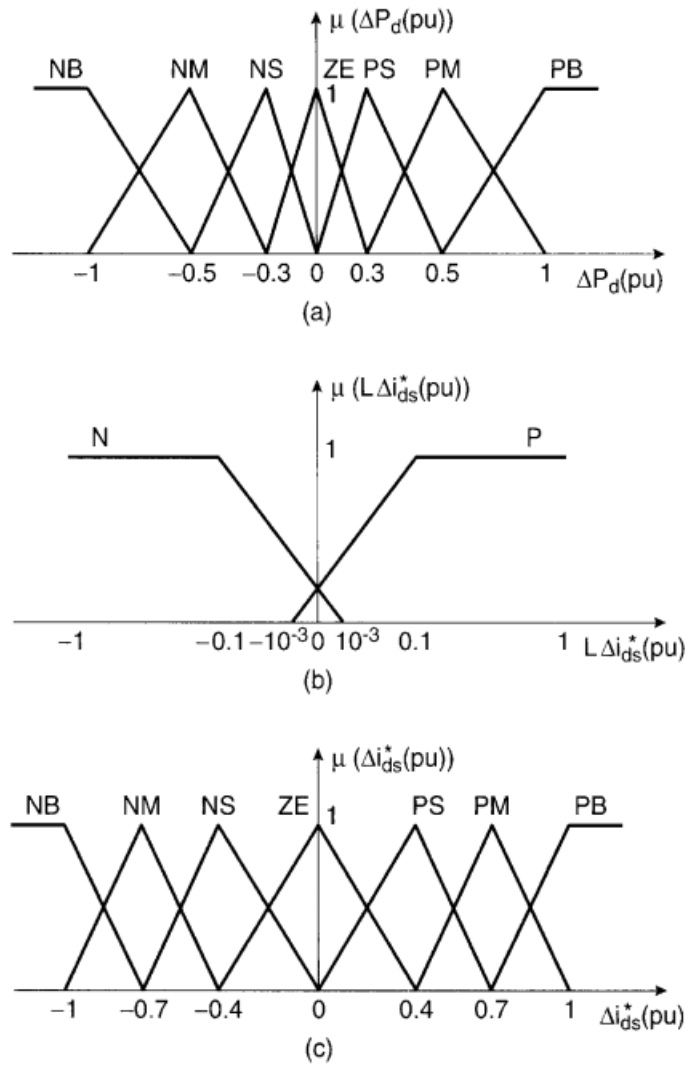


Figure 2 Membership functions of fuzzy sets

ΔP_o \ Last Δi_{ds}	N	P
PB	PM	NM
PM	PS	NS
PS	PS	NS
Z	Z	Z
NS	NS	PS
NM	NM	PM
NB	NB	PB

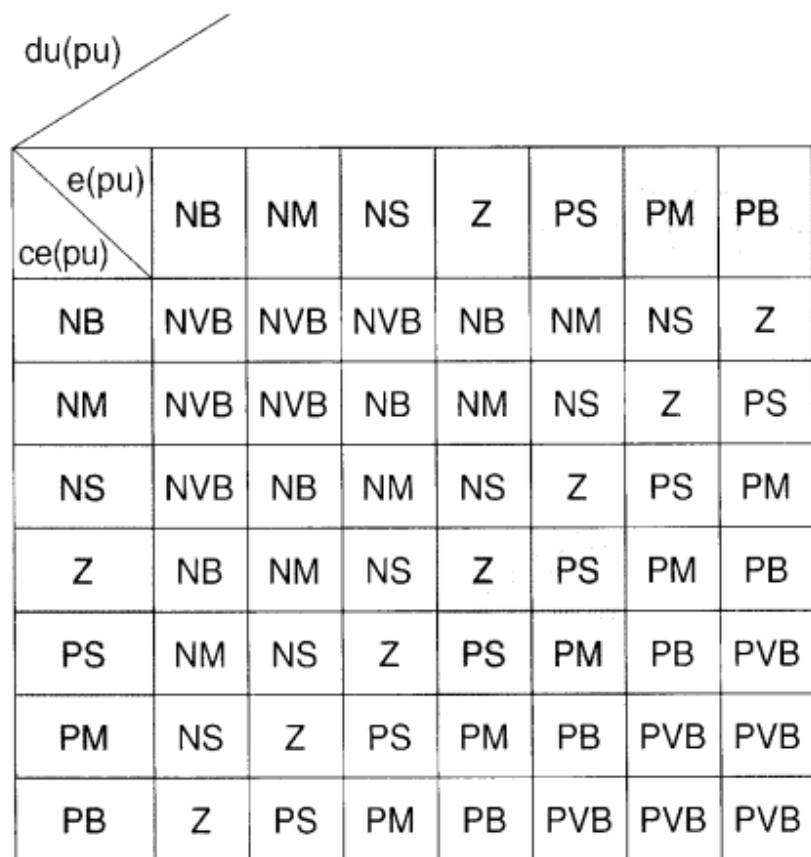
FLC-3: Closed-Loop Generator Speed Control

Inputs to Fuzzy Controller:

- Δw_r (speed error) in pu
- $d \Delta w_r$ (Change of error) in pu

Output of the Fuzzy Controller:

- $\Delta T e^*$ in pu



<div><div>e(pu)</div><div>ce(pu)</div></div>	NB	NM	NS	Z	PS	PM	PB
NB	NVB	NVB	NVB	NB	NM	NS	Z
NM	NVB	NVB	NB	NM	NS	Z	PS
NS	NVB	NB	NM	NS	Z	PS	PM
Z	NB	NM	NS	Z	PS	PM	PB
PS	NM	NS	Z	PS	PM	PB	PVB
PM	NS	Z	PS	PM	PB	PVB	PVB
PB	Z	PS	PM	PB	PVB	PVB	PVB