

Δ. comparisons of FS, NN, GA

	FS	NN	GA
mathematical model	SG	B	B
learning ability	B	G	SG
knowledge representation	G	B	SB
expert knowledge	G	B	B
nonlinearity	G	G	G
optimization ability	B	SG	G
fault tolerance	G	G	G
uncertainty tolerance	G	G	G
real-time operation	G	SG	SB

G: good, SG: slightly good, B: bad

各系統各有優缺點，故有混合系統

△. Mixed systems : 概念而生

1. Fuzzy neural network

模糊的神經網路

2. Neural fuzzy system

3. Fuzzy - Neural hybrid system

獨立完整的二種控制手段結合

4. Fuzzy - GA hybrid system

5. N.N. - GA hybrid system

~~GA neural network~~

<EX> Fuzzy NN

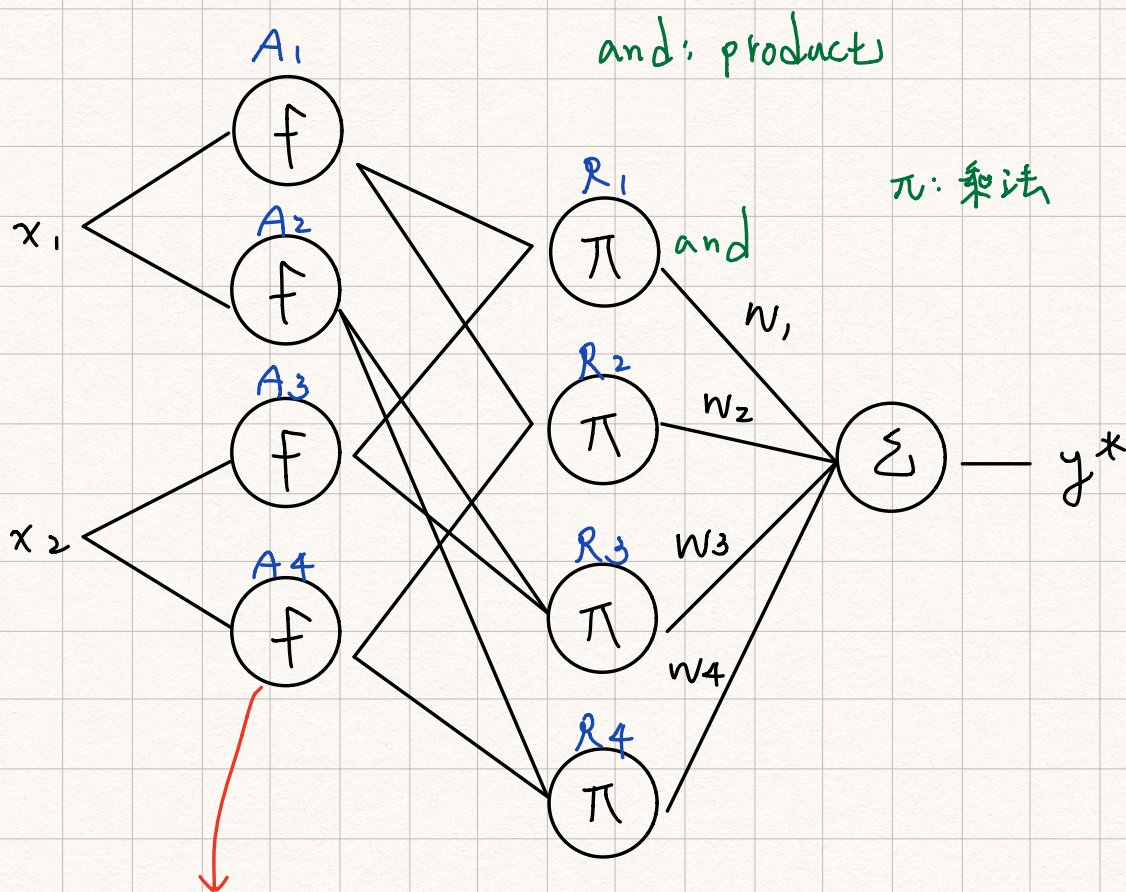
~~w 太多不實用~~

$R_1: \text{If } x_1 \text{ is } A_1 \text{ and } x_2 \text{ is } B_1 \text{ then } y \text{ is } w_1$

$R_2: \text{If } x_1 \text{ is } A_1 \text{ and } x_2 \text{ is } B_2 \text{ then } y \text{ is } w_2$

$R_3: \text{If } x_1 \text{ is } A_2 \text{ and } x_2 \text{ is } B_1 \text{ then } y \text{ is } w_3$

$R_4: \text{If } x_1 \text{ is } A_2 \text{ and } x_2 \text{ is } B_2 \text{ then } y \text{ is } w_4$



裡面的三角形set以高斯函數取代(可微分)

Fuzzy set 裡, if set 間的 overlap 夠大
(斜率控制)

則產出圖形不會有陡降情形發生。

利用 nn 修正 fuzzy set 斜率 達成平緩控制

6/21 (五) 9:20 ~ 11:20 考試

open book / 課本
不用上台報告