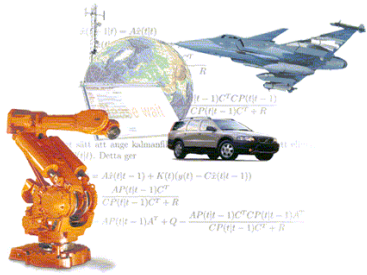


The Fuzzy toolbox

An example



Inger Klein

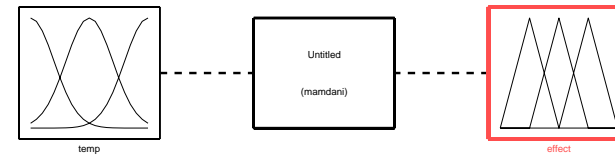
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ISY
Linköpings universitet

Fuzzy example
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Start the toolbox: fuzzy



FIS Name:	Untitled	FIS Type:	mamdani
And method	min	Current Variable	
Or method	max	Name	effect
Implication	min	Type	output
Aggregation	max	Range	[0 1]
Defuzzification	centroid		
<div>Help</div> <div>Close</div>			
Renaming output variable 1 to "effect"			

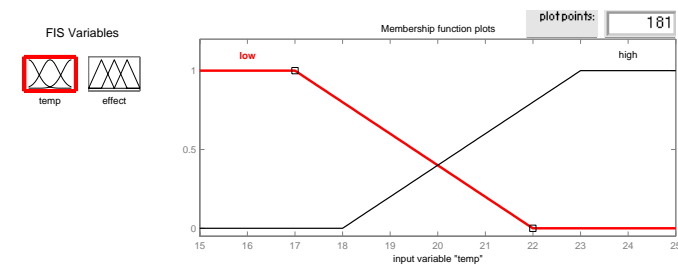
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Membership functions: temp

3



Current Variable	Current Membership Function (click on MF to select)
Name	temp
Type	input
Range	[15 25]
Display Range	[15 25]
Ready	
	Name
	low
	Type
	trapmf
	Params
	[11.4 14.6 17 22]
	Help
	Close

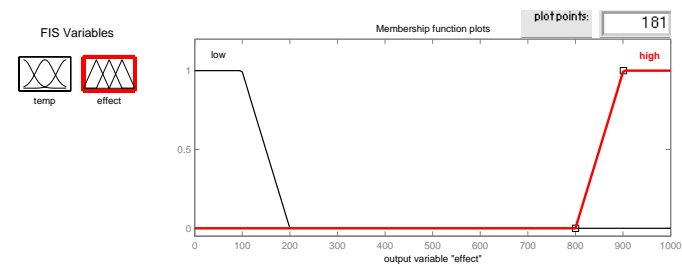
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Membership functions: effect

4



Current Variable	Current Membership Function (click on MF to select)
Name	effect
Type	output
Range	[0 1000]
Display Range	[0 1000]
Changing MF 2 type to "trapmf"	
	Name
	high
	Type
	trapmf
	Params
	[800 901 1.04e+03 1.36e+03]
	Help
	Close

Fuzzy example
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1. If (temp is low) then (effect is high) (1)
2. If (temp is high) then (effect is low) (1)

If temp is

low
high
none

Then effect is

low
high
none

not

not

Connectio

or
and

Weight:

1

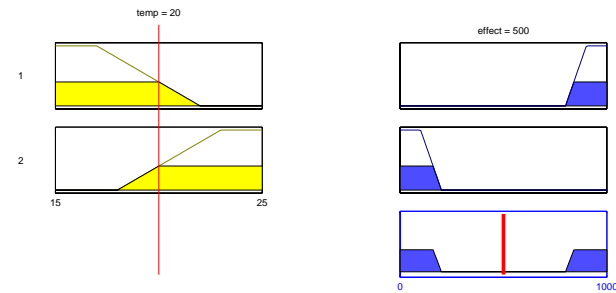
Delete rule Add rule Change rule

The rule is added

Help Close

Fuzzy example
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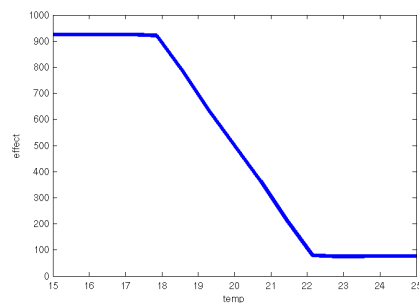
Input: 20 Plot points: 101 Move: left right down up

Opened system temp1, 2 rules

Help Close

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X (input): temp Y (input): - none - Z (output): effect

X grids: 15 Y grids: 15 Evaluate

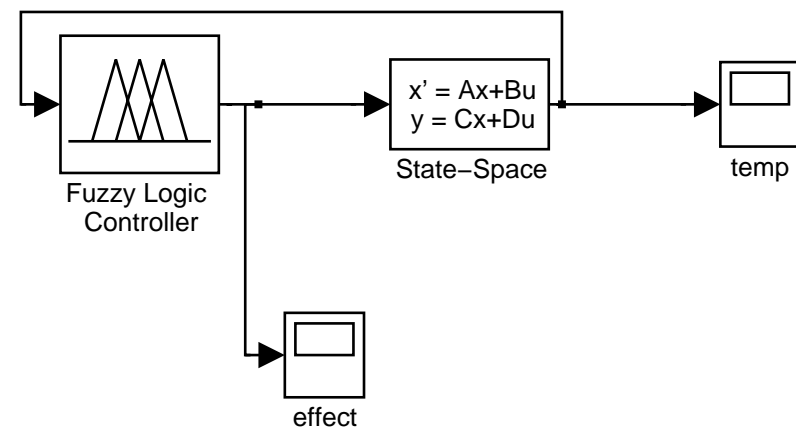
Ref. Input:

Help Close

Ready

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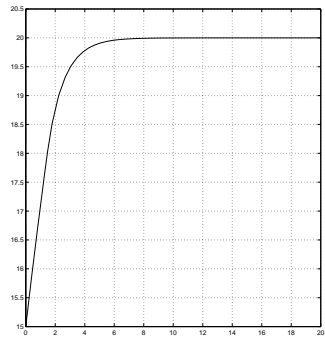
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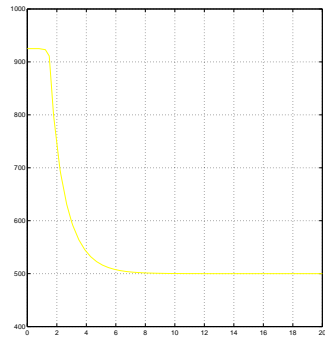
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Time offset: 0

temp



Time offset: 0

effect

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