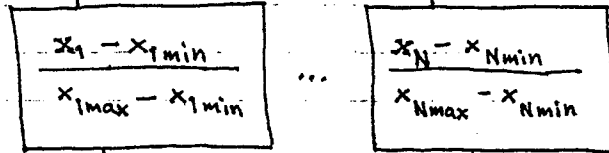


Neil E. Cottler  
1994

Input Data:  $x_1, \dots, x_{N=2}$

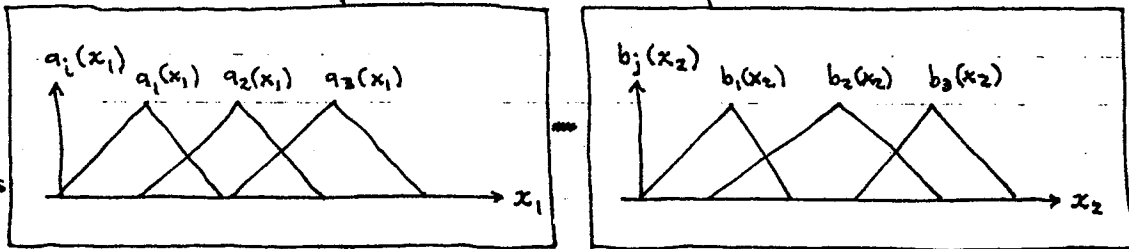
Architecture can be Generalized for  $N > 2$ .

Normalize Inputs



Scales input data to range [0,1].

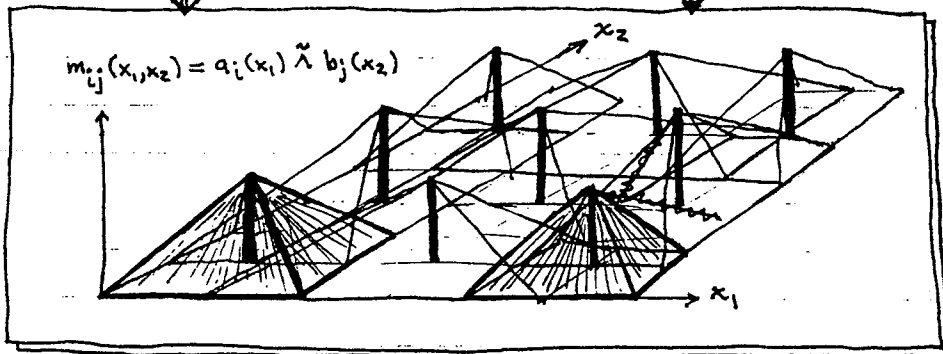
Membership Functions for qualities of each input variable.



$\{a_i(x_1)\}$

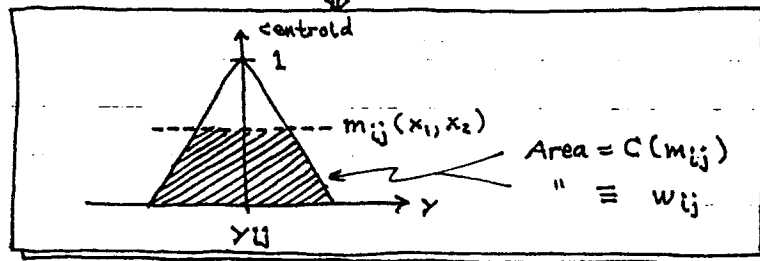
$\{b_j(x_2)\}$

Fuzzy AND of membership functions



overlapping pyramids

Centroids give weights for output (y) values



gives smooth interpolation

Normalized weighted sum

$$\frac{\sum_{i,j} y_{ij} w_{ij}}{\sum_{i,j} w_{ij}}$$

$f(x_1, x_2)$