

Algorithm of Hebbian Learning Rule

- 1) Set all weights to 0, $w_i = 0$
- 2) For each input vector, i/p vector: target o/p pair, repeat steps 3-5.
- 3) Set activations (sigmoid) for input units as follows.
 - for unipolar i/p's → unipolar sigmoid $f^2 [0 \text{ to } 1]$
 - for bipolar i/p's → bipolar sigmoid $f^2 [-1 \text{ to } 1]$
- 4) Set the corresponding output values to the output neurons, i.e. $y = t$
- 5) Update the weights using Hebb rule, i.e.

$$w_i(\text{new}) = w_i(\text{old}) + x_i y$$