



# Νευρο-Ασαφής Υπολογιστική Neuro-Fuzzy Computing

HY418

Διδάσκων –  
Δημήτριος Κατσαρός

@ Τμ. ΗΜΜΥ  
Πανεπιστήμιο Θεσσαλίας



# Practice on Radial Basis Function neural networks



## Exercise-10

For an RBF network with one input and one neuron in the hidden layer, the initial weights and biases are chosen to be:

$$w^1(0) = 0 \quad b^1(0) = 1 \quad w^2(0) = -2 \quad b^2(0) = 1$$

An input/target pair is given to be:  $\{p = -1, t = 1\}$

Perform one iteration of SDBP with  $\alpha = 1$ .

## Exercise-11

The following figure illustrates a classification problem, where Class I vectors are represented by dark circles, and Class II vectors are represented by light circles. These categories are not linearly separable. Design a radial basis function network to correctly classify these categories.

