



Sharif University of Technology.
Electrical Engineering School.

Fuzzy Systems – Spring 2009.

Final Take Home

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Dead-Line: 13 June

- I) Two System Implementation with TSK, Sugeno – Yasukawa , (ALM , ANFIS (it is Arbitrary)) evaluated with noisy Data.

$$Y = \sqrt{3 \left(\frac{\sin(x_1)}{x_1} \right)^2 + 5 \left(\frac{\sin(x_{12})}{x_2} \right)^2} \quad -15 \leq x_1, x_2 \leq 15$$

$$Y = 1 + x_1^{-2} + 3x_2^{-3} \quad 0.1 \leq x_1, x_2 \leq 5$$

- II) Implementing Control Process of a Plant with Transfer Function $H(s) = \frac{(s-3)e^{0.5s}}{(s+1)(s+5)}$ with Self Organizing Controller.