Home work 3.

A black box nonlinear system is given in the file nonlinear_system.slx.

Design Neural Network based nonadaptive and adaptive control systems for the given nonlinear system.

Test the system with set points 0.7. The required accuracy of control is ±0.05.
Define control time (settling time) of the closed loop system.

Try different structures on NN-based controller (different number of neurons and/or hidden layers). Compare the control time.

Present a report containing all design steps, simulation results (in case of adaptive control system, simulation has to include disturbances) and analysis.

NB! REPORT FORMAT *.DOC(X) or *.PDF