

Neural Adaptive Controller for a Class of Nonlinear Pendulum Dynamical System

Authors : Mohammad Reza Rahimi Khoiyani, Reza Ghasemi

Abstract : In this paper, designing direct adaptive neural controller is applied for a class of a nonlinear pendulum dynamic system. The radial basis function (RBF) is used for the Neural network (NN). The adaptive neural controller is robust in presence of external and internal uncertainties. Both the effectiveness of the controller and robustness against disturbances are the merits of this paper. The promising performance of the proposed controllers investigates in simulation results.

Keywords : adaptive control, pendulum dynamical system, nonlinear control, adaptive neural controller, nonlinear dynamical, neural network, RBF, driven pendulum, position control

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