Design Of Neuro PID Controller For Speed Control System Of Induction Motor

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ABSTRACT

Induction motor need a controller to provide desired it’s speed, the conventional PID (Proportional Integral Derivative) controller is one of reliable controller until now, it is very difficult to tuning the parameter of proportional gain ($K_p$), integral constant ($\tau_i$) and derivative constant ($\tau_d$). The autotuning is needed to find best respon. Autotuning gain parameter controller using Artificial neural network.. At the end of this task will be discussed with the method of controlling a speed inductin motor control using Proportional Integral derivative controller (PID controller) with Artificial neural network method. Results obtained by plant and Neuro PID controller can follow the model. By using the estimate of the controller and plant can more quickly pursue the desired target value of 0.9 gains rate, learning rate 0.00005, epoh 1:100, plant error 0.0015, 0.0004 controller error estimation and the estimation parameters alpha [1.2234, 4.2917, 9.6127].

Keywords : Artificial neural network, Induction motor, Speed Control, Neuro PID.