POSITION CONTROL of MOTOR DC USING CONTROLLER PID BASE ON GENETIC ALGORITHM (GA)

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ABSTRACT

Controller Proportional-Integral-Diferensial (PID) is most controller of this popular century because it’s effectiveness, modestly in implementation and wide it’s use. Standard controller PID configuraton own parameter Kp, Ki And Kd selected or determined characteristic of plant as according to expected criterion desain. This method is implementation directly because providing order tuning modestly to determine parameter PID. This Method use assumption that process controlled own minimum dynamics, linear, no noise. A lot of control process which nonlinear, time-variant and very complex. Genetic algorithm represent method which is a lot of utilized by all man of science for meyelesaikan problems do not be linear. This algorithm adopt experienced selection mechanism and evolution genetik as it’s rationale. In this thesis, proposed for controller tuned to use technique Genetic Algorithm . Genetic Algorithm have been shown to able to be placed at high performance area at complex area without experiencing of difficulties attributed to a high dimension or optima with briskness gradien technique. Thereby attainment of result of this research is better than conventional tuning controller PID at motor DC position arrangement with value rise-time, settling-time, maximum overshoot and mean square error.

Keywords: DC Motor, Controller PID, Genetic Algorithm