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Synthesis of PID algorithm for speed control of the dc motor

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Abstract

In this paper is proposed to synthesize the PID control algorithm for speed control of the DC motor based on the maximum stability degree method with iterations. According to the maximum stability degree method the tuning parameters depend on the maximum stability degree, which is varied and that permits to obtain high performance of the automatic control system. It was done the analytical and experimental identification of the mathematical model of the DC motor, viewed as control object. For efficacy analysis of the proposed control algorithm, there are presented case studies for control the speed of the DC motor based on the parametrical optimization method and internal control method.

Keywords: *automatic control system, method with iterations*

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