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## 电动舵机与其PWM驱动器的物理建模与参数估计(PDF)

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Title: Physical Model and Parameter Estimation of Electromechanical Actuator and Its PWM Driver

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摘要: 电动舵机与其PWM (pulse width modulation) 驱动器是某武器伺服系统的重要组成部分。针对其建模与参数估计的问题, 文中首先较详细地介绍了电动舵机与其PWM驱动器使用特点和应用技术, 然后选用 Simulink 平台下的SimDriveline TM 以及 SimPowerSystems TM 模块库建立起电动舵机与其PWM驱动器的物理模型;通过非线性最小二乘法拟合的方式, 对模型中的参数进

Abstract: The electromechanical actuator and its pulse width modulation (PWM) driver are important parts of servo system in certain weapon. Focused on the problem of the modeling and parameter estimation, the applied characteristics and techniques were introduced. Then, SimDriveline TM and SimPowerSystems TM modular libraries in Simulink were selected to set up their physical models, and the parameters of this model were estimated by nonlinear least squares. The output response of checking data set validated high precision of this physical model.

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