

عنوان مقاله:

Decomposed Fuzzy PID Controller for Power Inverters Regulation: An Overview

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خلاصه مقاله:

The aim of this paper is to examine the various decomposed Fuzzy PID control structures in literature and to classify them into different categories. An important attribute of decomposed Fuzzy PID controllers is its structural simplicity. In this paper, decomposed Fuzzy PID controllers are classified as Fuzzy + Conventional type controller and Fuzzy + Fuzzy type controller. Structural construction and output control laws of these controllers will be discussed. Their merits and drawbacks are highlighted. Based on the critical discussions, a new structure of Fuzzy PID controller is proposed. It is based on cascaded structure which reflects simpler design flow and parameters tuning. Other advantages of the proposed Fuzzy PID structure are the reduction of tuning parameters and rules of the Fuzzy controller. The controller is useful for power inverter designers who required fast, simple and precise controllers

کلمات کلیدی:

fuzzy logic; decomposed PID; fuzzy PID

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