عنوان مقاله:

Simulation and Implementation of a 300 Watt, Cascade Gama-LC Resonant Converter

محل انتشار:

سومین کنفرانس بین المللی الکترونیک قدرت و سیستمهای درایو (سال: 1390)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Mohammad Amin Heidari - *Islamic Azad University, Fasa branch*

Mohammad Jafari - *Islamic Azad University, Fasa branch*

Zahra Malekjamshidi - *Islamic Azad University, Marvdasht branch*

خلاصه مقاله:

In this paper a cascadeG - LC resonant power converter on base of a hybrid controller is introduced. To control the output voltage of converter, Artificial Neural Networks and PID classic controllers arecombined. A multi-layer feed-forward artificial neural network is employed to achieve real-time control. ThePID classic controller regulates the voltage on base of an Online PWM process while The ANN controller changes the switching frequency to maximize the voltage gain andconsequently to increase the efficiency of converter. The resulted trained ANN was tested on an ideal simulatedmodel of the converter for fine tuning. A prototype was designed and implemented on base of the proposed controller and was tested experimentally. Comparison between simulation and experimental results verified the proposed hybrid controller.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/213073