

## عنوان مقاله:

Voltage regulation in a microgrid connected to a PV-based VSI under parameters uncertainty using an improved sliding mode control method by PSO

## محل انتشار:

نهمین کنفرانس منطقه ای سیرد (سال: 1400)

تعداد صفحات اصل مقاله: 5

## نویسنده:

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## خلاصه مقاله:

This paper presents a proposed controller to control the voltage of load connected to a photovoltaic based voltage source inverter. In this method, the load connected to inverter through an LR filter and voltage is controlled without the need of current feedback. For this purpose, a cascade sliding mode controller is used. Also, the particle swarm optimization algorithm is used to determine the best coefficients of sliding mode controller. Then, uncertainty in important parameters (impedance of load) is studied. This technique allows achieving the regulate the voltage of load, despite parameter uncertainty. The results show this control method can follow all reference voltages under parameter uncertainties.

## کلمات کلیدی:

LR filter; photovoltaic-based voltage source inverter; parameter uncertainty; sliding mode controller; particle swarm optimization.

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1442392>

