

## عنوان مقاله:

Control of Grid Feeding VSI without Grid Current Sensors

## محل انتشار:

پنجمین کنفرانس بین المللی پژوهش های کاربردی در مهندسی برق مکانیک و مکاترونیک (سال: 1397)

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## خلاصه مقاله:

Application of voltage source inverters (VSI) for grid integration of renewable energy resources increasingly grows. These VSIs, in renewable energy applications, are so-called as grid feeding VSIs, and their control is an important part for proper functionality of grid integrated PVs. Their control structure consists of two cascade control (voltage and current control loops) and needs some precision expensive voltage and current sensors to reach suitable control performance which increases the cost of grid feeding VSIs. Hence, minimizing the number of sensors can play a significant rule in cost reduction of VSIs. In this paper, based on the state space equation of system in dq frame, and using a linear observer, output current of VSI estimated and control of the system is done without current sensor. Performance of the proposed idea is evaluated through the simulation of a sample grid feeding VSI in Simulink/MATLAB.

## کلمات کلیدی:

.Grid Feeding VSI, Observer, Grid Current Sensor, Renewable Energy

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/869073>

