

عنوان مقاله:

Wind Turbines Partial Load Power Regulation Using a Fast MPC Approach

محل انتشار:

چهارمین کنفرانس ملی تکنولوژی در مهندسی برق و کامپیوتر (سال: 1398)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Kamyar Ghanbarpour - *Department of Electrical Engineering University of Zanjan Zanjan, Iran*

Farhad Bayat - *Department of Electrical Engineering University of Zanjan Zanjan, Iran*

Abolfazl Jalilvand - *Department of Electrical Engineering University of Zanjan Zanjan, Iran*

خلاصه مقاله:

In this paper, the highly acknowledged advantages of the Model Predictive Control (MPC) approach are utilized to regulate the wind turbines output power in the partial load region. In this region, the purpose of the designed controller is to capture maximum power from the wind. When the wind speed is above rated wind speed (full load region), control strategy is to keep output power and generator speed at their rated value. Because of the wind turbine s nonlinearities and constraints of the variables this is a challenging problem and two MPC-based methods are proposed, i.e. online and offline MPC schemes, that guarantee all constraints satisfaction and handling the systems nonlinearities. At the end, effectiveness of these two methods are compared

کلمات کلیدی:

.Wind Turbine, Partial Load, Model Predictive Control

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/989045>

