

## عنوان مقاله:

Measurements and parameters estimation in power systems containing UPFC

## محل انتشار:

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## نویسندگان:

Mehdi Ahmadi Jirdehi - *Department of Electrical Engineering, Kermanshah University of Technology, Kermanshah, Iran*

Reza Hemmati - *Department of Electrical Engineering, Kermanshah University of Technology, Kermanshah, Iran*

Sadjad Galvani - *Department of Electrical and Computer Engineering, Urmia University, Urmia, Iran*

## خلاصه مقاله:

This paper presents a new algorithm for validation (identification and correction) of measurement and parameter errors (branch parameters as well as unified power flow controller (UPFC) parameters), simultaneously. The algorithm is composed of three steps. First, in the step ۱, state estimation (SE) is solved by the modified weighted least square (MWLS) and then, the normalized measurement residual and Lagrange multiplier vectors are computed. The errors in measurement and parameter are identified in the step ۲. Finally, in the step ۳, erroneous measurement and parameter values are corrected. The correction algorithm is based on a proposed approach without the using of augmented state vector (ASV). The IEEE-۱۴ bus system and ۲۳۰ kV East Azerbaijan network of Iran modified by incorporating UPFC are used as test systems. Simulation results demonstrate the effectiveness of the proposed method. Also, results indicate that the proposed method can validate the erroneous values with lower error percentage

## کلمات کلیدی:

State Estimation, MWLS, UPFC, Measurement Errors, Parameter Errors, East Azerbaijan Network of Iran

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1424939>

