

عنوان مقاله:

A novel self-tuning control structure to control DVR A novel self-tuning control structure to control DVR Emotional learning

محل انتشار:

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خلاصه مقاله:

DVR is one of the custom power devices for compensating power quality indices. The main function of DVR that is discussed in many papers is to compensate voltage sag in faulty mode. For the first, self-tuning PI controller based on human brain emotional learning is presented with a bi-objective structure in this paper. In order to improve the performance of DVR compensating in term of power quality indices such as voltage sag and THD in sensitive load, this controller is introduced. On the purpose, this new control structure is suggested for considering the voltage sag as the first objective and voltage THD as the second objective of DVR controller. Using this controller, system has better performance during fault conditions. Considering voltage THD as second goal, influence on voltage sag. In the other hand, voltage sag is improved with applying voltage THD as second object. According to simulation results, it works significantly better than classic PI controller and some intelligent controllers that have introduced in other researches already.

کلمات کلیدی:

DVR; Power Quality s indices of sensitive load; Self tuning PI controller; Human brain emotional learning controller; bi-objective control structure

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