

عنوان مقاله:

Simulation of a Fuel Cell Power Generation System Using Fuzzy Boost Converter

محل انتشار:

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خلاصه مقاله:

One of the important distributed energy resources in order to generation of electrical energy are fuel cells. This paper presents a new model for simulation of fuel cells that convert chemical energy to electrical energy. The proposed model considers all details of chemical and electrical parts of a fuel cells system simultaneously, which have been commonly neglected in other studies. Fuel cell part consists of a thermo chemical part and electrical part consists of fuzzy DC-DC converter, battery and DC load, that are simulated using Simulink block. The simulation results show that the voltage output is able to be controlled when there is interaction between electrical and chemical parts in a steady state condition for DC-DC fuzzy boost converter by using this methodology.

کلمات کلیدی:

Fuel cell, Dynamic model, Distributed generation, Simulink

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