Abstract

Tracking the maximum power point (MPP) of a photovoltaic array is an essential operation for any PV system. Thus, changing the environmental conditions causes different maximum power point (MPP) driving for non-uniform power feeding for the load. So, researchers have developed many MPPT algorithms to maximize and stabilize the power derived for the load. But, these algorithms still suffer from some limitations such as high cost, complexity and sometime instability with rapid changes in the environmental conditions. The proposed system introduces integration between the artificial neural networks (ANN) and the fuzzy logic controller (FLC) for achieving MPPT. It can improve the performance of the MPPT algorithm for obtaining a stable maximum power derived for the loads. The proposed MPPT algorithm has been applied for a PV system feeds the power for a camp that exposes the radiation site. The results obtained from the suggested system have proved its significant success for the practical applications.
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