Abstract

Photovoltaic systems are so versatile that it can supply any electric power need and are used for numerous applications. Recent advancements in efficiency and cost reduction have made photovoltaic systems economically competitive with traditional power sources. This paper presents an intelligent method of peak power point tracking for photovoltaic systems based on tracking the peak power point by measuring the voltage and current of the solar array to control a buck-boost DC to DC converter. Result analysis shows that the neuro-fuzzy controller can deal with different load and weather conditions and deliver more power from the photovoltaic systems. To increase the efficiency of PV panels, it must operate around the peak power point which is influenced by cell temperature and sun irradiation. A controller therefore is needed to find the peak power point and control PV output voltage according to peak power point voltage. The aim of the paper is to design and analyze neural fuzzy controller for controlling the PV system output voltage.
- V. Mummadi, "Voltage-Based Maximum Power Point Tracking Control of PV System."
- T. Senju and K. Uezato, "Maximum Power Point Tracker Using Fuzzy Control
Neuro Fuzzy based Peak Power Point Tracking for Solar Photovoltaic System


Index Terms
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 Maximum Power Point  Neuro-fuzzy  Photovoltaic  PPPT  PV module