Maximum power point tracking (MPPT) or sometimes just power point tracking (PPT), is a technique used with sources with variable power to maximize energy extraction under all conditions. The technique is most commonly used with photovoltaic (PV) solar systems, but can also be used with wind turbines, optical power generation systems, and other sources with variable output power.

Maximum Power Point Tracking (MPPT) algorithms can be implemented using a multi-rate technique or traditional control dynamics. This can typically be implemented using a multi-rate technique...

Evaluation of Fuzzy Membership Function Efficacy for Maximum Power Point Tracking (MPPT) technique are the main challenges that must be solved. In addition, the switching frequency of the converters employed also affects the MPPT system performance. A high gain voltage DC-DC converter is proposed to replace conventional power...

Assessing Maximum Power Point Tracking Intelligent Methods

The proposed methodology comprises the study of the dynamic response for tracking the maximum power point and the power generated of the PV systems, and it was compared to the classic P&O technique under varying ambient conditions. We observed that the intelligent techniques outperformed the classic P&O method in tracking speed, tracking accuracy, and reducing oscillations around the maximum...