

## ABSTRACT

The decreasing reserves of petroleum as the primary energy source on earth forced us to look for other alternative energy sources. Of the various alternative energy sources available, solar energy is an alternative energy source has its advantages , including the nature of the infinite, and an environmentally friendly energy source of the future. By using solar panels, which is a tool to convert solar energy into electrical energy, solar energy resources are now widely used for both industrial, infrastructure and residential roads. Optimization of the utilization of solar energy is very important to remember not every time a solar panel exposed to the sun's energy so that energy produced maximum.

To get maximum energy it needs a control system that can control the power output of a solar panel to keep it generates maximum power. One technique to control the power output of solar panels is the Maximum Power Point Tracker ( MPPT ). MPPT is an algorithm that basically can trace the point of maximum power that can be issued by a solar panel. MPPT has a variety of techniques with the advantages and disadvantages of each, one of which is by using Fuzzy Logic Control ( FLC ).

In this final will be studied how to get maximum points with a power output through the MPPT with fuzzy logic techniques on solar panels using a boost converter. The results of this study the MPPT system can improve the efficiency of solar panels with the addition of an average of 40.73% compared to without using MPPT system.

**Keywords:** Solar panel, Maximum Power Point Tracker (MPPT), Fuzzy Logic Control (FLC), boost converter.