

**Siti Fauziah Toha
Iskandar Al-Thani Mahmood
Asan Gani Abdul Muthalif**

**MECHATRONICS
ENGINEERING
PROJECTS**

Theory and Applications

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MECHATRONICS ENGINEERING PROJECTS: THEORY AND APPLICATIONS

Editors

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ABSTRACT

Solar energy is the least polluting and most inexhaustible of all known energy sources. The sun bathers the earth with more energy each minute than the world consumes in one year. In Malaysia, the sun intensity does not vary by season. It is a suitable place to develop the solar cell system. To make solar energy more efficient, the solar panel system must be maximized. This project is regarding the development of a sun tracking solar system. This system is a simple tracking solar system using linear actuator, motor and light sensor. The solar tracking system used in this method could increased the power collection efficiency by developing a device that can tracks the sun to keep the panel at normal to its rays. To utilize the power, this system is made self-powered using the mechanism of battery charging.

Keywords: Solar tracking system, photovoltaic, pulse width modulation, microcontroller

3.1 INTRODUCTION

Solar power is an alternative technology that will hopefully lead us away from petroleum dependant energy sources. The main issue regarding conventional solar panel is about its efficiencies of power absorption.