



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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التوثيق الإلكتروني والميكروفيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY



Cairo University

Comparison of PV Array MPPT Techniques with Application on Solar Pump

By

Eng. Islam Khalid Abdul – Razzaq

A Thesis Submitted to the
Faculty of Engineering at Cairo University
In Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
In
ELECTRICAL POWER AND MACHINES ENGINEERING

FACULTY OF ENGINEERING, CAIRO UNIVERSITY

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Title of Thesis: Comparison of PV Array MPPT Techniques with Application on Solar Pumping system.

Key Words: *PV system, Maximum Power Point Tracking, Solar Pump.*

Summary:

The solar system is designed with main parts: PV panel, converter, inverter, filter, dynamic load and in addition the battery is used to save energy in the event that there is an increased demand for energy and not to provide solar radiation, as well as saving energy in the case of generation more than demand, as a different scenario was conducted for the purpose of proving the effectiveness of the system. The effect of external changes on the system and its operation. This work was done using the MATLAB Simulink program.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Islam Khalid Abdul-Razzaq

Date: / /2021

Signature:

Dedication

The focus of the light that crossed me towards hope and his heart seeks to contain my dream when the world narrowed down and imposed difficulties for me and walked in the dark of light to instill the meanings of light and for as long as he held longing to see me dreaming of a master's degree and now it is the oldest in his hands, my dear father teacher Khaled Abdel Razzaq, he lived in order for us to live a beautiful life and in the arms of a dream and in order for me to comply now before him, and every part of it admits that it was the reason for its existence. It was part of my ambition to satisfy you so that you can see the fruit of your efforts in obtaining a master's degree, To the one whose prayers have always been the title of my path to you, my beloved mother, I give you my message to guide me with contentment and prayers, finally I thank My teacher, Engineer Hussein Nasser, for the information and guidance he provided, may God bless you and reward you with all the best and success.

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