

127, 17 27, 17 (20) 77, 17 (20









جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأفلام قد اعدت دون آية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15-20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of 15 – 25c and relative humidity 20-40 %



ثبكة المعلومات الجامعية





Information Netw. " Shams Children Sha شبكة المعلومات الجامعية @ ASUNET بالرسالة صفحات لم ترد بالأص

UNIVERSITY of AIN SHAMS FACULTY OF ENGINEERING

ELECTRICAL POWER AND MACHINES DEPARTMENT

MICROCOMPUTER - BASED FUZZY LOGIC PROTECTION OF AC DRIVES

BY

ALAA EL-DEEN AHMED MOHAMED KHALIL

B.Sc., University of Alexandria 1991 M.Sc., University of Alexandria 1994

A thesis submitted to the University of Ain Shams for the requirements of the degree of DOCTOR OF PHILOSOPHY

IN

ELECTRICAL ENGINEERING (Power and Machines)
Under the Supervision of

Prof. Mohamed A. L. Badr

Dr. Amr El Zawawi

Electrical Power & Machines Dept.

Electrical Eng. Dept.

Faculty of Engineering

Faculty of Engineering

University of Ain Shams

University of Alexandria

Cairo - 1999

B7974

. •

.

Examiners Committee

Signature

M. A. L. Bads

- 1- Prof. Dr. S. Wahsh
 Head of Power Electronics & Energy Conversion Dept.
 - **Electronics Research Institute**
- 2- Prof. Dr. M. M. S. Mansor

 Electrical Power & Machine Dept.

 Faculty of Engineering
 - Ain Shams University
- 3- Prof. Dr. M. A. L. Badr Electrical Power & Machine Dept.

Faculty of Engineering

Ain Shams University



Supervisors

Prof. Dr. M. A. L. Badr Electrical Power & Machine Dept. Faculty of Engineering

Ain Shams University

Dr. A. M. O. Elzawawi **Electrical Power engineering Dept.**

Faculty of Engineering

Alexandria University

Chul/2ams

M. A.L. Bad

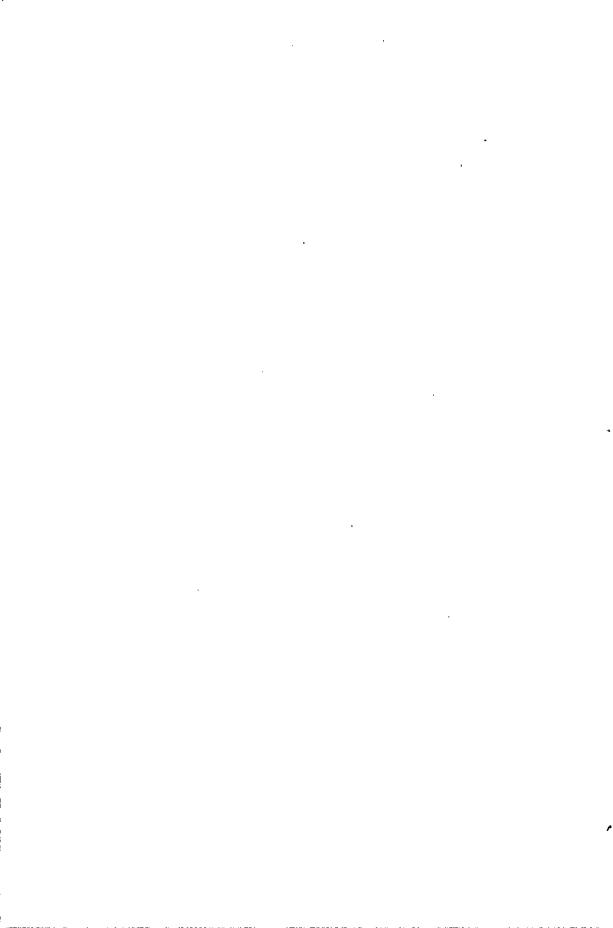
ACKNOWLEDGMENT

Special thanks and gratitude are due to **Prof.**MOHAMED ABD ELLATIF BADR. His valuable suggestions and active support helped put everything in perspective.

The author wishes to express his sincere appreciation to **Dr. AMR EL ZAWAWI** for his consistent guidance, assistance and encouragement through the research program. His invaluable suggestions and advice are gratefully acknowledged.

I also wish to thank all the staff and my colleagues in Arab Academy for Science, Technology and Maritime Transport for the continuous support and cooperation.

Finally, I would like to express my thanks to my mother and wife for their help and patience through all this work.



Statement

This thesis is submitted to Ain Shams University in partial fulfillment of the requirements for the Ph.D. degree in Electrical Engineering.

The included work in this thesis has been carried out by the author at the Electrical Power and Machines Department, Ain Shams University. No part of this has other university or institution.

Alaa El-deen Ahmed Mohamed Khalil. Name:

Signature: Alaa Eldeem
Date: 16/8/1999

