



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



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# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغييرات



## يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**



# **DYNAMIC MODELING OF CEREBRAL CORTEX TO STUDY EPILEPTIC SEIZURE PROPAGATION BASED ON EEG CLASSIFICATION**

By

**Mustafa Abd El-Samea Abd El-Baset**

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  
**Biomedical Engineering and Systems**

FACULTY OF ENGINEERING, CAIRO UNIVERSITY  
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**Key Words:**

Epilepsy; Seizure; EEG; MRI; Focal area.

**Summary:**

Epilepsy is considered one of the common medical and social disorders with specific and remarkable characteristics. One of the familiar techniques to diagnose and classify epilepsy is Electroencephalographic (EEG). On this study we proposed a procedure for epilepsy classification with and without signal processing. Moreover, generating a dynamic model to localize the focal area.

## **Disclaimer**

I state that this thesis is my own original work and that no single part of it has been submitted for a degree qualification at any other institute or university. I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Mustafa abd elsamea

Date: /7/2020

Signature: Mustafa abd elsamea

## **Dedication**

My lovely Mother and wife

sisters

My son and daughter

My extended family

& All of those who lovely and friendly supported me during this thesis progress

& preparation.

*Mustafa*

## **Acknowledgments**

First, I thank ALLAH who gave me the strength and power to complete this thesis successfully, as behind this project there is a great effort and power has been exerted.

I would like to thank every person who helped, encouraged and supported me in finishing this thesis.

### **Prof. Dr. Ayman Mohamed Eldeib**

I owe him for valuable supervision, for the continuous support and encouragement of my M.S. study, for his patience, and immense knowledge, useful suggestions, and active help during this work. He helped me all the time of research and writing of this thesis.

### **Dr. Sherif El-Gohary**

I thank him for his effort in every step I have done in this study, he guided me through all the study phases, encouraged me, treated me as a brother, tried to provide me with the required resources and, try get out the best of the best that can I do.

I give my sincere appreciation and gratitude to my family for their help and patience during the preparation of this work.

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