



**“Fault Modeling and Test Vector Generation for ASIC
Devices Exposed to Space Single Event Environment”**

A Thesis submitted by

Ahmed Ibrahim Mohamed

to the Electronics and Communications Engineering Department

on May 11, 2021

in partial fulfillment of the requirements for the degree of

Master of Science in Electronics and Communications Engineering

Has been approved by

Dr. Ahmed Abou-Auf (Advisor)

Professor, Department of Electronics and Communications Engineering,
The American University in Cairo

Dr. Abou-Auf

Dr. Mohab Anis (Internal Examiner)

Professor, Department of Electronics and Communications Engineering,
The American University in Cairo

Dr. Mohab Anis

Dr. Amr Wassal (External Examiner)

Professor, Department of Computer Engineering,
Cairo University

Amr Wassal

Dr. Sherif Abdel Azeem (Moderator)

Professor, Department of Electronics and Communications Engineering,
The American University in Cairo

Sherif Abdel Azeem

Sherif Abdel Azeem
Dr. Sherif Abdel Azeem
Graduate Program
Director

May 11, 2021
Date

Altaf 25/5/2021
School Dean **Date**

MEMORANDUM

TO: Library

FROM: Dr. Hassan A. N. El-Fawal
Dean of School of Sciences and Engineering

SUBJECT: Master Thesis

DATE: May 11, 2021



Please find the attached signed copy of thesis submitted by Ahmed Ibrahim Mohamed in partial fulfillment of M.Sc. degree, which has satisfied the requirements of the Electronics & Communications Engineering Department and is ready for binding and display in the library.

Name of student: Ahmed Ibrahim Mohamed

Department: Electronics & Communications Engineering Department

Advisor: Dr. Ahmed Abou-Auf

Thesis title: *“Fault Modeling and Test Vector Generation for ASIC Devices Exposed to Space Single Event Environment”*

CC. Candidate
Department Chair
Registrar
Dean of Graduate Studies