

# Curriculum Vitae



## **PERSONAL INFORMATION**

Date of Birth: 3 / 11/ 1987 – Qalyiobia – Egypt

Gender: Female

Marital State: Married

Religion: Muslim

Nationality: Egyptian

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## **ACADEMIC QUALIFICATION:**

- **B.Sc. in physics – Faculty of Science – Ain Shams University**

Subject Of Study: Electronics

Major Grade: Very Good

Last year: Excellent

Project Grade: Excellent

Date of Graduation: June 2009

Project Subject: Microprocessor Based Solar Tracking System  
Using Stepper Motor.

- **M.Sc. in Physics - Faculty of Science – Ain Shams University March 2016**

Subject of Study: Digital Signal Processing

Thesis Subject: Implementation of Parallel Digital Signal Processing Circuits  
using Field Programmable Gate Array.

- **PhD in Physics - Faculty of Science – Ain Shams University 2024.**

Subject of Study: High Energy Physics

Thesis Subject: Detectors Optimization Study for Low and High Energy  
Radiation.

### **CAREER GRADATION:**

Teaching Assistant

### **ADMINISTRATIVE ACTIVITY**

- MATLAB.

- VHDL.
- ORCAD Design and layout (ITTC UNIT FACULTY OF SCIENCE AIN SHAMS University).
- Verilog (self-study).
- Lab view (self-study).
- Data Analysis.
- Artificial Intelligent.

## **PUBLICATIONS**

- 1- Implementation of high performance electronic circuits for zero suppression and encoding of digital signals.

<https://www.scirp.org/journal/paperinformation.aspx?paperid=59081>

- 2- Performance of GE1/1 Chambers for the CMS Muon Endcap Upgrade

<https://arxiv.org/pdf/1903.02186.pdf>

- 3- Operational Experience with the GEM Detector Assembly Lines for the CMS Forward Muon Upgrade

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8469076>

- 4- Layout and assembly technique of the GEM chambers for the upgrade of the CMS first muon endcap station

<https://reader.elsevier.com/reader/sd/pii/S0168900218316371?token=A2F7CD2738D8F47997BB9D9928DF3C2FE5954A52017A08F3888FDF45B7405B5B8AFE0292EAE4614E2C4E3ACAB9822F5A>

- 5- Design of a constant fraction discriminator for the VFAT3 front-end ASIC of the CMS GEM detector

<https://iopscience.iop.org/article/10.1088/1748-0221/11/01/C01023/pdf>

- 6- Fiber Bragg Grating (FBG) sensors as flatness and mechanical stretching sensors

<https://www.sciencedirect.com/science/article/pii/S0168900216000875?via%3Dihub>

7- Reduction of high voltage discharge in GEM detectors for the ME0 station of the CMS forward muon system

[https://www.researchgate.net/publication/369612846\\_Reduction\\_of\\_high\\_voltage\\_discharge\\_in\\_GEM\\_detectors\\_for\\_the\\_ME0\\_station\\_of\\_the\\_CMS\\_forward\\_muon\\_system](https://www.researchgate.net/publication/369612846_Reduction_of_high_voltage_discharge_in_GEM_detectors_for_the_ME0_station_of_the_CMS_forward_muon_system)

8- Synthesis and characterization of high-sensitivity Dy,Eu co-doped CaSO<sub>4</sub> thermoluminescent phosphor using coprecipitation technique

### **SCIENTIFIC ACTIVITY**

-Attending several months at CERN, *Switzerland-France* for participating and collaborating in the muon system upgrade of CMS detectors from 2014 till now.

-Working on FPGA kits all through master work.

- Data analysis using ROOT.

- Good knowledge about Garfield and GEANT4.

### **INTERNATIONAL COOPERATION**

I'm a member of the Egyptian Network for High Energy Physics (ENHEP), which collaborates with CERN (CMS Experiment), Geneva, Switzerland.

### **TEACHING EXPERIENCE**

I worked as a physics teaching assistant from 2009 till 2016 and working as assistant lecturer from 2016 till now at the Higher Technological Institute.

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