In the Name of Allah

Name: *MOHAMMAD HOMAYOUN*
Email: *homayoun.mh@chmail.ir*

Education:

BSc

University: *Shiraz University*
Major: *Electrical Engineering - Electronics*

MSc

University: *Shiraz University*
Major: *Electrical Engineering - Electronics*
Thesis: *Simulation and Fabrication of An Electron Gun to Be Used For E-Beam Lithography*
Supervisor: *Dr. MOHAMMAD HOSSEIN SHEIKHI*

PhD

University: *Sharif University of Technology*
Major: *Nanoelectronics*

Research Interests:

- *Nanolithography & Resist Materials*
- *High Energy & Power Batteries*
- *RFID Sensors & IoNT*

Research Experience:

Internet of Nano Things (IoNT), Fusion to Convergence
Tensor expression for optical properties of materials and the effect of crystalline symmetry
Calculation of GaAs band structure using MATLAB
Calculation of noise in Analog CMOS integrated circuits
Simulation of microwave propagation in transmission lines using MATLAB
A review on Lithium Batteries
A survey on Purification Methods of MG-Si
A review on components of vacuum systems with very low pressure

Carrier & Voluntary Work Experience:

Building a Supervisory, Semi-Automatic Control and Data Acquisition System for Czochralski Crystal Grower (Embedded: C++, Backend: Python, Frontend: JavaScript)
Building of a Customized Syringe Pump Setup
Building a High-Speed Photography System
Construction of Laboratory Vacuum Chambers
Construction of a Quartz Crystal Microbalance (QCM)
Design and Production of High Voltage Switching Power Supplies and Transformers for CO2 Laser, Sputter Deposition and E-Beam Lithography Systems
Production of MG-Si Using a Lab Scale Arc Furnace
Combination of Excel & Python for Various Engineering Analysis; e.g. Transformer Design, Furnace Design, Battery Calculations, Solar Power Plants
Object Detection and Tracking Using OpenCV

Skills:

Programming Languages: C++, Python, JavaScript, MATLAB, VBA, C#
Embedded development in C++ & Python (Raspberry Pi, STM32, AVR)
Python Experience: Multiprocessing, Multithreading, Flask, Pandas, Dask, …
Web Experience: Express.js, Vue.js, Socket.io, Chart.js, CSS3, SVG
Android App Development using Flutter
PCB design using Altium Designer & Altium Circuit Studio
Modeling Experience in SolidWorks
Experience with Milling machine, Lathe machine, TIG welding, Oxyacetylene welding
MSRT English Language Test Score (2018-12-21): 80

Honors:

1st Rank in Nation-Wide Nanoelectronics PhD. University Entrance Exam (2019), Sanjesh Organization, Tehran, Iran
3rd Rank among M.Sc. graduates (2015), Shiraz University, Shiraz, Iran
16th Rank in Nation-Wide Electronics PhD. University Entrance Exam (2013), Sanjesh Organization, Tehran, Iran
77th Rank in Nation-Wide Nanotechnology Competition (2013), Iran Nanotechnology Innovation Council, Tehran, Iran

Here everything that is heard, sounds greater before it's actually seen,
while everything of the Hereafter is actually greater when seen than heard.
Nahj al-Balagha, Sermon 114