

Masood Nekoie
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 Living in Canada

Education

PhD Electronic Engineering (GPA:4/4)– Carleton University (Fall 2021-Ongoing)

Research Assistant

- Quantum Computing Application in Electromagnetic problems
- Variational Quantum Algorithm (VQA) for solving linear equation problems
- Developing Hamiltonian Simulation in Python
- Developing HHL algorithm in Python

Courses:

- *Method of Moments: Computational Electromagnetic 4/4*
- *Advanced linear and nonlinear circuits 4/4*
- *Neural networks for Electrical Circuits 4/4*

MSc. Fields And Waves (GPA: 3.8/4)– Amirkabir University of Technology (2017-2020)

- **Thesis:** A Methodology for THz Complex Material Characterization based on CSRR metamaterials and the Formulation of the Behavior by ABCEP as a prediction method
- Developing CST and MATLAB automatic communication
- Coding GP and ABCP automatic programming methods

Courses:

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|--------------------------------|-----------------------------------|
| • <i>Microwave measurement</i> | • <i>Metamaterials</i> |
| • <i>Advanced Microwave</i> | • <i>Advanced Electromagnetic</i> |
| • <i>Radar systems</i> | |

BSc. Electrical Engineering (Communication) – Isfahan University of Technology (2013-2017)

- Project: EEG Simulation based on FPGA programming

Selected Courses:

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|--------------------------------|--|
| • <i>Analog Communications</i> | • <i>Digital Communication</i> |
| • <i>Electronics 1-2</i> | • <i>Electromagnetic-Field and Waves</i> |
| • <i>FPGA Programming Lab</i> | • <i>Digital 1,2 (AVR Programming)</i> |

Publications (14 Citations / h-index 3):

- **6 Citations / First Author:** Developing ABCEP as a new automatic programming method (<https://doi.org/10.1016/j.ins.2020.09.020>; *Information sciences Journal*, IF= 6.795)

- **5 Citations / Second Author:** Modeling the carbonation depth of recycled aggregate concrete using a novel automatic regression technique
(<https://doi.org/10.1016/j.jclepro.2022.133522>: *Cleaner Production Journal*, IF: 9.297)
- **3 Citations / Second Author:** Application of artificial bee colony programming techniques for predicting the compressive strength of recycled aggregate concrete
(<https://doi.org/10.1016/j.asoc.2022.109641>: *Applied Soft Computing Journal*, IF= 6.725)

Experience

RF Engineer and High Frequency Programmer – Mobin Saman Company IRAN (Fall 2018-Fall 2020)

- PLL designer based on DDS analog devices
- Designing Automatic Frequency Shifter based on communication of FPGA-AVR gates and programmable analog devices
- Sharp filter designer
- General circuits debugging
- Developing Interface platform for users with low knowledge of RF and waves (MATLAB & Visual Basics GUI)

ELECTRICAL ENGINEER – INTELLICOM COMPANY IRAN (Winter 2020- 2021)

- MATLAB, AVR, FPGA and Arduino developer
- Developing Online Cameras recorder application with specific user requirements
- Debugging and repairing faulty network systems such as routers and switches
- Developing new electronic bus ticket cards using Arduino
- Qt & Python Programmer

Teacher Assistant

• **Electronic 1 LAB - Carleton University**

Lab teacher:

- **MOSFET, BJT, Diode, Multisim Software**

• **Electrical Circuits LAB - Carleton University**

Lab Teacher:

- **Signal filtering and amplification. Time and frequency domain. Circuit design and simulation.**

• **Communication Circuits LAB - Amirkabir University of Technology**

Lab Teacher:

- **Modulator and Demodulators, FM, AM, Oscillator**

- **FPGA LAB - Amirkabir University of Technology**

Lab Teacher:

- **MATLAB & FPGA communication, VGA implementation, UART protocol, ISE, Verilog & VHDL**

Skills & Abilities

- | | |
|---|---|
| <ul style="list-style-type: none"> • <i>MATLAB</i> • <i>FPGA (Verilog & VHDL)</i> • <i>C (Programming Language)</i> • <i>Optimization (GA, ABC, Ant, ICA)</i> • <i>Neural Networks</i> • <i>Quantum Computing (Python Cirq)</i> • <i>Visual Basics</i> | <ul style="list-style-type: none"> • <i>CST (Simulation & Visual Basic programming to communicate with MATLAB or other platforms)</i> • <i>ADS</i> • <i>Python Programming</i> • <i>Machine Learning (Automatic Programming: GP, ABCP, GEP, ABCEP)</i> • <i>Qt</i> |
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References

- Gholamreza Moradi ghmoradi@aut.ac.ir
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- Emadaldin Mohammadi Golafshani E.Mohammadi.Golafshani@gmail.com
Post-Doctorial Fellowship Monash University
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