Amirhossein Nazeri

Birthdate : July 3, 1999

Current Position :Graduate Student

Location: Toronto, ON, Canada
Phone : (+1) 437 986 2091
Email : a.nazeri@mail.utoronto.ca
Website : https://amirhnazeri.github.io/
Linkedin: Profile

Education

2021 - *Present*	**University of Toronto,** Toronto, Canada.
	M.A.Sc in Electrical Engineering - Power Electronics
2017 - 2021	**University of Tehran,** Tehran, Iran.
	B.Sc in Electrical Engineering, GPA: **17.91/20** Equivalent to **3.87/4**
	Thesis: Automation System for Monitoring and Measuring Decentralized Solar Power Plants

Honors and Awards

Aug. 2020	Eligible for **Exemption from M.Sc Entrance Exam** in University of Tehran as **an exceptionally talented** student, for outstanding academic performance
June 2020	Awarded Paid Internship offer by **Max Planck Institute**, Germany (Canceled due to Covid-19 Pandemic), *Supervisor:* Dr. Katherine J. Kuchenbecker
2017 - *Present*	Awarded Member of **National Elites Foundation, Iran**.
2017 - 2020	**Support Foundation of University of Tehran Grant**

Research Experiences and Internships

Sept. 2021 - *Present*	Graduate Research Assistant at **Laboratory for Advanced Power Conversion and Systems Analysis**, University of Toronto Research on On-board DC Charging Systems for Electric Vehicles Supervisor: Prof. P. Lehn
June 2019 - July 2021	Undergrad Research Assistant at **Electrical Machine and Smart Micro-Grid Lab**, University of Tehran Project Title: Implementation of Mirco-Grid Wireless Network Infrastructure Supervisor: Dr. M. Abedini
Summer 2020	Research Intern at **Electrical Machine and Smart Micro-Grid Lab** Project Title: Micro-Grids Network Infrastructure Management Software Supervisor: Dr. M. Abedini
July 2017 - *Present*	Team Leader of **Houshafza IoT group**, University of Tehran Implemented some hands-on educational IoT-related projects

Publications

Spring 2020	M. Abedini, T. Vahabzadeh, S. Ahmadi, M. Karimi, H. Manoochehri, **A. Nazeri,** M. Karami, M. Arani, F. Aminifar, M. Sanaye-Pasand, "Smart Microgrid Educational Laboratory: An Integrated-Electric and Communications Infrastructures Platform." *Scientia Iranica*, 2020.

Skills

Simulation	**MATLAB** and SIMULINK, **PLECS**, **PSCAD**, **Altium Designer**, NI Multisim, PSPICE, PowerWorld, Proteus, PowerWorld, HFSS, ADS
FPGA	**Verilog**, **Modelsim**, **Quartus II**, Qsys, Nios II Processor, Altera DE Boards
Hardware	ARM/AVR Microcontrollers, Zigbee, Raspberry Pi, Arduino
Programming	**Python**, C, R. (GitHub Page)
General	Windows and Linux(Ubuntu), LaTeX

Language Skills

English	Fluent
	TOEFL iBT Score: **94**
Persian	Native

Notable Projects (**details**)

Thesis (Bachelor)

- Implementation of a **Smart Automation System** for Real-time monitoring and measuring Solar Power Plants. This wireless system provides Smart fault detection, Data-driven Analysis (using Tables & Graphs), etc.

Undergrad Research

- Implemented A **Wireless Network** of Digital Electricity Meters and Sensors connected to Micro-grids, Based on **Zigbee** for Dispatching purposes.

Internship

- Developed A **Software** to Control, Monitor and analyze Microgrids-equipped with Zigbee Data Transceivers of Power Systems Research Sites/Labs.

Relevant Courses

Power Electronics, Electronics (I, II), Electrical Circuits (I, II),
Power System Analysis, Electric Machine,
Linear Control Theory, Linear Control System and Lab,
FPGA-based Embedded System Design, Computer Architecture, Digital Signal Processing

Selected Course Projects (**details**)

Power Electronics	• Design and Implementation of a Non-Inverting Buck Boost Converter with Compensator.
Electronics	• Simulation and Implementation of an adjustable DC-DC Boost Converter, using Multisim and Altium Designer.
Power System Analysis	• Simulation and Analysis of a City distributed Power Systems including Transmission lines, Generators, Capacitor Banks and HV Transformers.
FPGA	• Used NIOS and Implemented PS2 mouse driver, voice recorder and FIR-filtering, Programmed the system on the Altera DE2 board.
Linear Control Theory	• State and Output Feedback Stabilization and Tracking Control of a Cart-Pendulum Using Observer and PID Controller in MATLAB and SIMULINK.

Teaching Assistantship

Spring 2022	**ECE110 - Electrical Fundamentals,** *Instructor: Prof. Stewart Aitchison*
Fall 2021	**CSC108 - Introduction to Programming,** *Instructor: Dr. Michael Liut*
Spring 2021	**Signals and Systems,** *Instructor: Dr. Amir Masoud Rabiei*
	Digital Communications, *Instructor: Dr. Amir Masoud Rabiei*
Fall 2020	**Engineering Probability and Statistics,** *Instructor: Dr. Amir Masoud Rabiei*
	Electrical Circuits I, *Instructor: Dr. Jalil Agha Rashed Mohassel*
	Digital Communications, *Instructor: Dr. Amir Masoud Rabiei*
	Electromagnetics, *Instructor: Dr. Leila Yousefi*
Spring 2020	**Signals and Systems,** *Instructor: Dr. Amir Masoud Rabiei*
	Power Systems Analysis I, *Instructor: Dr. Amirhossein Mohammad-zadeh*
Fall 2019	**Engineering Probability and Statistics,** *Instructor: Dr. Amir Masoud Rabiei*
	Electrical Machines I, *Instructor: Dr. Moein Abedini*
Spring 2019	**Numerical Analysis,** *Instructor:Dr. Jamal Kazazi*
Fall 2018	**Introduction of Computing and Programming,** *Instructor:Dr.Hadi Moradi*

Certifications

Network+	CompTIA Certified Network+, by Kahkeshan Noor Inc, August 2019
MATLAB	Fundamental in MATLAB, by IEEE Iran section, Summer 2017