Araz Bagherzadeh Karimi

arazbagherzadeh@gmail.com — Phone: +1 404 218 6840
Linkedin Github Website Publons

EDUCATION

2021-2022

- ***Georgia Institute of Technology, Atlanta, GA***
  M.Sc. in **Electrical and Computer Engineering**
  supervisor: Dr. Maryam Saeedifard GPA: 3.6

2018-2021

- ***The University of Tehran, Tehran, Iran***
  M.Sc. in **Electrical Engineering**
  supervisor: Dr. Farrokh Aminifar and Dr. Mohsen Hamzeh GPA: 3.7 (17.16/20)

2014-2018

- ***The University of Tabriz, Tabriz, Iran***
  B.Sc. in **Electrical Engineering** GPA: 3.81 (18.21/20)

EXPERIENCE

- Teacher Assistant - Georgia Tech
  - ECE 3058 Architecture, Systems, Concurrency and Energy in Computation
    - Website development and maintenance
    - Office Hours
  - ECE 2020 Digital Design
    - Recitation, Office hours, Grading
  - ECE 3072 Energy Conversion
    - Lab session Holding, Grading
- Research Assistant - Georgia Tech
  - Inverter Model Development (MATLAB),
  - Inverter Sizing Optimization (MATLAB)
- Research Assistant - University of Tehran
  - Grid Optimization (MATLAB),
- Teacher Assistant - University of Tehran

Research Sample

Imbalance Constrained Crossphase Quadratic OPF for Optimal Integration of EV Chargers and PV Inverters in Meshed and Radial Distribution Systems Paper available at Arxiv Code available at Github
supervised by: Dr. Farrokh Aminifar

NOTABLE SKILLS

- **Computer Skills**
  - ◇ Web Developement (HTML, CSS, mkdocs), Database systems (Microsoft access, mySQL), Languages (JS, Python, C++), Version Control (Git, Github), Operation Systems (Windows, Linux Ubuntu)
- **Scientific Skills**
  - ◇ Convex Optimization, Machine Learning, Optimal Control, Nonlinear and linear Control, and their application in power systems and Power-Electronic Inverters, Simulation and Scientific coding software such as MATLAB, CYME, PLECS and PowerFactory
- **Presentation Skills**
  - ◇ LaTeX, Matplotlib, Microsoft Word, Excel, Power Point, Visio, Google Docs, Sheets and Slides

JOURNAL REVIEWER

IEEE Transactions on Sustainable Energy, Power Electronics, Power Systems, PES Letters and Scientia Iranica

COURSES

Computer Architecture, C++ Programming, Introduction to Database Systems, Statistical Machine Learning, Online Convex Optimization, Optimal Control, Nonlinear Systems, Power Electronics, Digital Protection of The Power Systems, Power Quality, Protection, Stability and Control of Microgrids, The Application of Power Electronics in Microgrids and High Voltage Engineering

NOTABLE PROJECTS

Intro. to Database Systems Course's Project

MySQL implementation of Soccer sport Database (500 line of sql code)
supervised by: Dr. Melinda McDaniel

Statistical Machine Learning Course's Project

Flight Price Prediction with Kernel SVM Regression (500 lines of Python code)
supervised by: Dr. Mark Davenport

Optimal Control Course's Project

Double Tank Relaxed Control Optimal Problem (500 lines of MATLAB code)
supervised by: Dr. Yorai Wardi

Freelance Project

Programatic Implementation of Existing Power System Data into CYME software (Reverse Engineering of existing Database file to figure out relations and update Database accordingly)
supervised by: Dr. Farrokh Aminifar

Power System Digital Protection Course's Project

A Novel Method for Improving Marginal Performance of a Digital Distance Relay (1000 lines of MATLAB code)
supervised by: Dr. Majid Sanaye-Pasand

Protection, Control and Stability of Microgrids Course's Project

Optimal Placement and Sizing of DGs for Minimizing Total Loss Using Digsilent (500 lines of C++ (DPL) code)
supervised by: Dr. Mahdi Davar Panah

Protection, Control and Stability of Microgrids Course's Project

Regulation of Islanding Detection and Impedance Relays of a Disperse Synchronous Generator Using Digsilent (500 lines of C++ (DPL) and (DSL) code)
supervised by: Dr. Mahdi Davar Panah

Application of Power Electronics in Microgrids Course's Project

Simulation of AC and DC Microgrids with Power Sharing Capability (PLECS)
supervised by: Dr. Mohsen hamzeh

Application of Power Electronics in Microgrids Course's Project

Controller and Hardware Design of DC-AC and DC-DC Inverters (PLECS)
supervised by: Dr. Mohsen hamzeh

Power System Digital protection Course's Project

Implementation of Phasor Estimation Algorithms for Digital Relays (300 lines of MATLAB code)
supervised by: Dr. Majid Sanaye-Pasand

Power System Dynamics Course's Project

Design and Simulation of AVR, Governer and PSS System of a Steam Turbine Generator in Simulink (MATLAB SIMULINK)
supervised by: Dr. Hamid Lesani

Power Quality Course's Project

Loss Assessment of Unbalanced Lv Distribution Network Using Digsilent Programming Language(500 lines of C++ (DPL))
supervised by: Dr. Mohsen Hamzeh

References

- You can refer to the hyperlinks in the CV.