

Ismael Khorshed Abdulrahman

Email: ismael.abdulrahman@epu.edu.iq

Mobile: +964 771 395 2897



EDUCATION

Electrical and Computer Engineering (ECE)

- **Ph.D.** (Tennessee Technological University, Tennessee–USA) – GPA: 3.75/4.0

Electrical Engineering

- **Master** (University of Sulaimani, Kurdistan Region–Iraq)
- **Bachelor** (Mustansiriyah University, Baghdad–Iraq)
General Specilization (Electronic, Power, Communication, Control, Computer)

I received a scholarship from the government in Baghdad for my Ph.D. degree. I was in first place in all my elementary, middle, and high schools except the senior year when my family went through a hardship affecting my continuation of study for two years. I was awarded exemption from all final exams in all subjects in the seventh, eighth, tenth, and eleventh grades.

ACADEMIC ACHIEVEMENTS

- Asst. Lecturer at Erbil Polytechnic University, Information System Engineering, 2011-2014
- Lecturer at Erbil Polytechnic University, Information System Engineering, 2014-2022
- **Asst. Prof.** at Erbil Polytechnic University, Information System Engineering, 2022-Now

TEACHING COURSES

- **Quantum Computing and Information:** Postgraduate (PhD)
- **Quantum Computing:** Postgraduate (Master)
- **Electronic Circuits:** Undergraduate (Bachelor)
- **GIS:** Undergraduate (Bachelor)
- **Math I** (Calculus I)
- **Math II** (Calculus II)
- **Math III** (Engineering Analysis)

SUPERVISING STUDENTS AND PARTICIPATING IN COMMITTEE EVALUATIONS

- Currently, I'm supervising two **PhD** students in Quantum Computing and Deep Learning, along with one **master's** student in quantum computing. Additionally, I've contributed to six PhD defense committees.

CURRENT RESEARCH AREAS

- Quantum computing, quantum information, machine learning, deep learning, data science, information theory, smart grid, intelligent control, renewable energy, power systems, digital communication, wireless communication, , system modeling, experimental studies, simulations, numerical algorithms, etc.

TECHNICAL SKILLS:

- MATLAB ~ Simulink ~ PSSE ~ ArcGIS~ ATP-EMTP ~ MATPOWER ~ CPLEX ~ Python

LANGUAGES:

- Kurdish (Mother tongue), English (fluent), Arabic (fluent).

YOUTUBE COURSE: QUANTUM COMPUTING (NATIVE LANGUAGE)

- <https://www.youtube.com/watch?v=VUJe3ptfhpQ&t=653s>

PUBLICATIONS

- I. Abdulrahman, "Enhancing Grover's search algorithm: a modified approach to increase the probability of good states", Springer, 2024. **IF: 3.3 (single author)**.
<https://link.springer.com/article/10.1007/s11227-024-06142-5>
- I. Abdulrahman, "Reinforcement-learning-based damping control scheme of a PV plant in wide-area measurement system", in *Springer Electrical Engineering*, , 2022. **IF: 1.8 (single author)**
<https://link.springer.com/article/10.1007/s00202-022-01615-3>
- Z. Hamad and I. Abdulrahman, "Deep learning-based load forecasting considering data reshaping using MATLAB\Simulink", in *Springer International Journal of Energy and Environmental Engineering*, 13, 853–869, 2022. **IF: 2.6 (2nd author)**
<https://link.springer.com/article/10.1007/s40095-022-00480-x>
- I. Abdulrahman and G. Radman, "Wide-Area-Based Adaptive Neuro-Fuzzy SVC Controller for Damping Interarea Oscillations," in *IEEE Canadian Journal of Electrical and Computer Engineering*, vol. 41, no. 3, pp. 133-144, Summer 2018. **IF: 1.7 (1st author)**
<https://ieeexplore.ieee.org/document/8506642>
- I. Abdulrahman and G. Radman, "ILP-Based Optimal PMU Placement with the Inclusion of the Effect of a Group of Zero-Injection Buses", in *Springer Journal of Control, Automation, and Electrical Systems*, Vol. 29, pp. 512–524, 2018. **IF: 1.5 (1st author)**
<https://link.springer.com/article/10.1007/s40313-018-0389-4>
- I. Abdulrahman, "SimCOVID: Open-Source Simulation Programs for the COVID-19 Outbreak", in *Springer SN Computer Science*, 2022. **Scopus Q2, SJR 0.6 (single author)**.
<https://link.springer.com/article/10.1007/s42979-022-01441-1>
- I. Abdulrahman, "MATLAB-Based Programs for Power System Dynamic Analysis," in *IEEE Open Access Journal of Power and Energy*, vol. 7, pp. 59-69, 2020. **IF: 3.8 (single author)**
<https://ieeexplore.ieee.org/document/8906163>
- I. Abdulrahman, "An open-source Simulink-based program for simulating power systems integrated with renewable energy sources", in *Springer Electrical Engineering*, 2020. **IF: 1.8 (single author)**
<https://link.springer.com/article/10.1007/s00202-020-01022-6>
- I. Abdulrahman and G. Radman, "Power system spatial analysis and visualization using geographic information system (GIS)", in *Springer Spatial Information System*, Vol. 28, pp. 101–112, 2020. **IF: 2.4 (1st author)**
<https://link.springer.com/article/10.1007/s41324-019-00276-y>
- I. Abdulrahman, R. Belkacemi, and G. Radman, "Power oscillations damping using wide-area-based solar plant considering adaptive time-delay compensation" in *Springer Energy System*, 2019. **IF: 2.3 (1st author)**
<https://link.springer.com/article/10.1007/s12667-019-00350-2>
- I. Abdulrahman and G. Radman, "Simulink-based programs for power system dynamic analysis", in *Springer Electrical Engineering*, Vol. 101, pp. 345–356, 2019. **IF: 1.8 (1st author)**
<https://link.springer.com/article/10.1007/s00202-019-00781-1>
- I. Abdulrahman and G. Radman, "Simulink-Based Program for Simulating Multi-Machine Power Systems," 2018 *IEEE Power & Energy Society General Meeting (PESGM)*, Portland, OR, 2018, pp. 1-5. **(Best conference in power and energy)**
<https://ieeexplore.ieee.org/document/8585773>

Developed Toolboxes

- I. Abdulrahman, "Standard Grover Search Algorithm Plus Enhanced Version", *MATLAB Central File Exchange*, 2024.
<https://www.mathworks.com/matlabcentral/fileexchange/158896-standard-grover-search-algorithm-plus-enhanced-version>
- I. Abdulrahman, "Reinforcement-Learning Based Damping Control Scheme of a PV Plant", *MATLAB Central File Exchange*, 2022.
https://www.mathworks.com/matlabcentral/fileexchange/124525-reinforcement-learning-based-damping-control-scheme-of-a-pv?s_tid=srchtitle

- I. Abdulrahman, "Optimal PMU Placement", *MATLAB Central File Exchange*, 2019.
https://www.mathworks.com/matlabcentral/fileexchange/73830-optimal-pmu-placement-ilp-1-cplex-2-built-in-function?s_tid=prof_contriblnk
- I. Abdulrahman, "SimCOVID5", *MATLAB Central File Exchange*, 2020.
<https://www.mathworks.com/matlabcentral/fileexchange/75025-simcovid5>
- I. Abdulrahman, "Power System Simulation Using MATLAB", *MATLAB Central File Exchange*, 2019.
https://www.mathworks.com/matlabcentral/fileexchange/73836-power-system-simulation-using-matlab?s_tid=prof_contriblnk
- I. Abdulrahman, "Power System Simulation Using Simulink", *MATLAB Central File Exchange*, 2019.
https://www.mathworks.com/matlabcentral/fileexchange/73834-power-system-simulation-using-simulink?s_tid=prof_contriblnk
- I. Abdulrahman, "Power System Simulation Using Simulink (Renewable Energy)", *MATLAB Central File Exchange*, 2020.
https://es.mathworks.com/matlabcentral/fileexchange/84993-power-system-simulation-using-simulink-renewable-energy?s_tid=srchtitle

More Information

- <https://scholar.google.com/citations?user=4gmb1ugAAAAJ&hl=en&oi=ao>
- <https://www.researchgate.net/profile/Ismael-Abdulrahman-2>
- <https://www.youtube.com/@ismaelabdulrahman7295/videos>
- <https://www.facebook.com/profile.php?id=100091947498836>
- <https://academicstaff.epu.edu.iq/faculty/ismael.abdulrahman>