

FACULTY VITAE

Adam Reda Hasan Alhawari

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Education

Degree	Discipline	Institution	Year
PhD	Wireless Communications Engineering	Universiti Putra Malaysia, Selangor, Malaysia	2012
Master	Communication Network Engineering	Universiti Putra Malaysia, Selangor, Malaysia	2009
Bachelor	Electrical Engineering (Major: Communication Engineering)	Yarmouk University, Irbid, Jordan	2003

Academic Experience

May 2023 – Present	Professor Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
March 2019 – May 2023	Associate Professor Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
Nov. 2015 – March 2019	Assistant Professor Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
Dec. 2012 – July 2015	Assistant Professor Department of Computer and Communication Systems Engineering, Faculty of Engineering, Universiti Putra Malaysia, Selangor, Malaysia.

Non-Academic Experience

- Jan. 2006 – Dec. 2007: Communication/AutoCAD Engineer Huta-Marine/Huta-Hegerfeld Saudia Ltd., Jeddah, KSA.
- Oct. 2003 – Oct. 2004: Communication Engineer at the Great Irbid Municipality, Irbid, Jordan.
- Sept. 2002 – Nov. 2002: Intern at Jordan Telecommunication Company (JTC), Irbid, Jordan.
- Dec. 2002 – Feb. 2003: Intern at QuickTel, The Egyptian Telephone Company (ETC), Egypt, Cairo.

Certificates

- Basic Training in Teaching and Learning.
- Introduction to Blackboard for teaching and learning.
- Program Outcomes Awareness and EAC Requirements.
- AutoCAD (2D and 3D).

Honors and Awards

- Awarded International Graduate Research Fellowship (IGRF), Universiti Putra Malaysia, 2011–2012.
- Awarded Special Graduate Research Allowance Scheme (S-GRA), Universiti Putra Malaysia, January 2009–June 2009.

Publications & Presentations

1. Rajeev K Parida, Abdulkarem HM Alkawgani, Arjuna Muduli, Dhruva C Panda, **Adam R. H. Alhawari**, Amrindra Pal, MM Abdullah, Hasan B Albargi, “A Compact Isolated CR Antenna System for Application in C-Band”, *International Journal of Antennas and Propagation*, Issue 1, 2024. <https://doi.org/10.1155/2024/5522356>.
 2. Abdulkarem HM Alkawgani, Sunil Lavadiya, Vishal Sorathiya, **Adam R. H. Alhawari**, “Design and diversity performance analysis of C shape engraved miniaturised, and high gain Quad-Port MIMO antenna for 5 G and P2P communication”, *Physica Scripta*, 99 (2024) 035532. DOI 10.1088/1402-4896/ad289f.
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3. K. Vasu Babu, Das Sudipta, Gorre N. J. Sree, Abdulkarem H. M. Alkawgani, Tanvir Islam, and **Adam R. H. Alhawari**, “Deep learning assisted fractal slotted substrate MIMO antenna with characteristic mode analysis (CMA) for Sub-6GHz n78 5G NR applications: design, optimization and experimental validation”, *Physica Scripta*, 98 (2023) 115526. <https://doi.org/10.1088/1402-4896/ad00e6>.
 4. Abdulkarem H. M. Alkawgani, Vishal Sorathiya, and **Adam R. H. Alhawari**, “Design of dipole array MIMO antenna for multiband and ultrawideband radiation applications in WiFi/Zigbee/WiMAX/satellite and mobile communications”, *Applied Physics A*, (2023). 129:449, 2023. <https://doi.org/10.1007/s00339-023-06716-9>.
 5. **Adam R. H. Alhawari**, Tale Saeidi, Idris Ismail, Turki Alsuwian, and Ahmed Jamal Abdullah Al-Gburi, “Health Control of Tree Trunk Utilizing Microwave Imaging and Reverse Problem Algorithms”, *ACS Omega* 2023, 8, Vol. 16, pp. 14387–14400, 2023. <https://pubs.acs.org/doi/10.1021/acsomega.2c07015>.
 6. **Adam R. H. Alhawari**, “Split ring resonator RFID tag antenna with inductively coupled feed using folded stepped-impedance resonators”, *ARPJ Journal of Engineering and Applied Sciences*, Vol. 17, No. 15, pp. 57-60, August 2022.
 7. A. H. M. Alkawgani, Sofyan A. Taya, Malek G. Daher, **Adam R. H. Alhawari**, Ilhami Colak, and Shobhit K. Patel, “Design of a Novel Protein Sensor of High Sensitivity Using a Defective Ternary Photonic Crystal Nanostructure”, *Silicon* (2022). <https://doi.org/10.1007/s12633-022-02048-0>.
 8. Tale Saeidi, **Adam R. H. Alhawari**, A. H. M. Alkawgani, Turki Alsuwian, Muhammad Ali Imran, and Qammer H. Abbasi, “High Gain Compact UWB Antenna for Ground Penetrating Radar Detection and Soil Inspection”, *Sensors* 2022, 22, 5183. <https://doi.org/10.3390/s22145183>.
 9. A. H. M. Alkawgani, Malek G. Daher, Sofyan A. Taya, Melad M. Olaimat, **Adam R. H. Alhawari**, and Ilhami Colak, “Detection of Blood Plasma Concentration Theoretically Using SPR-Based Biosensor Employing Black Phosphor Layers and Different Metals”, *Plasmonics* 17, 1751–1764 (2022). <https://doi.org/10.1007/s11468-022-01662-3>.
 10. **Adam R. H. Alhawari**, A. H. M. Alkawgani, Hisham Alghamdi, Ayman Taher Hindi, Azzan Alyami, Abdulrahman Alyami, Yahya Aldaweis, Mahdi Al-Gannas, and Abdultawab Qahtan, “Energy efficient and privacy protection window system for smart home using polymer-dispersed liquid crystals glass”, *International Journal of Electrical and Computer Engineering (IJECE)*, Vol. 12, No. 5, October 2022, pp. 5600-5608.
 11. A. H. M. Alkawgani, Turki Alsuwian, **Adam R. H. Alhawari**, A. N. Alhuthari, M. A. Alhezabr, M. S. Alharethi, and F. H. Alqahtani, “Smart and efficient system for the detection of wrong cars parking”, *Bulletin of Electrical Engineering and Informatics*, Vol. 10, No. 4, August 2021, pp. 1968-1978.
 12. A. H. M. Alkawgani, **A. R. H. Alhawari**, Ayman Taher Hindi, Waled Hussein Al-Arashi and A. Y. Al-Ashwal, “Hybrid image steganography method using Lempel Ziv Welch and genetic algorithms for hiding confidential data”, *Multidimensional Systems and Signal Processing* (2022). <https://doi.org/10.1007/s11045-021-00793-w>.
 13. **Alhawari, A. R. H.**, Tale Saeidi, Abdulkarem H.M. Alkawgani, Ayman Taher Hindi, Hisham Alghamdi, Turki Alsuwian, Samer A. B. Awwad, and Muhammad Ali Imran, “Wearable Metamaterial Dual-Polarized High Isolation UWB MIMO Vivaldi Antenna for 5G and Satellite Communications,” *Micromachines*, Vol. 12, No. 12: 1559, 2021.
 14. **Alhawari, A. R. H.**, Sama F Majeed, Tale Saeidi, Sajid Mumtaz, Hisham Alghamdi, Ayman Taher Hindi, Abdulkarem H.M. Alkawgani, Muhammad Ali Imran, and Qammer H Abbasi, “Compact elliptical UWB antenna for underwater wireless communications,” *Micromachines*, Vol. 12, No. 4: 411, 2021.
 15. **Alhawari, A. R. H.**, A. H. M. Alkawgani, A. T. Hindi, H. Alghamidi, and Tale Saeidi, “Metamaterial-based wearable flexible elliptical UWB antenna for WBAN and breast imaging applications,” *AIP Advances*, Vol. 11, No. 1, pp. 015128, 2021.
 16. Tale Saeidi, Idris Ismail, Sima Noghianian, **Adam R. H. Alhawari**, Qammer H. Abbasi, Muhammad Ali Imran, M. Y. Zeain, and Shahid M. Ali, “High Gain triple-band metamaterial-based antipodal Vivaldi MIMO antenna for 5G communications,” *Micromachines*, Vol. 12, No. 3: 250, 2021.
 17. **Alhawari, A. R. H.**, A. H. M. Alkawgani, N. A. Alsaleh, S. A. Alyami, and A. M. Aslloum, “An efficient monitoring system for early fire automatic detection,” *ARPJ Journal of Engineering and Applied Sciences*, Vol. 16, No. 1, pp. 57-60, 2021.
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18. **Alhawari, A. R. H.**, A. H. M. Almawgani, H. Alghamidi, Tale Saeidi, and A. Ismail, "Omega-shaped tag antenna with inductively-coupled feeding using u-shaped stepped-impedance resonators for RFID applications," *Applied Computational Electromagnetics Society Journal*, Vol. 35, No. 8, pp. 951-961, August 2020.
 19. Tale Saeidi, Idris Ismail, S. N. Mahmood, S. Alani, and **A. R. H. Alhawari**, "Microwave Imaging of Voids in Oil Palm Trunk Applying UWB Antenna and Robust Time-Reversal Algorithm," *Journal of Sensors*, Volume 2020, Article ID 8895737, 21 pages, 2020.
 20. Tale Saeidi, Idris Ismail, Wong Peng Wen, and **A. R. H. Alhawari**, "Dielectric properties of complete oil palm trunk sample (healthy and unhealthy)," *AIP Advances*, Vol. 9, No. 7, pp. 075314, 2019.
 21. Tale Saeidi, Idris Ismail, Wong Peng Wen, and **A. R. H. Alhawari**, "Ultra-wideband elliptical patch antenna for microwave imaging of wood," *International Journal of Microwave and Wireless Technologies*, pp. 1-19, 2019. doi:10.1017/S1759078719000588.
 22. Tale Saeidi, Idris Ismail, Wong Peng Wen, **A. R. H. Alhawari**, and Ahmad Mohammadi, "Ultra-wideband antennas for wireless communication applications," *International Journal of Antennas and Propagation*, Vol. 2019, Article ID 7918765, 25 pages, 2019.
 23. Tale Saeidi, Idris Ismail, **A. R. H. Alhawari**, and Wong Peng Wen, "Near-field and far-field investigation of miniaturized UWB antenna for imaging of wood," *AIP Advances*, Vol. 9, No. 3, pp. 035232, 2019.
 24. **Alhawari, A. R. H.**, "Lung tumour detection using ultra-wideband microwave imaging approach," *Journal of Fundamental and Applied Sciences*, Vol. 10, No. 2, pp. 222-234, 2018.
 25. **Alhawari, A. R. H.**, "Improving UWB microstrip antenna using corrugated compact design for wireless communication systems," *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, Vol. 9, No. 4, pp. 45-48, 2017.
 26. **Alhawari, A. R. H.**, A. F. Alshehri, M. A. Alwadi, F. A. Blih, A. H. M. Almawgani, and A. S. Alwadi, "Design and development of electronic cooling and heating pad for hot and cold therapy," *ARPN Journal of Engineering and Applied Sciences (JEAS)*, Vol. 12, No. 24, pp. 7282-7289, 2017.
 27. Alqaisy, M., C. Chakrabraty, J. Ali, **A. R. H. Alhawari**, and Tale Saeidi, "Switchable square ring bandpass to bandstop filter for ultra-wideband applications," *International Journal of Microwave and Wireless Technologies*, Vol. 9, No. 01, pp. 51-60., 2017.
 28. Saeedi, T., I. Ismail, M. Ahadi, and **A. R. H. Alhawari**, "Photonic band gap aperture coupled fractal shape tri-band active antenna," *Progress In Electromagnetics Research C*, Vol. 69, pp. 125-138, 2016.
 29. Alqaisy, M., C. Chakrabraty, J. Ali, **A. R. H. Alhawari** and Tale Saeidi, "Reconfigurable bandwidth and tunable dual-band bandpass filter design for ultra-wideband (UWB) applications," *Electromagnetics*, Vol. 36, No. 6, pp. 366-378, 2016.
 30. Alqaisy, M., C. Chakrabraty, J. Ali, **A. R. H. Alhawari**, "A miniature fractal based dual-mode dual-band microstrip bandpass filter design," *International Journal of Microwave and Wireless Technologies*, Vol. 7, No. 02, pp. 127-133., 2015.
 31. Sabah, A., M. N. Hamidon, A. Ismail, and **A. R. H. Alhawari**, "Gain enhancement of a microstrip patch antenna using a reflecting layer," *International Journal of Antennas and Propagation*, Vol. 2015, pp. 1-7, 2015.
 32. Naeem, N., A. Ismail, **A. R. H. Alhawari**, and M. A. Mahdi, "Subwavelength negative index planar terahertz metamaterial using spiral split ring resonators for near field sensing," *International Journal of Applied Electromagnetics and Mechanics*, Vol. 47, pp. 827-836, 2015.
 33. **Alhawari, A. R. H.**, A. Ismail, A. S. A. Jalal, R. S. A. Raja Abdullah and M. F. A. Rasid, "U-shaped inductively coupled feed radio frequency identification tag antennas for gain enhancement," *Electromagnetics*, Vol. 34, No. 6, pp. 487-496, 2014.
 34. Rusni, I. M., A. Ismail, **A. R. H. Alhawari**, M. N. Hamidon and N. A. Yusof, "An aligned-gap and centered-gap rectangular multiple split ring resonator for dielectric sensing application," *Sensors 2014*, Vol. 14, pp. 13134-13148, 2014.
 35. Shareef, W. Z., A. Ismail, and **A. R. H. Alhawari**, "Substrate-perforated and compact ultra-wideband antenna with WLAN band rejection," *International Journal of Microwave and Wireless Technologies*, pp. 1-8, available on CJO2014. doi: 10.1017/S1759078714000786, 2014.
 36. Baharudin, E., A. Ismail, **A. R. H. Alhawari**, E. S. Zainudin, D. L. A. Abdul Majid, and F. Che Seman, "Investigation on the dielectric properties of pulverized oil palm frond and pineapple leaf
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fiber for x-band microwave absorber application,” *Advanced Materials Research*, Vol. 893, pp. 488-491, 2014.

Most Recent Professional Development Activities

1. Member, Jordan Engineers Association (JEA), Jordan.
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering – Control Systems	University of Dayton, Ohio, USA	2018
Master	Master of Science in Electric and Electronics Engineering	Gannon University, Pennsylvania State, USA	2011
Bachelor	Bachelor of science in Electrical engineering	King Saud University, Riyadh, KSA	2004

Academic Experience

04 / 2024 – Present	Associate Professor in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
04/ 2019 – 03/ 2024	Assistant Professor in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
06/2014 – 12 / 2018	Lecturer in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

- Power System Engineer – Saudi Electricity Company, Riyadh, KSA (www.sec.com.sa): 04 / 2004 – 01 / 2009.
- Electrical Engineer in the Management of Projects: Ministry of Education, Riyadh, KSA: 2004.

Certificates

- Academic Quality Practitioner NCAAA.
- Preparing a research proposal.
- Preparing self-assessment and self-study for academic accreditation.
- Teaching methods for undergraduate stage at the quality assurance management.
- Internal Audit Certificate from Institute of Public Administration, Riyadh, KSA.

Honors and Awards

- Research Grant from Deanship of Scientific Research, NU/SERC/12,2022, Najran University.
- Research Grant from Deanship of Scientific Research, NU/SERC/11,2021, Najran University.

Service Activities

- Chairman of Electrical Engineering Department, Engineering College, Najran University, 2023 – Present.
- Vice Dean for Students Affairs in Engineering College, Najran University, 2020 – 2022.
- Chairman of Academic study Plans and Accreditation Committee in Electrical Engineering Department, Engineering College, Najran University.

Publications & Presentations

2. **Alsuwian, Turki**; Tayyeb, Muhammad; Amin, Arslan Ahmed; Qadir, Muhammad Bilal; Almasabi, Saleh; Jalalah, Mohammed; ,Design of a hybrid fault-tolerant control system for air-fuel ratio control of internal combustion engines using genetic algorithm and higher-order sliding mode control,Energies,15,15,5666,2022,MDPI.
3. **Alsuwian, Turki**; Saeed, Rana Basharat; Amin, Arslan Ahmed; ,Autonomous vehicle with emergency braking algorithm based on multi-sensor fusion and super twisting speed controller,Applied Sciences,12,17,8458,2022,MDPI.
4. **Alsuwian, Turki**; Riaz, Umar; Amin, Arslan Ahmed; Qadir, Muhammad Bilal; Almasabi, Saleh; Jalalah, Mohammed; ,Hybrid fault-tolerant control for air-fuel ratio control system of internal combustion engine using fuzzy logic and super-twisting sliding mode control techniques,Energies,15,19,7010,2022,MDPI.

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5. **Alsuwian, Turki**; Usman, Mian Hamza; Amin, Arslan Ahmed; ,An autonomous vehicle stability control using active fault-tolerant control based on a fuzzy neural network,Electronics,11,19,3165,2022,MDPI.
 6. Rokade, Ashay; Singh, Manwinder; Malik, Praveen Kumar; Singh, Rajesh; **Alsuwian, Turki**; ,Intelligent data analytics framework for precision farming using IoT and regressor machine learning algorithms,Applied Sciences,12,19,9992,2022,MDPI.
 7. **Alsuwian, Turki**; Basit, Abdul; Amin, Arslan Ahmed; Adnan, Muhammad; Ali, Mansoor; ,An optimal control approach for enhancing transients stability and resilience in super smart grids,Electronics,11,19,3236,2022,MDPI.
 8. Charin, Chanuri; Ishak, Dahaman; Mohd Zainuri, Muhammad Ammirul Atiqi; Ismail, Baharuddin; **Alsuwian, Turki**; Alhawari, Adam RH; ,Modified levy-based particle swarm optimization (MLPSO) with boost converter for local and global point tracking,Energies,15,19,7370,2022,MDPI.
 9. **Alsuwian, Turki**; Shahid Butt, Aiman; Amin, Arslan Ahmed; ,Smart grid cyber security enhancement: Challenges and solutions—A review,Sustainability,14,21,14226,2022,MDPI.
 10. **Alsuwian, Turki**; Amin, Arslan Ahmed; Iqbal, Muhammad Sajid; Qadir, Muhammad Bilal; Almasabi, Saleh; Jalalah, Mohammed; ,Design of Active Fault-Tolerant Control System for Air-Fuel Ratio control of Internal Combustion engine using nonlinear regression-based observer model,PLoS One,17,12,e0279101,2022,"Public Library of Science San Francisco, CA USA.
 11. **Alsuwian, Turki**; Amin, Arslan Ahmed; Maqsood, Muhammad Taimoor; Qadir, Muhammad Bilal; Almasabi, Saleh; Jalalah, Mohammed; ,Advanced Fault-tolerant anti-surge control system of centrifugal compressors for sensor and actuator faults,Sensors,22,10,3864,2022,MDPI.
 12. Alhawari, Adam RH; Saeidi, Tale; Almagwani, Abdulkarem Hussein Mohammed; Hindi, Ayman Taher; Alghamdi, Hisham; **Alsuwian, Turki**; Awwad, Samer AB; Imran, Muhammad Ali; ,Wearable metamaterial dual-polarized high isolation UWB MIMO vivaldi antenna for 5G and satellite communications,Micromachines,12,12,1559,2021,MDPI.
 13. Almasabi, Saleh; **Alsuwian, Turki**; Awais, Muhammad; Irfan, Muhammad; Jalalah, Mohammed; Aljafari, Belqasem; Harraz, Farid A; ,False data injection detection for phasor measurement units,Sensors,22,9,3146,2022,MDPI.
 14. Almasabi, Saleh; **Alsuwian, Turki**; Javed, Ehtasham; Irfan, Muhammad; Jalalah, Mohammed; Aljafari, Belqasem; Harraz, Farid A; ,A novel technique to detect false data injection attacks on phasor measurement units,Sensors,21,17,5791,2021,MDPI.
 15. Almagwani, AHM; **Alsuwian, Turki**; Alhawari, Adam RH; Alhuthari, AN; Alhezabr, MA; Alharethi, MS; Alqahtani, FH; ,Smart and efficient system for the detection of wrong cars parking,Bulletin of Electrical Engineering and Informatics,10,4,1968-1978,2021.
 16. Gehlot, Anita; Malik, Praveen Kumar; Singh, Rajesh; Akram, Shaik Vaseem; **Alsuwian, Turki**; ,Dairy 4.0: intelligent communication ecosystem for the cattle animal welfare with blockchain and IoT enabled technologies,Applied Sciences,12,14,7316,2022,MDPI.
 17. **Alsuwian, Turki**; Iqbal, Muhammad Sajid; Amin, Arslan Ahmed; Qadir, Muhammad Bilal; Almasabi, Saleh; Jalalah, Mohammed; , "A comparative study of design of Active Fault-Tolerant control system for air–fuel ratio control of internal combustion engine using particle swarm optimization, genetic algorithm, and nonlinear regression-based observer model",Applied Sciences,12,15,7841,2022,MDPI.
 18. Patel, Yogesh; Tanwar, Sudeep; Bhattacharya, Pronaya; Gupta, Rajesh; **Alsuwian, Turki**; Davidson, Innocent Ewean; Mazibuko, Thokozile F; ,An improved dense CNN architecture for deepfake image detection,IEEE Access,11,22081-22095,2023,IEEE.
 19. Alhawari, Adam RH; Saeidi, Tale; Ismail, Idris; **Alsuwian, Turki**; Al-Gburi, Ahmed Jamal Abdullah; ,Health Control of Tree Trunk Utilizing Microwave Imaging and Reverse Problem Algorithms,ACS omega,8,16,14387-14400,2023,American Chemical Society.
 20. **Alsuwian, Turki**; Amin, Arslan Ahmed; Iqbal, Muhammad Sajid; Maqsood, Muhammad Taimoor; ,A review of anti-surge control systems of compressors and advanced fault-tolerant control techniques for integration perspective,Heliyon,2023,Elsevier.
 21. Liaqat, Marriam; **Alsuwian, Turki**; Amin, Arslan Ahmed; Adnan, Muhammad; Zulfiqar, Adil; ,Transient stability enhancement in renewable energy integrated multi-microgrids: A comprehensive and critical analysis,Measurement and Control,57,2,187-207,2024,"SAGE Publications Sage UK: London, England".
 22. Jolly, Aman; Pandey, Vikas; Malik, Praveen Kumar; **Alsuwian, Turki**; ,The Symbiotic Relation of
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- IoT and AI for Applications in Various Domains: Trends and Future Directions, Data Analytics for Internet of Things Infrastructure,,219-245,2023, Springer Nature Switzerland Cham.
23. Agravat, Dhruvik; Patel, Shobhit K; Almawgani, Abdulkarem HM; **Alsuwian, Turki**; Armghan, Ammar; Daher, Malek G; , "Investigation of a novel graphene-based surface plasmon resonance solar absorber to achieve high absorption efficiency over a wide spectrum of wavelengths, from ultraviolet to infrared", *Plasmonics*,19,3,1071-1083,2024, Springer US New York.
 24. Ahmad, Faizan; **Alsuwian, Turki**; Amin, Arslan Ahmed; Adnan, Muhammad; Qadir, Muhammad Bilal; ,Design of Advanced Fault-Tolerant Control System for Three-Phase Matrix Converter Using Artificial Neural Networks, *IEEE Access*,2023,IEEE.
 25. **Alsuwian, Turki**; Basit, A; Amin, AA; Adnan, M; Ali, M; , "An Optimal Control Approach for Enhancing Transients Stability and Resilience in Super Smart Grids. *Electronics* 2022, 11, 3236",2022, MDPI.
 26. **Alsuwian, Turki**; Ansari, Shaheer; Zainuri, Muhammad Ammirul Atiqi Mohd; Ayob, Afida; Hussain, Aini; Lipu, MS Hossain; Alhawari, Adam RH; Almawgani, AHM; Almasabi, Saleh; Hindi, Ayman Taher; ,A Review of Expert Hybrid and Co-Estimation Techniques for SOH and RUL Estimation in Battery Management System with Electric Vehicle Application, *Expert Systems with Applications*,,,123123,2024,Pergamon.
 27. Saleem, Omer; **Alsuwian, Turki**; Amin, Arslan Ahmed; Ali, Shehryaar; Alqarni, Zuhair A; ,Stabilization control of rotary inverted pendulum using a novel EKF-based fuzzy adaptive sliding-mode controller: design and experimental validation, *Automatika*,65,2,538-558,2024, Taylor & Francis.
 28. Yousuf, Muhammad; **Alsuwian, Turki**; Amin, Arslan Ahmed; Fareed, Sanwal; Hamza, Muhammad; ,IoT-based health monitoring and fault detection of industrial AC induction motor for efficient predictive maintenance, *Measurement and Control*,00202940241231473,2024, "SAGE Publications Sage UK: London, England".
 29. **Alsuwian, Turki**; Habib, Asiful; Zainuri, Muhammad Ammirul Atiqi Mohd; Ibrahim, Ahmad Asrul; Tousizadeh, Mahdi; Alhawari, Adam RH; Almawgani, AHM; Almasabi, Saleh; ,Prototype development of a fully coreless multi-stage axial-flux permanent-magnet machine (AFPM) through the performance comparison between single-stator double-rotor (SSDR) and double-stator single-rotor (DSSR) configurations, *Alexandria Engineering Journal*,92,,283-293,2024,Elsevier.
 30. S. Almasabi, A. Shaf, T. Ali, M. Zafar, M. Irfan and **Alsuwian, Turki**, "Securing Smart Grid Data with Blockchain and Wireless Sensor Networks: A Collaborative Approach," in *IEEE Access*, vol. 12, pp. 19181-19198, 2024, doi: 10.1109/ACCESS.2024.3361752.
 31. Akond, Mohammad Shahed; **Alsuwian, Turki M**; ,Assessment of Dispersive Materials using Recursive Implicit Time Domain Techniques,2020 IEEE 8th International Conference on Photonics (ICP),50-51,2020,IEEE.
 32. **Alsuwian, Turki**; Ordoñez, Raúl; Jacobsen, Lance; ,Nonlinear adaptive control for lateral dynamics with fixed roll angle of hypersonic vehicles at subsonic speeds,2017 IEEE National Aerospace and Electronics (NAECON),127-134,2017,IEEE.
 33. **Alsuwian, Turki**; Ordóñez, Raúl; Jacobsen, Lance; ,Comparison of PID and nonlinear feedback linearization controls for longitudinal dynamics of hypersonic vehicle at subsonic speeds,2016 IEEE National Aerospace and Electronics (NAECON) and Ohio Innovation Summit (OIS),207-213,2016,IEEE.
 34. **Alsuwian, Turki M**; Ordonez, Raul; Jacobsen, Lance; ,Adaptive Control for Longitudinal Dynamics of Hypersonic Vehicle at Subsonic Speeds,AIAA Modeling and Simulation Technologies Conference,4009,2017.
 35. **Alsuwian, Turki**. (2018). "*Comparative Analysis of Flight Control Designs for Hypersonic Vehicles at Subsonic Speeds*", [Doctoral dissertation, University of Dayton]. OhioLINK Electronic Theses and Dissertations Center.
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering (Power Systems & Control)	Michigan State University, MI, USA	2019
Master	Electrical Engineering	Wayne State University, MI, USA	2012
Bachelor	Electrical Engineering	KFUPM, Dahrán, KSA	2008

Academic Experience

2/6/2019 – present	Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.
26/1/2015 – 31/5/2019	Ph.D. Student at Michigan State University, MI, USA
31/5/2012 – 31/8/2014	Lecturer at Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.
1/1/2010 – 30/5/2012	Master's at Wayne State University, MI, USA.
1/8/2009 – 31/12/2010	Assistance Lecturer at Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.

Non-Academic Experience

NA

Certificates

- Institutional Excellency Criteria
- Innovation for small and midlevel size institutions
- High Impact Educational Practices
- Academic Leadership Diploma
- Preparing self-assessment and self-study for academic accreditation
- Responsible Conduct of Research for Engineers
- Data and Data Management
- Writing Strategies for academic writing

Honors and Awards

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Publications & Presentations

1. S. Almasabi and J. Mitra, "Multistage Optimal PMU Placement Considering Substation Infrastructure," in IEEE Transactions on Industry Applications, vol. 54, no. 6, pp. 6519-6528, Nov.-Dec. 2018.
 2. S. Almasabi and J. Mitra, "A Fault-Tolerance Based Approach to Optimal PMU Placement", in IEEE Transactions on Smart Grid.
 3. N. Nguyen, S. Almasabi and J. Mitra, "Impact of Correlation Between Wind Speed and Turbine Availability on Wind Farm Reliability," in IEEE Transactions on Industry Applications, vol. 55, no. 3, pp. 2392-2400, May-June 2019.
 4. Nga Nguyen, Saleh Almasabi, Atri Bera and Joydeep Mitra, "Optimal Power Flow Considering Frequency Security Constraint" in IEEE Transactions on Industry Applications,
 5. Atri Bera, Saleh Almasabi, Yuting Tian, Raymond H. Byrne, Babu Chalamala, Tu A. Nguyen, Joydeep Mitra, "Maximising the investment returns of a grid-connected battery considering degradation cost" in IET Generation, Transmission & Distribution
 6. N. Nguyen, S. Almasabi, A. Bera and J. Mitra, "Optimal Power Flow Incorporating Frequency Security Constraint," in IEEE Transactions on Industry Applications, vol. 55, no. 6, pp. 6508-6516, Nov.-Dec. 2019, doi: 10.1109/TIA.2019.2938918.
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 10. S. Almasabi et al., "False Data Injection Detection for Phasor Measurement Units," *Sensors*, vol. 22, no. 9, p. 3146, Apr. 2022, doi: 10.3390/s22093146.
 11. T. Alsuwian, A. A. Amin, M. T. Maqsood, M. B. Qadir, S. Almasabi, and M. Jalalah, "Advanced Fault-Tolerant Anti-Surge Control System of Centrifugal Compressors for Sensor and Actuator Faults," *Sensors*, vol. 22, no. 10, p. 3864, May 2022, doi: 10.3390/s22103864
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 13. T. Alsuwian, U. Riaz, A. A. Amin, M. B. Qadir, S. Almasabi, and M. Jalalah, "Hybrid Fault-Tolerant Control for Air-Fuel Ratio Control System of Internal Combustion Engine Using Fuzzy Logic and Super-Twisting Sliding Mode Control Techniques," *Energies*, vol. 15, no. 19, p. 7010, Sep. 2022, doi: 10.3390/en15197010.
 14. S. Almasabi and J. Mitra, "Multi-stage optimal PMU placement including substation infrastructure," in *2017 IEEE Industry Applications Society Annual Meeting*, pp. 1–8, Oct. 2017.
 15. S. Almasabi, F. T. Alharbi and J. Mitra, "Opposition-based elitist real genetic algorithm for optimal power flow", in *NAPS*, Denver, CO, 2016, pp. 1-6.
 16. N. Nguyen, S. Almasabi, J. Mitra and B. B. Shenoy, "Correlation of Wind Speed and Wind Turbine Reliability in System Adequacy Assessment," *2018 IEEE International Conference on Probabilistic Methods Applied to Power Systems (PMAPS)*, Boise, ID, 2018, pp. 1-6.
 17. S. Almasabi, A. Bera and J. Mitra, "Dynamic State Estimation Aided By Machine Learning," *IEEE Power and Energy Society General Meeting (PESGM)*, pp. 1-5, 2019.
 18. F. T. Alharbi, S. Almasabi and J. Mitra, "Enhancing Network Loadability Using Optimal TCSC Placement and Sizing," *2018 IEEE/PES Transmission and Distribution Conference and Exposition (T&D)*, Denver, CO, 2018, pp. 1-9.
 19. A. Bera and Y. Tian and S. Almasabi and J. Mitra and C. Borges " Modeling of Battery Energy Storage Systems for System Reliability Studies," *IEEE Power and Energy Society General Meeting (PESGM)*, pp. 1-5, 2019(under review).
 20. Nga Nguyen, S. Almasabi, Atri Bera and Joydeep Mitra, "Optimal Power Flow Considering Frequency Security Constraint," in *Power Africa*, Cape Town, South Africa, 2018, pp. 1-6.
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 22. S. Almasabi and J. Mitra, "An Overview of Synchrophasors and Their Applications in Smart Grids", in ICICPI, Kolkata, 2016.
 23. S. Almasabi, S. Sulaeman, N. Nguyen, and J. Mitra, " Cost Benefit Analysis for Wind Power Penetration ", in NAPS, Morgantown, WV, 2017.
 24. Bera, Atri, Saleh Almasabi, Joydeep Mitra, Babu Chalamala, and Raymond H. Byrne. "Spatiotemporal optimization of grid-connected energy storage to maximize economic benefits." In 2019 IEEE Industry Applications Society Annual Meeting, pp. 1-7. IEEE, 2019.
 25. Bera, Atri, Anurag Chowdhury, Joydeep Mitra, Saleh Almasabi, and Mohammed Benidris. "Data-driven assessment of power system reliability in presence of renewable energy." In 2020 International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), pp. 1-6. IEEE, 2020.
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Most Recent Professional Development Activities

1. S. Almasabi, Z. Mushtaq, N. A. Khan and M. Irfan, "Improving FDI Detection for PMU State Estimation Using Adversarial Interventions and Deep Auto-Encoder," in IEEE Access, vol. 12, pp. 116398-116414, 2024, doi: 10.1109/ACCESS.2024.3445811.
 2. Turki Alsuwian, Asiful Habib, Muhammad Ammirul Atiqi Mohd Zainuri, Ahmad Asrul Ibrahim, Mahdi Tousizadeh, Adam R.H. Alhawari, A.H.M. Almawgani, Saleh Almasabi, "Prototype development of a fully coreless multi-stage axial-flux permanent-magnet machine (AFPM) through the performance comparison between single-stator double-rotor (SSDR) and double-stator single-rotor (DSSR) configurations," Alexandria Engineering Journal, Volume 92, 2024, <https://doi.org/10.1016/j.aej.2024.02.023>.
 3. Turki Alsuwian, Shaheer Ansari, Muhammad Ammirul Atiqi Mohd Zainuri, Afida Ayob, Aini Hussain, M.S. Hossain Lipu, Adam R.H. Alhawari, A.H.M. Almawgani, Saleh Almasabi, Ayman Taher Hindi, "A review of expert hybrid and co-estimation techniques for SOH and RUL estimation in battery management system with electric vehicle application," in Expert Systems with Applications, Volume 246, 2024, <https://doi.org/10.1016/j.eswa.2023.123123>.
 4. S. Almasabi, "Mitigation of Cyber-Threat on Dynamic State Estimation," 2023 4th International Conference on Clean and Green Energy Engineering (CGEE), Ankara, Turkiye, 2023, pp. 1-5, doi: 10.1109/CGEE59468.2023.10351839.
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Education

Degree	Discipline	Institution	Year
PhD	Wireless and Mobile Systems	Universiti Sains Malaysia, Electrical and Electronics School, Penang, Malaysia	2011
Master	Electronic System Design Engineering	Electronic System Design Engineering, Electrical and Electronics School, Penang, Malaysia	2008
Bachelor	Electrical Engineering (Track: Information Engineering)	Baghdad University, Baghdad, Iraq	2003

Academic Experience

Time	Rank	Institution
29/3/2020 – present	Associate Professor	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
26/1/2015 – 28/3/2020	Assistant Professor	Electrical Engineering Department, Engineering College Najran University, Najran, KSA.
1/8/2011 – 25/1/2015	Assistant Professor	Electrical Engineering Department, Engineering College, University of Science & Technology, Yemen.
1/8/2012 – 1/8/1/8/2014	Assistant Professor	Electrical Engineering Department, Engineering College, Sana'a University, Yemen.

Non-Academic Experience

NA

Certificates

- Prepare Program Specification Document for Communications Engineering
- Thesis editing using LaTeX
- Occupational Safety and Health Course for Post Graduate Students
- Writing a scientific research article
- Preparing a research proposal
- Stress management workshop
- Preparing self-assessment and self-study for academic accreditation
- Teaching Technicians
- Teaching methods for undergraduate stage at the quality assurance management
- Computer Networks
- Database (SQL, Developer oracle)

Honors and Awards

- Top 2 % researcher in the database of world researchers released by Stanford University in 2024.
- Best Researcher Award (2nd position) for 2023 in Najran University Saudi Arabia.
- Best Researcher Award (10th position) for 2022 in Najran University Saudi Arabia.
- Awarded International Graduate Research Fellowship (IGRF), Universiti Sains Malaysia, 2008–2011.

Publications & Presentations

26. H. B. Albargi *et al.*, "Investigation and measurement of square strip line antenna design and characteristic mode analysis for 5G/WiFi/WLAN applications," *Phys. Scr.*, vol. 99, no. 6, p. 65529, 2024, doi: 10.1088/1402-4896/ad3bf0.
27. A. H. M. Almwagani, "RNN-LSTM model for reliable optical transmission in flexible switching network systems," *Wirel. Networks*, vol. 30, no. 3, pp. 1575–1589, 2024, doi: 10.1007/s11276-023-03599-9.
28. A. H. M. Almwagani, A. A. H. Al-Athwary, H. A. Elsayed, A. Mehaney, A. Hajjiah, and H. Sayed, "Enhancement the optical properties of thin film solar cells using new materials and designs of anti-reflection coating," *J. Mater. Sci. Mater. Electron.*, vol. 35, no. 19, p. 1279, 2024, doi: 10.1007/s10854-024-12802-2.
29. A. H. M. Almwagani, S. Lavadiya, V. Sorathiya, and A. R. H. Alhawari, "Design and diversity performance analysis of C shape engraved miniaturised, and high gain Quad-Port MIMO antenna for

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- 5 G and P2P communication,” *Phys. Scr.*, vol. 99, no. 3, p. 35532, 2024, doi: 10.1088/1402-4896/ad289f.
30. S. M. Alqhtani *et al.*, “Improved Brain Tumor Segmentation and Classification in Brain MRI With FCM-SVM: A Diagnostic Approach,” *IEEE Access*, vol. 12, pp. 61312–61335, 2024, doi: 10.1109/ACCESS.2024.3394541.
 31. N. K. Anushkannan, A. H. M. Almawgani, U. Arun Kumar, and A. T. Hindi, “CSRR backed compact two-port, dual-band MIMO antenna for mm-wave applications,” *Wirel. Networks*, vol. 30, no. 3, pp. 1857–1867, 2024, doi: 10.1007/s11276-023-03628-7.
 32. R. K. Parida *et al.*, “A Compact Isolated CR Antenna System for Application in C-Band,” *Int. J. Antennas Propag.*, vol. 2024, no. 1, p. 5522356, 2024, doi: 10.1155/2024/5522356.
 33. S. K. Patel, D. Jansari, A. H. M. Almawgani, A. Armghan, M. Irfan, and S. Lavadiya, “Design and optimization of meandered plasmonic MIMO antenna with defected ground structure showing ultra-wideband response and high isolation for 6G/TWPAN communication,” *Opt. Quantum Electron.*, vol. 56, no. 1, p. 86, 2024, doi: 10.1007/s11082-023-05633-8.
 34. Shailesh *et al.*, “Circularly Polarized Sixteen-Port Flexible UWB MIMO Antenna Featuring Polarization Diversity for WBAN Applications,” *Int. J. RF Microw. Comput. Eng.*, vol. 2024, no. 1, p. 8442770, 2024.
 35. A. H. M. Almawgani, “A hybrid QL ANN model designed to improve the Quality of Transmission of optical communication network,” *Opt. Quantum Electron.*, vol. 55, no. 12, p. 1053, 2023, doi: 10.1007/s11082-023-05328-0.
 36. A. H. M. Almawgani and V. Sorathiya, “Rectangular strip engraved circular patch and connected corrugated stub-based MIMO antenna for Wi-Fi/5G/WiMAX/satellite communication applications,” *Appl. Phys. A Mater. Sci. Process.*, vol. 129, no. 3, p. 200, 2023, doi: 10.1007/s00339-023-06489-1.
 37. A. H. M. Almawgani, V. Sorathiya, and A. R. H. Alhawari, “Design of dipole array MIMO antenna for multiband and ultrawideband radiation applications in WiFi/Zigbee/WiMAX/satellite and mobile communications,” *Appl. Phys. A Mater. Sci. Process.*, vol. 129, no. 6, p. 449, 2023, doi: 10.1007/s00339-023-06716-9.
 38. A. H. M. Almawgani, V. Sorathiya, V. M. Dabhi, A. R. H. Alhawari, and M. F. M. Salleh, “Six-element MIMO antenna structure with squared ring structure with multiband and high gain characteristics for C/X/Ku/K band applications,” *Phys. Scr.*, vol. 98, no. 12, p. 125517, 2023, doi: 10.1088/1402-4896/ad0bbc.
 39. A. Armghan, M. Alsharari, K. Aliqab, A. H. M. Almawgani, M. Irfan, and S. K. Patel, “Multiband and high gain meandered metamaterial THz MIMO antenna for highspeed wireless communication applications,” *Opt. Quantum Electron.*, vol. 55, no. 9, p. 828, 2023, doi: 10.1007/s11082-023-05115-x.
 40. K. V. Babu, D. Sudipta, G. N. J. Sree, A. H. M. Almawgani, T. Islam, and A. R. H. Alhawari, “Deep learning assisted fractal slotted substrate MIMO antenna with characteristic mode analysis (CMA) for Sub-6 GHz n78 5 G NR applications: design, optimization and experimental validation,” *Phys. Scr.*, vol. 98, no. 11, p. 115526, 2023, doi: 10.1088/1402-4896/ad00e6.
 41. Y. Fawad *et al.*, “Dual-polarized 8-port sub 6 GHz 5G MIMO diamond-ring slot antenna for smart phone and portable wireless applications,” *PLoS One*, vol. 18, no. 11 November, p. e0288793, 2023, doi: 10.1371/journal.pone.0288793.
 42. M. Qahtan, A. H. M. Almawgani, and A. Ghosh, “Smart double glazing integrated polymer dispersed liquid crystal for enhancing building’s thermal performance in hot-arid climate,” *J. Build. Eng.*, vol. 80, p. 107971, 2023, doi: 10.1016/j.jobbe.2023.107971.
 43. M. B. F. Sanjeetha, G. A. Ali, S. S. Nawaz, A. H. M. Almawgani, and Y. A. A. Ali, “Development of an Alignment Model for the Implementation of DevOps in SMEs: An Exploratory Study,” *IEEE Access*, vol. 11, pp. 144213–144225, 2023, doi: 10.1109/ACCESS.2023.3344040.
 44. R. Hasan Alhawari *et al.*, “Energy efficient and privacy protection window system for smart home using polymer-dispersed liquid crystals glass,” *Int. J. Electr. Comput. Eng.*, vol. 12, no. 5, pp. 5600–5608, 2022, doi: 10.11591/ijece.v12i5.pp5600-5608.
 45. A. H. M. Almawgani, A. R. H. Alhawari, A. T. Hindi, W. H. Al-Arashi, and A. Y. Al-Ashwal, “Hybrid image steganography method using Lempel Ziv Welch and genetic algorithms for hiding confidential data,” *Multidimens. Syst. Signal Process.*, vol. 33, no. 2, pp. 561–578, 2022, doi: 10.1007/s11045-021-00793-w.
 46. A. H. M. Almawgani, S. A. Taya, A. J. Hussein, and I. Colak, “Dispersion properties of a slab
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47. A. M. Qahtan and A. H. M. Almawgani, “Experimental Evaluation of Thermal and Lighting Performance Using Double Dynamic Insulated Glazing,” *Buildings*, vol. 12, no. 8, p. 1249, 2022, doi: 10.3390/buildings12081249.
 48. T. Saeidi, A. R. H. Alhawari, A. H. M. Almawgani, T. Alsuwian, M. A. Imran, and Q. Abbasi, “High Gain Compact UWB Antenna for Ground Penetrating Radar Detection and Soil Inspection,” *Sensors*, vol. 22, no. 14, p. 5183, 2022, doi: 10.3390/s22145183.
 49. A. R. H. Alhawari *et al.*, “Compact elliptical uwb antenna for underwater wireless communications,” *Micromachines*, vol. 12, no. 4, 2021, doi: 10.3390/mi12040411.
 50. R. H. Alhawari *et al.*, “Compact elliptical uwb antenna for underwater wireless communications,” *Micromachines*, vol. 12, no. 4, p. 411, 2021, doi: 10.3390/mi12040411.
 51. A. R. H. Alhawari *et al.*, “Wearable metamaterial dual-polarized high isolation uwb mimo vivaldi antenna for 5g and satellite communications,” *Micromachines*, vol. 12, no. 12, p. 1559, 2021, doi: 10.3390/mi12121559.
 52. A. R. H. Alhawari, A. H. M. Almawgani, A. T. Hindi, H. Alghamdi, and T. Saeidi, “Metamaterial-based wearable flexible elliptical UWB antenna for WBAN and breast imaging applications,” *AIP Adv.*, vol. 11, no. 1, 2021, doi: 10.1063/5.0037232.
 53. A. H. M. Almawgani *et al.*, “Smart and efficient system for the detection of wrong cars parking,” *Bull. Electr. Eng. Informatics*, vol. 10, no. 4, pp. 1968–1978, 2021, doi: 10.11591/EEI.V10I4.2634.
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 55. A. H. M. Almawgani, “Smart monitoring system of Najran dam,” *Int. J. Electr. Comput. Eng.*, vol. 10, no. 4, pp. 3999–4007, 2020, doi: 10.11591/ijece.v10i4.pp3999-4007.
 56. H. Alghamdi and A. H. M. Almawgani, “Smart and Efficient Energy Saving System Using PDL Glass,” in *2019 Smart Cities Symposium Prague, SCSP 2019 - Proceedings*, 2019, pp. 1–5, doi: 10.1109/SCSP.2019.8805731.
 57. F. Alshehri, A. H. M. Almawgani, A. Alqahtani, and A. Alqahtani, “Smart Parking System for Monitoring Cars and Wrong Parking,” in *2nd International Conference on Computer Applications and Information Security, ICCAIS 2019*, 2019, pp. 1–6, doi: 10.1109/CAIS.2019.8769463.
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Most Recent Professional Development Activities

1. F. Alshehri, A. H. M. Almawgani, A. Alqahtani, and A. Alqahtani, “Smart Parking System for Monitoring Cars and Wrong Parking,” in *2nd International Conference on Computer Applications and Information Security, ICCAIS 2019*, 2019, pp. 1–6, doi: 10.1109/CAIS.2019.8769463.
 2. A. H. M. Almawgani, “Design Of Real Time Smart Traffic Light Control System,” in *ISER- 318th International Conference on Science, Technology, Engineering and Management (ICSTEM)*, 2018, no. 4, pp. 51–55.
 3. A. H. M. Almawgani and M. F. M. Salleh, “Partner coupling algorithm for mobile coded cooperation technique,” in *17th Asia-Pacific Conference on Communications, APCC 2011*, 2011, pp. 659–664, doi: 10.1109/APCC.2011.6152890.
 4. A. H. M. Almawgani and M. F. M. Salleh, “RS coded cooperation with adaptive cooperation level scheme over multipath Rayleigh fading channel,” in *Proceedings - MICC 2009: 2009 IEEE 9th Malaysia International Conference on Communications with a Special Workshop on Digital TV Contents*, 2009, pp. 480–484, doi: 10.1109/MICC.2009.5431555.
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Education

Degree	Discipline	Institution	Year
PhD	Nanotechnology Engineering	Hanyang University, Seoul, South Korea	2018
Master	Power Systems Engineering	University of Manchester, Manchester, UK	2008
Bachelor	Electrical Engineering	King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia	2001

Academic Experience

Time	Rank	Institution
Nov. 2022 – present	Associate Professor	The Department of Electrical Engineering, Najran University, Najran, Saudi Arabia
May. 2018 – Nov. 2022	Assistant Professor	The Department of Electrical Engineering, Najran University, Najran, Saudi Arabia
Dec. 2018 – Nov. 2022	Vice-Dean of	the Engineering College, Najran University, Najran, Saudi Arabia
Oct. 2018 – Sep. 2022	Director of	the Advanced Material and Nano-Research Center, Najran University, Najran, Saudi Arabia
Feb. 2013 – May 2018	Lecturer	The Department of Electrical Engineering, Najran University, Najran, Saudi Arabia
Apr. 2011 – Feb. 2013	Teaching assistance	The Department of Electrical Engineering, Najran University, Najran, Saudi Arabia
Dec. 2008 – Feb. 2011	Researcher and Teaching assistance	The Department of Power Systems Engineering, the University of Manchester, Manchester, UK
Sep. 2002 – Nov. 2008	Teacher	Electrical Technology Department, Dammam College of Technology, Dammam, Saudi Arabia

Non-Academic Experience

NA

Certificates

- A certificate of appreciation from the Deanship of Scientific Research at Najran University for achieving the fifth rank in the number of published scientific papers according to the Clarivate Analytics in 2022.
- A certificate of appreciation from the Deanship of Scientific Research at Najran University for achieving the sixth rank in the number of published scientific papers according to the Clarivate Analytics in 2021.
- A certificate of appreciation from the Deanship of Scientific Research at Najran University for achieving the seventh rank in the number of published scientific papers according to the Clarivate Analytics in 2020.

Honors and Awards

- The scientific paper titled “Enhanced efficiency and current density of solar cells via energy-down-shift having energy-tuning-effect of highly UV-light-harvesting Mn²⁺-doped quantum dots” has been selected as a key scientific article contributing to excellence in science and engineering research, Advances in Engineering, July 2017, <https://advanceseng.com/enhanced-efficiency-and-current-density-solar-cells-energy-down-shift/>

Publications & Presentations

- The publications are available on the following links:
 - Google Scholar: <http://scholar.google.co.kr/citations?user=PJdo3zIAAAAJ&hl=en>
 - Web of Science: <https://www.webofscience.com/wos/author/record/I-7458-2016>
 - ORCID: <https://orcid.org/0000-0002-6828-3874>
 - Scopus: <https://www.scopus.com/authid/detail.uri?origin=resultslist&authorId=55748793400>

-
- ResearcherID: <http://www.researcherid.com/rid/I-7458-2016>
- Research Gate: https://www.researchgate.net/profile/Mohammed_Jalalah2
1. Growth kinetics and metabolic characteristics of five freshwater indigenous microalgae for nutrient removal and biofuel generation: a sustainable approach, M Zhang, M Jalalah, SA Alsareii, FA Harraz, Q Yang, M Sharma, ..., *Biomass Conversion and Biorefinery* 14 (14), 16699-16710, 2024
 2. Plastic waste and microplastics (MPs) formation: Management, migration, and environmental impact, Y Yang, M Jalalah, SA Alsareii, FA Harraz, N Thakur, Y Zheng, M Koutb, ... M Jalalah, *Journal of Environmental Chemical Engineering*, 112926, 2024
 3. Magnetic chicken bone biochar mediated anaerobic co-digestion of lignocellulosic biomass for energy enhancement and microbial synergism, I Saif, M Alsaiari, M Jalalah, FA Harraz, S Su, ES Salama, X Li, *Fuel* 362, 130794, 2024
 4. Harnessing the antimicrobial potential of natural starch and mint extract in PVA-based biodegradable films against staphylococcus aureus bacteria, IA Rashid, M Faisal, A Ahmad, A Afzal, Z Khaliq, MS Ashraf, HMF Shakir, ... M Jalalah, *Materials Research Express* 11 (3), 035401, 2024
 5. A graphene gold metasurface inspired surface plasmon resonance sensor designed for terahertz applications in sensing and detection of heavy metals in Water, J Muheki, J Wekalao, HB Albargi, M Jalalah, AHM Almawgani, SK Patel, *Plasmonics*, 1-15, 2024
 6. Occurrence, characteristics, and microbial community of microplastics in anaerobic sludge of wastewater treatment plants, W Kong, M Jalalah, SA Alsareii, FA Harraz, AA Almadiy, N Thakur, ..., *Environmental Pollution* 344, 123370, 2024
 7. Anaerobic digestion of fat, oil, and grease (FOG) under combined additives: Enhanced digestibility, biogas production, and microbiome, N Thakur, M Jalalah, SA Alsareii, FA Harraz, AA Almadiy, S Su, ..., *Renewable and Sustainable Energy Reviews* 191, 114155, 2024
 8. Conversion of sugarcane biomass into sustainable fabrics: softening of fibers using alkali and silicone softener treatment, MB Qadir, M Alsaiari, Z Ali, A Afzal, Z Khaliq, M Irfan, A Rahman, ... M Jalalah, *Materials Research Express* 11 (2), 025103, 2024
 9. Nanofiltration PVP Membrane with Gradient Cross-Linking for Efficient Polycyclic Aromatic Hydrocarbons Removal, AAJ Ghanim, S Waqas, MH Zeeshan, JA Khan, SA Ghalib, M Irfan, ... M Jalalah, *ACS omega* 9 (5), 5265-5272, 2024
 10. Comparative analysis of feed-forward neural network and second-order polynomial regression in textile wastewater treatment efficiency, AS Alkorbi, M Tanveer, H Shahid, MB Qadir, F Ahmad, Z Khaliq, M Jalalah, ..., *AIMS Mathematics* 9 (5), 10955-10976, 2024
 11. Adsorption of lead ions from wastewater using electrospun zeolite/MWCNT nanofibers: kinetics, thermodynamics and modeling study, U Mahmood, AS Alkorbi, T Hussain, A Nazir, MB Qadir, Z Khaliq, ... M Jalalah, *RSC advances* 14 (9), 5959-5974, 2024
 12. Reinforcement using undoped carbon quantum dots (CQDs) with a partially carbonized structure doubles the toughness of PVA membranes, Z Latif, HB Albargi, Z Khaliq, K Shahid, U Khalid, MB Qadir, M Ali, ... M Jalalah, *Nanoscale Advances* 6 (6), 1750-1764, 2024
 13. Microalgal cycling in the cathode of microbial fuel cells (MFCs) induced oxygen reduction reaction (ORR) and electricity: A biocatalytic process for clean energy, M Sharma, M Jalalah, SA Alsareii, FA Harraz, W Xue, N Thakur, ..., *Chemical Engineering Journal* 479, 147431, 2024
 14. Supplementation of micro-nutrients to growth media of microalgae-induced biomass and fatty acids composition for clean energy generation, Z Su, M Jalalah, SA Alsareii, FA Harraz, AA Almadiy, L Wang, N Thakur, ..., *World Journal of Microbiology and Biotechnology* 40 (1), 12, 2024
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Education

Degree	Discipline	Institution	Year
PhD	Electrical and Electronics	University of Southampton	2016
Master	Electrical and Electronics	University of Leicester	2010
Bachelor	Electrical Engineering	Umm Alqura University	2007

Academic Experience

22/12/2022	Associate Professor at Najran University, Najran, Saudi Arabia
27/03/2016	Assistance Professor at Najran University, Najran, Saudi Arabia
17/06/2014	Lecturer at Najran University, Najran, Saudi Arabia

Non-Academic Experience

2021-2023	Dean of ISCS, Najran University, Najran
2019-2021	Vice-Dean, ITC, Najran University, Najran
2018-2020	Vice-Dean, Engineering College, Najran University, Najran

Certificates

- Diploma in Information Resources Management, Leicester, UK
- Training course in Project Management for Professionals, Leicester, UK
- Diploma in Risk Management, Leicester, UK
- Diploma in Leadership and Entrepreneurship Management

Honors and Awards

- Second place in the King Salman Competition for Memorization of the Holy Qur'an at the Kingdom level.
- Three-time Academic Excellence Award from the Cultural Attaché in the UK.

Publications & Presentations

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Education

Degree	Discipline	Institution	Year
PhD	Electrical & Electronic Engineering	Universiti Teknologi PETRONAS, Malaysia	2016
Master	Electrical & Electronic Engineering	Universiti Teknologi PETRONAS, Malaysia	2013
Bachelor	Mechatronics & Control Engineering	University of Engineering & Technology Lahore, Pakistan	2009

Academic Experience

15/09/2021 – present	Associate Professor, Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
30/1/2017 – 14/09/2021	Assistant Professor, Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

10/10/2009–30/09/2011	Electrical Maintenance Engineer, Roshan Packages Pvt Ltd, Pakistan.
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Certificates

- o Attended a workshop on “Unlocking Opportunities: Harnessing Thermal Imaging for Enhanced Maintenance Solutions” organized by CBM Connect, USA, 20 June 2024.
- o Attended a workshop on “Understanding the Benefits and Capabilities of Different Vibration Sensor technologies in a CM system” organized by CBM Connect, USA, 25 April 2023.
- o Attended a workshop on “Integrative Learning” organized by DQD Najran University, Saudi Arabia, 10 November 2021.
- o Attended a workshop on “Data Handling and Detection Goals When Selecting New Generation Sensors” organized by CBM Connect, USA, 14 October 2020.
- o Attended a workshop on “Bridging the Gap between Vibration & Lubrication Analysis with the IoT” organized by CBM Connect, USA, 25 October 2019.
- o Attended a workshop on “Missing Pillars in Your Reliability Strategy” organized by CBM Connect, USA, 03 October 2019.
- o Attended a workshop on “Integrating Motor Circuit Analysis into Maintenance Program” organized by All Test Pro, USA, May 2019.
- o Attended a training on “How to Publish Research in ISI Journal” organized by Deanship of Quality and Development, Najran University Saudi Arabia, November 2018.
- o Attended a training on “Electronic File Management” organized by Deanship of Quality and Development, Najran University Saudi Arabia, November 2017.

Honors and Awards

- o Best Researcher Award (1st position) for 2022 in Najran University Saudi Arabia.
- o Top 2 % researcher in the database of world researchers released by Stanford University in 2023.
- o Best Researcher Award (3rd position) for 2021 in Najran University Saudi Arabia.
- o Best Researcher Award (2nd position) for 2020 in Najran University Saudi Arabia.
- o Best Poster Presenter Award 2023 in Annual Research Day, Najran University Saudi Arabia.
- o Best Poster Presenter Award 2022 in Annual Research Day, Najran University Saudi Arabia
- o Silver Award in ITEX-15(May 2015) held in Kuala Lumpur, Malaysia.
- o Best Paper Presenter Award in ICIAS 2014, Malaysia.
- o Silver Award in SEDEX-31 (August 2014) held in UTP, Malaysia.

Publications & Presentations

Patent 1: A Method of Detecting Bearing Defects in an Induction Motor, (Intellectual Property Corporation of Malaysia, Patent No: MY-196968-A; Date of Issue: 16 May 2023).

Patent 2: Image Enhancement Method for Analysis of Mammogram Images.

US Patent No: 20240148349A1 ; Date of Issue: 09 May 2024.

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 2. Alaa U. Khawaja, Nabeel A. Khan, Faisal AlThobiani, **Muhammad Irfan***, Zohaib Mushtaq and Muhammad Armghan Latif, “Modified Gramian Angular Field for Spatially Informed Bearing Fault Diagnosis Using Feature Fusion,” *Computer Modeling in Engineering & Sciences*, in press, **August 2024**. (ISI, Impact Factor: 2.2, Q2)
 3. Alaa U. Khawaja, Ahmad Shaf, **Muhammad Irfan**, Faisal Al Thobiani, Tariq Ali, Aqib Rehman Pirzada and Unza Shahkeel, “Optimizing Bearing Fault Detection: Convolutional Neural Network-Long Short-Term Memory Integrated with Attentive Interpretable Tabular Learning Classifier for Electric Motor Systems,” *Computer Modeling in Engineering & Sciences*, in press, **August 2024**. (ISI, Impact Factor: 2.2, Q2)
 4. **Muhammad Irfan**, Ahmad Shaf, Tariq Ali, Maryam Zafar, Faisal AlThobiani, Majid A. Almas, H. M. Attar, Abdulmajeed Alqhatani, Saifur Rahman, Abdulkarem H. M. Almawgani, “Global horizontal irradiance prediction for renewable energy system in Najran and Riyadh” *AIP Advances*, **March 2024**. (ISI, Impact Factor: 1.4, Q4)
 5. Omar AlShorman, **Muhammad Irfan**, Ra’ed Bani Abdelrahman, Mahmoud Masadeh, Ahmad Alshorman, Muhammad Aman Sheikh, Nordin Saad, Saifur Rahman, “Advancements in condition monitoring and fault diagnosis of rotating machinery: A comprehensive review of image-based intelligent techniques for induction motors,” *Engineering Applications of Artificial Intelligence*, **February 2024**. (ISI, Impact Factor: 3.9, Q1)
 6. Saleh Almasabi, Ahmad Shaf, Tariq Ali, Maryam Zafar, **Muhammad Irfan**, Turki Alsuwian, “Securing Smart Grid Data with Blockchain and Wireless Sensor Networks: A Collaborative Approach,” *IEEE Access*, **February 2024**. (ISI, Impact Factor: 3.9, Q2)
 7. Adam Glowacz, Maciej Sulowicz, Jarosław Kozik, Krzysztof Piech, Witold Glowacz, Zhixiong Li, Frantisek Brumerick, Miroslav Gutten, Daniel Korenciak, Anil Kumar, Guilherme Beraldi Lucas, **Muhammad Irfan**, Wahyu Caesarendra, Hui Lui, “Fault diagnosis of electrical faults of three-phase induction motors using acoustic analysis,” *Bulletin of the Polish Academy of Sciences. Technical Sciences*, **February 2024**. (ISI, Impact Factor: 1.2, Q4)
 8. **Muhammad Irfan**, Zohaib Mushtaq, Nabeel Ahmed Khan, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Faisal Althobiani, Imran Khan, Ghulam Abbas, “A Scalo gram-based CNN Ensemble Method with Density-Aware SMOTE Oversampling for Improving Bearing Fault Diagnosis,” *IEEE Access*, **December 2023**. (ISI, Impact Factor: 3.9, Q2)
 9. **Muhammad Irfan**, Zohaib Mushtaq, Nabeel Ahmed Khan, Faisal Althobiani, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Imran Khan Yousufzai, “Improving Bearing Fault Identification by Using Novel Hybrid Involution-Convolution Feature Extraction With Adversarial Noise Injection in Conditional GANs,” *IEEE Access*, **November 2023**. (ISI, Impact Factor: 3.9, Q2)
 10. **Muhammad Irfan**, Ayub N, Althobiani F, Masood S, Arbab Ahmed, Saeed MH, “Ensemble learning approach for advanced metering infrastructure in future smart grids,” *PLOS ONE*, **November 2023**. (ISI, Impact Factor: 3.752, Q2)
 11. Awais Nazir, Safdar Abbas Khan, Malak Adnan Khan, Zaheer Alam, Imran Khan, **Muhammad Irfan**, Saifur Rehman, And Grzegorz Nowakowski “Robust estimation based nonlinear higher order sliding mode control strategies for PMSG-WECS,” *Bulletin of the Polish Academy of Sciences Technical Sciences*, **October 2023**. (ISI, Impact Factor: 1.2, Q4)
 12. Elnazeer Ali Hamid Abdalla, Mahesh Kumar, Izzeldin Idris Abdalla, Salah Eldeen Gasim Mohamed, Amir Mahmood Soomro, **Muhammad Irfan**, Saifur Rahman, and Grzegorz Nowakowski, “Modeling and Optimization of Isolated Combined Heat and Power Microgrid for
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Managing Universiti Teknologi PETRONAS Energy,” *IEEE Access*, **July 2023**. (ISI, Impact Factor: 3.752, Q2)

13. Zaheer Alam, Malak Adnan Khan, Zain Ahmad Khan, Waleed Ahmad, Imran Khan, Qudrat Khan, **Muhammad Irfan**, Grzegorz Nowakowski, “Fault Diagnosis Strategy for a Standalone Photovoltaic System: A Residual Formation Approach,” *Electronics*, **January 2023**. (ISI, Impact Factor: 2.690, Q3)
14. Maveeya Baba,, Nursyarizal B.M. Nor, M. Aman Sheikh, Grzegorz Nowakowski, Faisal Masood, Masood Rehman, **Muhammad Irfan**, Ahmed Amirul Arefin, Rahul Kumar and A. Momin Baba “A review of the importance of synchrophasor technology, smart grid, and applications,” *Bulletin of the Polish Academy of Sciences Technical Sciences*, **December 2022**. (ISI, Impact Factor: 1.515, Q3)
15. **Muhammad Irfan**, Ch. Anwar Ul Hassan, Faisal Althobiani, Nasir Ayub, Raja Jalees ul Hussen Khan, Emad Ismat Ghandourah, Majid A Almas, Saleh Mohammed Ghonaim, V.R. Shamji, Saifur Rahman, “Power Scheduling with Max User Comfort in Smart Home: Performance Analysis and Trade-offs,” *Computer Systems Science and Engineering*, **December 2022**. (ISI, Impact Factor: 4.397, Q1)
16. Umair Rashid, Muhammad Asim Abbasi, Abdul Qayyum Khan, **Muhammad Irfan**, Muhamad Abid, Grzegorz Nowakowski, “Robust Data-Driven Design for Fault Diagnostics of Industrial Drives,” *Electronics*, **November 2022**. (ISI, Impact Factor: 2.690, Q3)

Most Recent Professional Development Activities

1. Delivered a keynote speech on the topic titled “Fault Detection, Diagnosis and Control of Wind Turbines- A Future Prospective of Renewable Energy Resources” International Conference on Advances in Science, Engineering and Technology (ICASET - 2024), Lucknow, India, 30th July 2024.
 2. Delivered a workshop on “Robot Design and Simulation using MATLAB” Najran University, 12th May 2024.
 3. Delivered a talk on “A prototype development of a portable diagnostic condition monitoring tool for detecting bearing defects in AC motors” Amity University, 9th July 2023.
 4. Conducted a seminar on “Research Methodology- A step by step guide” Najran University, 23rd March 2023.
 5. Conducted a workshop on “LabVIEW based Data Acquisition” Najran University, 23rd May 2022.
 6. Conducted a seminar on “Modern Technologies for Smart Cities” Najran University, 24th March 2022.
 7. Conducted a seminar on “Is Artificial Intelligence Only the Future of World?” Najran University, February 2020.
 8. Conducted a seminar on “Emerging Trends and Technologies: A Future?” Najran University, October 2019.
 9. Conducted a workshop on “Introduction to LabVIEW Programming and its Applications in the Industry” Najran University, December 2017.
 10. Conducted a workshop on “How to Write a Research Proposal”, Najran University, October 2017.
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Education

Degree	Discipline	Institution	Year
PhD	Electronics & Communication Engineering	Integral University, Lucknow-India	2015
Master	Electronic Circuit & Systems	Integral University, Lucknow-India	2008
Bachelor	Electronics Engineering	Uttar Pradesh Technical University, Lucknow-India	2005

Academic Experience

Time	Rank	Institution
25/8/2021 – present	Associate Professor	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
21/2/2016 – 25/8/2021	Assistant Professor	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

NA

Certificates

- Prepare Course Specification Document for Communications Engineering
- Writing a scientific research article
- Preparing a research proposal
- Delivered a lecture on “Emerging Technology and use of Sensors in Life” at Electrical Engineering Department, Najran University on 7th May, 2024.
- Working as a guest editor in CMC Tech journal special issue “Recent Developments in Antennas and Wireless Propagation”.
- Reaching Assembly language to undergraduate students.

Honors and Awards

- Awarded Silver medal during M.tech at Integral University. Lucknow-India 2005-2008.

Publications & Presentations

1. Rabbia Amin, Jamila Farid, Muhammad Aman Sheikh, Muhammad Irfan, Saifur Rahman, Salim Nasar Faraj Mursal, “Statistical and Cross-Sectional Analysis of Factors Effecting the Prevalence of Pressure Ulcer in Hospital Admitted Stroke Patients”, Journal of Tissue Viability, June 2024. (ISI, Impact Factor: 3.374, Q1)
2. Samar M. Alqhtani, Toufique Ahmed Soomro, Ahmed Ali Shah, Abdul Aziz Memon, Muhammad Irfan, Saifur Rahman, Mohammed Jalalah, Abdulkarem H. M. Almagani, and Ladon Ahmed Bade Eljak, “Improved Brain Tumor Segmentation and Classification in Brain MRI With FCM-SVM: A Diagnostic Approach,” IEEE Access, May 2024. (ISI, Impact Factor: 3.9, Q2)
3. Mimonah Al Qathrady, Ahmad Shaf, Tariq Ali, Umar Farooq, Aqib Rehman, Samar M. Alqhtani, Mohammed S. Alshehri, Sultan Almakdi, Muhammad Irfan, Saifur Rahman, and Ladon Ahmed Bade Eljak, “A Novel Web Framework for Cervical Cancer Detection System: A Machine Learning Breakthrough” IEEE Access, February 2024. (ISI, Impact Factor: 3.9, Q2)
4. M. Yin et al., "Dual-Branch U-Net Architecture for Retinal Lesions Segmentation on Fundus Image," IEEE Access, November 2023. (ISI, Impact Factor: 3.9, Q2)
5. Muhammad Irfan, Ahmad Shaf, Tariq Ali, Umar Farooq, Saifur Rahman, Salim Nasar Faraj Mursal, Mohammed Jalalah, Samar M. Alqhtani, Omar AlShorman “Effectiveness of Deep Learning Models for Brain Tumor Classification and Segmentation,” Computers, Materials & Continua, June 2023. (ISI, Impact Factor: 3.860, Q2)
6. Alqhtani Saeed, Toufique Soomro, Nisar Ahmed Jandan, Ahmed Ali Shah, Muhammad Irfan, Saifur Rahman, Waleed A. Aldhabaan, Abdulrahman Samir Khairallah, Ismail Abuallut, “Impact of Retinal Vessel Image Coherence on Retinal Blood Vessel Segmentation,” Electronics, January 2023. (ISI, Impact Factor: 2.690, Q3)
7. Jamila Farid, Rabbia Amin, Muhammad Aman Sheikh, Muhammad Irfan, Raed AlRuwalli, Mubarak Alruwalli, Naif H Ali, Anas Mohammad Albarrak, Saifur Rahman, "Prevalence and prediction of pressure ulcers in admitted stroke patients in a tertiary care hospital," Journal of Tissue Viability,

November 2022. (ISI, Impact Factor: 3.374, Q1)

8. Yassir Edrees Almalki, Asma Imam Din, Muhammad Ramzan, Muhammad Irfan, Khalid Mahmood Aamir, Abdullah Almalki, Saud Alotaibi, Ghada Alaglan, Hassan A Alshamrani, Saifur Rahman, "Deep Learning Models for Classification of Dental Diseases using Orthopantomography X-Ray OPG Images," *Sensors*, October 2022. (ISI, Impact Factor: 3.847, Q2)
 9. Yassir Edrees Almalki, Nisar Ahmed Jandan, Toufique Ahmed Soomro, Ahmed Ali, Pardeep Kumar, Muhammad Irfan, Muhammad Usman Keerio, Saifur Rahman, Ali Alqahtani, Samar Alqhtani, Mohammed Awaji M Hakami, Saeed Alqahtani, Waleed A Aldhabaan, Abdulrahman Samir Khairallah, "Enhancement of Medical Images through Iterative McCann Retinex Algorithm: A Case of Detecting Brain Tumor and Retinal Vessel Segmentation," *Applied Sciences*, August 2022. (ISI, Impact Factor: 2.838, Q2)
 10. Muhammad Irfan, Khalil Ullah, Fazal Muhammad, Salman Khan, Faisal Althobiani, Muhammad Usman, Mohammed Alshareef, Shadi Alghaffari and Saifur Rahman, "Automatic Detection of Outliers in Multi-Channel EMG Signals Using MFCC and SVM," *Intelligent Automation & Soft Computing*, July 2022. (ISI, Impact Factor: 3.401, Q2).
 11. Saifur Rahman, Muhammad Irfan, Mohsin Raza, Khawaja Moyeezullah, Ghori, Shumayla Yaqoob, Muhammad Awais, "Performance Analysis of Boosting Classifiers in Recognizing Activities of Daily Living," *International Journal of Environmental Research and Public Health MDPI*, Vol. 17, No. 03, February 2020. (ISI, Impact Factor: 2.849, Q1)
 12. Muhammad Irfan, Imran Shah, Usama M Niazi, Muhsin Ali, Sadaqat Ali, Mohammed S Jalalah, Muhammad K Asif Khan, Abdulkarem Hussein Mohammed Alkawgani, Saifur Rahman, "Numerical analysis of non-aligned inputs M-type micromixers with different shaped obstacles for biomedical applications," *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, October 2021. (ISI, Impact Factor: 2.2, Q3)
 13. Muhammad Irfan, Zohaib Mushtaq, Nabeel Ahmed Khan, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Faisal Althobiani, Imran Khan, Ghulam Abbas, "A Scalo gram-based CNN Ensemble Method with Density-Aware SMOTE Oversampling for Improving Bearing Fault Diagnosis," *IEEE Access*, December 2023. (ISI, Impact Factor: 3.9, Q2)
 14. Muhammad Irfan, Zohaib Mushtaq, Nabeel Ahmed Khan, Faisal Althobiani, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Imran Khan Yousufzai, "Improving Bearing Fault Identification by Using Novel Hybrid Involution-Convolution Feature Extraction With Adversarial Noise Injection in Conditional GANs," *IEEE Access*, November 2023. (ISI, Impact Factor: 3.9, Q2)
 15. Muhammad Irfan, Farman Ali, Fazal Muhammad, Saifur Rahman, Ammar Armghan, Yousaf Khan, Faisal Althobiani, Rehan Shafiq, Mohammed Alshareef and Mohammad E. Gommosani, "Impairments Approximations in Assembled mmWave and Radio Over Fiber Network," *Computers, Materials & Continua*, June 2022. (ISI, Impact Factor: 3.772, Q2)
 16. Sana Yasin, Umar Draz, Tariq Ali, Kashaf Shahid, Amna Abid, Rukhsana Bibi, Muhammad Irfan, Mohammed A. Huneif, Sultan A. Almedhesh, Seham M Alqahtani, Alqahtani Abdulwahab, Mohammed Jamaan Alzahrani, Dhafer Batti Alshehri, Alshehri Ali Abdullah and Saifur Rahman, "Automated Speech Recognition System to Detect Babies' Feelings through Feature Analysis," *Computers, Materials & Continua*, May 2022. (ISI, Impact Factor: 3.772, Q2)
 17. Saifur Rahman, Farman Ali, Fazal Muhammad, Muhammad Irfan, Adam Glowacz, Mohammed Shahed Akond, Salim Nasar Faraj Mursal, Amjid Ali, "Analyzing Distributed Vibrating Sensing Technologies in Optical Meshes," *Micromachines*, Vol. 13, Issue 01, January 2022. (ISI, Impact Factor: 2.891, Q2)
 18. Mohammad Kamal Asif Khan, Javed Akbar Khan, Habib Ullah, Hussain H. Al-Kayiem, Sonny Irawan, Muhammad Irfan, Adam Glowacz, vHui Liu, Witold Glowacz and Saifur Rahman, "De-Emulsification and Gravity Separation of Micro-Emulsion Produced with Enhanced Oil Recovery Chemicals Flooding," *Energies*, Vol. 14, Issue 08, April 2021. (ISI, Impact Factor: 3.004, Q3)
 19. Muhammad Aamir, Tariq Ali, Muhammad Irfan, Ahmad Shaf, Muhammad, Zeeshan Azam, Adam Glowacz, Frantisek Brumercik, Witold Glowacz, Samar Alqhtani, Saifur Rahman, "Natural Disasters Intensity Analysis and Classification based on Multispectral Images using Multi-layered Deep Convolutional Neural Network," *Sensors*, Vol. 21, Issue 08, April 2021. (ISI, Impact Factor: 3.576, Q1)
 20. Muhammad Kamal Asif Khan, Farman Ali, Muhammad Irfan, Fazal Muhammad, Faisal Althobiani, Asar Ali, Suliman Khan, Saifur Rahman, Grzegorz Perun, Adam Glowacz "Mitigation of Phase Noise and Nonlinearities for High Capacity Radio-over-Fiber Links," *Electronics MDPI*, Vol. 10, No. 02,
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February 2021. (ISI, Impact Factor: 2.412, Q2)

21. MY Naz, M Irfan, S Shukrullah, I Ahmad, A Ghaffar, UM Niazi, S Rahman, M Jalalah, MA Alsaiani, MKA Khan, "Effect of microwave plasma treatment on magnetic and photocatalytic response of manganese ferrite nanoparticles for wastewater treatment," *Main Group Chemistry*, January 2021. (ISI, Impact Factor: 1.3, Q2)
22. Saifur Rahman, Xin-Cheng Ren, Ahsan Altaf, Muhamamd Irfan, Mujeeb Abdullah, Fazal Muhammad, Muhammad Rizwan Anjum, Salim Nasar Faraj Mursal, Fahad Salem AlKhtani "Nature Inspired MIMO Antenna System for Future mmWave Technologies," *Micromachines MDPI*, Vol. 12, December 2020. (ISI, Impact Factor: 2.523, Q2)
23. Saifur Rahman, Farman Ali, Ardian Smagor, Fazal Muhammad, Usman Habib, Adam Glowacz, Shabir Ahmad, Muhammad Irfan, Albert Smalcerz, Adam Kula, "Mitigation of Non-linear Distortions for a 100 Gb/s Radio-over-Fiber based WDM Network," *Electronics MDPI*, Vol. 09, No. 11, November 2020. (ISI, Impact Factor: 2.412, Q2)
24. Aiza Maqbool, Shazia Shukrullah, Fasiha Kashif, Muhammad Yasin Naz, Muhammad Irfan, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub Mohamed Ali; Photocatalytic response of plasma functionalized and sonochemically TiO₂/BiOBr coated fabrics for self-cleaning application. *AIP Advances* December 2023. (ISI, Impact Factor: 1.4, Q4)
25. Yasir Fawad, Sadiq Ullah, Muhammad Irfan, Rizwan Ullah, Saifur Rahman, Fazal Muhammad, Abdulkarem H. M. Almagani, Salim Nasar Faraj Mursal, "Dual-polarized 8-port sub 6 GHz 5G MIMO diamond-ring slot antenna for smart phone and portable wireless applications," *PLOS ONE*, November 2023. (ISI, Impact Factor: 3.752, Q2)
26. Muhammad Shoaib, Muhammad Yasin Naz, Shazia Shukrullah, Muhammad Adnan Munir, Muhammad Irfan, Saifur Rahman, and Abdulnoor Ali Jazem Ghanim, "Dual S-Scheme Heterojunction CdS/TiO₂/g-C₃N₄ Photocatalyst for Hydrogen Production and Dye Degradation Applications," *ACS Omega*, November 2023. (ISI, Impact Factor: 4.1, Q2)
27. Fasiha Kashif, Muhammad Yasin Naz, Zunaira Kashif, Shazia Shukrullah, Muhammad Irfan, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub Mohamed Ali; Indoor water splitting for hydrogen production through electrocatalysis using composite metal oxide catalysts. *AIP Advances*, November 2023. (ISI, Impact Factor: 1.4, Q4)
28. Salim Nasar Faraj Mursal, Muhammad Ismail, Fazal Muhammad, Saifur Rahman, Muhammad Irfan and Kamlesh Kumar Singh, "Performance Analysis Of Distance-Basedresource Allocation In Uav-Assisted Vehicular Ad Hoc Networks," *ARNP Journal of Engineering and Applied Sciences*, October 2023. (Scopus, Impact Factor:0.15, Q4)
29. Rab Nawaz, Habib Ullah, Abdulnoor Ali Jazem Ghanim, Muhammad Irfan, Muzammil Anjum, Saifur Rahman, Shafi Ullah, Zaher Abdel Baki, and Vipin Kumar Oad, "Green Synthesis of ZnO and Black TiO₂ Materials and Their Application in Photodegradation of Organic Pollutants," *ACS Omega*, September 2023. (ISI, Impact Factor: 4.1, Q2)

Most Recent Professional Development Activities

11. Saifur Rahman, Salim Nasar Faraj Mursal, Muhammad Armghan Latif, Zohaib Mushtaq, Muhammad Irfan, Ali Waqar, "Enhancing network intrusion detection using effective stacking of ensemble classifiers with multi-pronged feature selection technique", 2023 2nd International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering (EETECTE), November 2023.
 12. Saifur Rahman, Syed Luqman Shah, Salim Nasar Faraj Mursal, Ziaul Haq Abbas, Muhammad Usman, Muhammad Irfan, Fazal Muhammad, "Controlled Out-band Device to Device Communication in Cellular Networks Using Backup Channel in Television White Space", 2023 18th International Conference on Emerging Technologies (ICET), November 2023
 13. Salim Nasar Faraj Mursal, Muhammad Abdul Rehman, Abdullah S Alwadie, Saifur Rahman, Muhammad Irfan, Zohaib Mushtaq, Sana Ullah Jan, "Design of Dual-Band Bandpass Filter for Effective Filtering in a Next-Generation Handheld Wireless Devices", 2023 International Conference on Engineering and Emerging Technologies (ICEET), October 2023
 14. Saifur Rahman, "The Development of Deep Learning AI based Facial Expression Recognition Technique for Identifying the Patients With Suspected Coronavirus", Published: 12 January 2021 by MDPI in The 3rd International Electronic Conference on Environmental Research and Public Health —Public Health Issues in the Context of the COVID-19 Pandemic session Infectious Disease Epidemiology (doi:10.3390/ECERPH-3-09109)
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering (Power and Renewable Energy)	University of South Florida, Electrical Engineering Department, Tampa, Florida, USA	2019
Master	Electrical Engineering (Power and Renewable Energy)	Northern Illinois University, Dekalb, Illinois, USA	2016
Bachelor	Electrical Engineering	Umm Alqura University, Makkah, Saudi Arabia	2011

Academic Experience

19/4/2020 – present	Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.
26/1/2020 – 26/1/2021 2012	Electrical Engineering Department, Technical College in Najran, Najran, KSA. Teaching assistant at Najran University, Saudi Arabia.

Non-Academic Experience

- Member of the Standing Committee for Study Plans and Programs, Applied College, Najran University (2022-Present).
- Member of the Standing Committee for Study Plans and Programs, Najran University (2022-Present).
- Vice Dean of the Applied College for Programs at Najran University (2022-Present).
- Head of Applied College's Examinations Committee (2021-Present).
- Member of the Student Disciplinary Committee, Applied College, Najran University (2021-Present).
- Head of the Student Cases and Discipline Committee, Applied College, Najran University (2021-Present).
- Vice Dean of the Applied College for Educational Affairs at Najran University (2021-Present).
- Head of the Student Affairs Committee, Department of Electrical Engineering, Najran University (2021-Present).
- Member of the Center for Scientific and Engineering Research at Najran University (2021-Present).
- Academic Advising Coordinator, Department of Electrical Engineering, Najran University (2020-Present).
- Member of the Research and Community Service Committee, Department of Electrical Engineering, Najran University (2020-Present).
- Head of the Academic Guidance Committee, Department of Electrical Engineering, Najran University (2020-2021).
- Head of the Student Activities Committee, Department of Electrical Engineering, Najran University (2020-2021).
- Member of Engineering College's Examinations Committee (2020-2021).

Certificates

- Writing a scientific research article
- Preparing a research proposal
- Stress management workshop
- Teaching Technicians

Honors and Awards

- Travel Award on Graduate Student Research Symposium at University of South Florida – 2017-Winner of the graduate research symposium.

Publications & Presentations

1. Aljafari, Belqasem, et al. "Supervised classification and fault detection in grid-connected PV systems using 1D-CNN: Simulation and real-time validation." *Energy Reports* 12 (2024): 2156-2178.
2. Aljafari, Belqasem, et al. "Transformer-less high gain DC–DC converter design and analysis for fuel

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- cell vehicles." *Scientific Reports* 14.1 (2024): 19221.
3. Aljafari, Belqasem, et al. "Mitigation of mismatch losses in solar PV systems: a hybrid L-shaped propagated array configuration approach." *Frontiers in Energy Research* 12 (2024): 1432834.
 4. Takshi, Arash, Belqasem Aljafari, and Manoj Ram. "Electrochemical cells for harvesting and storing energy and devices including the same." U.S. Patent No. 12,054,672. 6 Aug. 2024.
 5. Aljafari, Belqasem, et al. "Optimizing Radial Distribution System with Distributed Generation and EV Charging: A Spotted Hyena Approach." *IEEE Access* (2024).
 6. Ramu, Senthil Kumar, et al. "Enhanced energy management of DC microgrid: Artificial neural networks-driven hybrid energy storage system with integration of bidirectional DC-DC converter." *Journal of Energy Storage* 88 (2024): 111562.
 7. Aljafari, Belqasem, et al. "A reliable GTR-PLC approach for power enhancement and online monitoring of solar PV arrays during partial shading." *Energy* (2024): 131839.
 8. Satpathy, Priya Ranjan, et al. "Parameters Sensitivity of Solar Photovoltaic Array Architectures under Incremental Row and Column Shading." *Smart Grids as Cyber Physical Systems: Artificial Intelligence, Cybersecurity, and Clean Energy for Next Generation Smart Grids* 1 (2024): 41-54.
 9. Aljafari, Belqasem, et al. "Modeling and simulation of a Renzoku puzzle pattern-based PV array configuration for a partially shaded PV system." *Frontiers in Energy Research* 12 (2024): 1335111.
 10. Suresh, A., Belqasem Aljafari, and Sudhakar Babu Thanikanti. "Investigations of the performance of 3D printed micro wind turbine composed of PLA material." *Heliyon* 10.3 (2024).
 11. Aljafari, Belqasem, et al. "Organic/carbon and organic/carbon-metal composite phase change material for thermoelectric generator: Experimental evaluation." *Journal of Energy Storage* 78 (2024): 110082.
 12. Aljafari, Belqasem, et al. "Design of PV, Battery, and Supercapacitor-Based Bidirectional DC-DC Converter Using Fuzzy Logic Controller for HESS in DC Microgrid." *Journal of Electrical and Computer Engineering* 2024.1 (2024): 3035524.
 13. Aljafari, Belqasem, et al. "Synthesis of nano-architected copper-cobalt layered double hydroxide for energy storage applications." *Inorganic Chemistry Communications* 159 (2024): 111748.
 14. Aljafari, Belqasem, et al. "Nanostructured g-C₃N₄-decorated TiO₂ for superior photoanode performance in dye-sensitized solar cells." *Inorganic Chemistry Communications* 159 (2024): 111737.
 15. Aljafari, Belqasem, et al. "Advancements in foam-based phase change materials: Unveiling leakage control, enhanced thermal conductivity, and promising applications." *Journal of Energy Storage* 74 (2023): 109380.
 16. Aljafari, Belqasem, et al. "Thermo-kinetic behaviour of green synthesized nanomaterial enhanced organic phase change material: Model fitting approach." *Journal of Environmental Management* 348 (2023): 119439.
 17. Aljafari, Belqasem, et al. "Analyzing the thermal potential of binary 2D (h-BN/Gr) nanoparticles enhanced lauric acid phase change material for photovoltaic thermal system application." *Journal of Energy Storage* 73 (2023): 109116.
 18. Aljafari, Belqasem, et al. "Analysis of Welding Power Source Using a Double Star Rectifier with Interface Transformer." *2023 Innovations in Power and Advanced Computing Technologies (i-PACT)*. IEEE, 2023.
 19. Aljafari, Belqasem, et al. "Design and Implementation of Dual Axis Tracking System for Improving Efficiency of the PV Panel." *2023 Innovations in Power and Advanced Computing Technologies (i-PACT)*. IEEE, 2023.
 20. Aljafari, Belqasem, et al. "Optimizing the allocation of renewable DGs, DSTATCOM, and BESS to mitigate the impact of electric vehicle charging stations on radial distribution systems." *Heliyon* 9.12 (2023).
 21. Aljafari, Belqasem, et al. "Synthesized sea urchin morphology of copper incorporated hollandite manganese dioxide for energy storage applications." *Journal of Alloys and Compounds* 962 (2023): 171036.
 22. Aljafari, Belqasem, et al. "An efficient power extraction technique for improved performance and reliability of solar PV arrays during partial shading." *Energy* 282 (2023): 128992.
 23. Yuvaraj, T., et al. "Minimizing the electric vehicle charging stations impact in the distribution networks by simultaneous allocation of DG and DSTATCOM with considering uncertainty in load." *Energy Reports* 10 (2023): 1796-1817.
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24. Aljafari, Belqasem. "Production enhancement of long string photovoltaic plants during partial shading through switching capacitor power optimizer circuit." *Alexandria Engineering Journal* 74 (2023): 427-444.
 25. Aljafari, Belqasem, et al. "Energy-Economic-Environmental (3E) modeling of a near-zero energy community using the solar-power system: A case study of Najran city." *Journal of the Taiwan Institute of Chemical Engineers* 148 (2023): 104685.
 26. Aljafari, Belqasem, et al. "Intelligent RBF-Fuzzy Controller Based Non-Isolated DC-DC Multi-Port Converter for Renewable Energy Applications." *Sustainability* 15.12 (2023): 9425.
 27. Aljafari, Belqasem, Sudhakar Babu Thanikanti, and Karthik Balasubhranian. "A Reliable Technique for Power Generation Enhancement in Unsymmetrical PV Arrays during Partial Shading." *2023 11th International Conference on Smart Grid (icSmartGrid)*. IEEE, 2023.
 28. Aljafari, Belqasem, et al. "Solar photovoltaic converter controller using opposition-based reinforcement learning with butterfly optimization algorithm under partial shading conditions." *Environmental Science and Pollution Research* 30.28 (2023): 72617-72640.
 29. Aljafari, Belqasem, et al. "Power enhanced solar PV array configuration based on calcudoku puzzle pattern for partial shaded PV system." *Heliyon* 9.5 (2023).
 30. Aljafari, Belqasem, et al. "A zero switch and sensorless reconfiguration approach for sustainable operation of roof-top photovoltaic system during partial shading." *IET Renewable Power Generation* 17.6 (2023): 1385-1412.
 31. Aljafari, Belqasem, et al. "Electric vehicle optimum charging-discharging scheduling with dynamic pricing employing multi agent deep neural network." *Computers and Electrical Engineering* 105 (2023): 108555.
 32. Aljafari, Belqasem. "Reliability investigation of long photovoltaic string generators under electrical fault scenarios." *2022 International Conference on Electrical and Computing Technologies and Applications (ICECTA)*. IEEE, 2022.
 33. Aljafari, Belqasem, et al. "Acid red 88 dye doped polyaniline framed by soft template method: A potential candidate for dye-sensitized solar cells." *Journal of Saudi Chemical Society* 26.6 (2022): 101574.
 34. Aljafari, Belqasem, et al. "Automatic monitoring system for online module-level fault detection in grid-tied photovoltaic plants." *Energies* 15.20 (2022): 7789.
 35. Aljafari, Belqasem, et al. "Reliability enhancement of photovoltaic systems under partial shading through a two-step module placement approach." *Energies* 15.20 (2022): 7766.
 36. Aljafari, Belqasem, Priya Ranjan Satpathy, and Sudhakar Babu Thanikanti. "Partial shading mitigation in PV arrays through dragonfly algorithm based dynamic reconfiguration." *Energy* 257 (2022): 124795.
 37. Aljafari, Belqasem, et al. "Performance analysis of PLA material based micro-turbines for low wind speed applications." *Polymers* 14.19 (2022): 4180.
 38. Aljafari, Belqasem, et al. "Copper doped manganese dioxide as counter electrode for dye-sensitized solar cells." *Arabian Journal of Chemistry* 15.9 (2022): 104068.
 39. Aljafari, Belqasem, et al. "Analysis of a photovoltaic system based on a highly efficient single-phase transformerless inverter." *Energies* 15.17 (2022): 6145.
 40. Aljafari, Belqasem, et al. "Integration of photovoltaic-based transformerless high step-up dual-output-dual-input converter with low power losses for energy storage applications." *Energies* 15.15 (2022): 5559.
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering – Electrical Communications	Benha University, Shoubra, Cairo, Egypt	2016
Master	Electronic Engineering – Communications Engineering	Menoufia University, Menouf, Egypt	2009
Bachelor	Electronics and Electrical Communications Engineering	Menoufia University, Menouf, Egypt	2003

Academic Experience

Time	Rank	Institution
15/9/2021 – present	Assistant Professor	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
22/9/2011 – 14/9/2021	Lecturer	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
1/8/2003 – 1/8/2011	Teaching Assistant	Faculty of Electronic Engineering, Menouf, Menoufia, Egypt.

Non-Academic Experience

NA

Certificates

- Professional Certificate in Online Teaching / Training - Advanced Level (OTT-A)
- Python for MATLAB Programmers
- LabVIEW Programming – Introductory Level
- LabVIEW Programming – Advanced Level
- JELECOM Electronic Systems – Introductory and Advanced
- SHMS Platform workshop
- JOVE Training workshop
- Preparing self-assessment and self-study for academic accreditation
- Publishing in Academic Journals
- How to Drive the Impact of Your Publication
- Research Methods
- Web of Science Training
- Teaching methods for undergraduate stage at the quality assurance management
- Research Directions of Najran University
- Preparation of Exam Paper
- Performance Benchmarking in Quality
- Preparing the Self-Study Report of the Program
- Blackboard System workshop

Honors and Awards

- The Rector Award for Excellence in E-Learning, (2nd position), Najran University, Saudi Arabia, May 2016.
- JELECOM (Panasonic) free Internship, Cairo, Egypt, 2009.

Publications & Presentations

1. Seif Shebl et al., “Self-Isolated Surface-Mountable MIMO Antenna for FR1 Band Communications,” *International Journal of Antennas and Propagation*, vol. 2024, no. 1, Jan. 2024.
 2. Seif Shebl et al., “Novel Semi-Blind Spectrum Sensing in Cognitive Radio Networks with Fourth-Order Statistics,” in *Wireless Personal Communications*, Volume 82, Issue 4, pp. (2097–2113), June 2015.
 3. Seif Shebl et al., “Novel Construction and Optimization of LDPC Codes for NC-OFDM Cognitive Radio Systems,” in *Wireless Personal Communications*, Volume 79, Issue 1, pp. (69–83), November 2014.
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4. Seif Shebl and Abdullah Alwadie, "Novel Construction and Optimization of LDPC Codes for NC-OFDM Cognitive Radio Systems," in the *Second International Japan-Egypt Conference on Electronics, Communications and Computers, (JEC-ECC2013)*, Cairo, Egypt, 17-19 December 2013.
 5. Seif Shebl et al., "Performance enhancement of power line communication systems with efficient low-density parity-check codes, noise removal, equalization, and chaotic interleaving," in *Digital Signal Processing*, Vol. 23, pp. 1933–1944, 2013
 6. Seif Shebl et al., "Efficient LDPC Codes for Cognitive Radio Wireless Networks," in the *3rd International Conference on ADVANCED CONTROL CIRCUITS AND SYSTEMS (ACCS'013)*, 30 Nov.–03 Dec., Luxor, Egypt, 2013
 7. Seif Shebl et al., "Noise Estimation for LDPC Decoding on Power Lines" in *Proceedings of The 27th National Radio Science Conference (NRSC)*, Faculty of Electronic Engineering, Menouf, March 16-18, 2010.
 8. Seif Shebl et al., "A Random Construction of LDPC Codes Using a Sub-Optimal Search Algorithm", in *Proceedings of The 26th National Radio Science Conference (NRSC)*, Faculty of Engineering, Future University, New Cairo, 17-19 March 2009.
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Most Recent Professional Development Activities

1. Organized an introductory workshop for international students about the Electrical Engineering Department, January 2023.
 2. Organized a student workshop on IEEE student membership benefits, November 2023.
 3. Delivered a training course on Artificial Intelligence with MATLAB for Electrical Engineering students, May 2024.
 4. Active member of the Institute of Electrical and Electronics Engineers (IEEE), participated in the establishment of the IEEE Student Chapter at Najran University, 2023.
 5. Delivered a training course on Python Introduction for Engineers for Electrical Engineering students, January 2023.
 6. Visited the Saudi Electricity Company (Distribution Plant) with Electrical Engineering students, January 2023.
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering Science	Vinnitsia National Technical University	2004
Master	Electrical Engineering	Vinnitsia Technical University	1997
Bachelor	Electrical Engineering	Vinnitsia Technical University	1995

Academic Experience

2011– present	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
2008-2010	Philadelphia University.
2005-2008	The Arab college, Amman, Jordan.
2007 – 2008	AL - Israa Private University

Academic Experience

Loay Alhares Office - Designer and supervisor.

Certificates

- Designer and supervisor – Designer and supervisor Engineer at Jordanian Engineering Association.

Honors and Awards

NA

Publications & Presentations

1. **Hindi, Ayman**, Ali S.K. Dalabeeh and Yousef Al-Tous " Optimizing the Implementation Process of Installing Capacitor Banks in Electrical Industrial Network INDIAN JOURNAL OF APPLIED RESEARCH), Volume 5 | Issue : 6 | June 2015 | ISSN - 2249-555X, Pages695–698.
2. Ali K. Dalabeeh, Abdallah Al-Ziod, **Ayman Hindi**, Ibrahim Al-Udwan, M. Al-Khawaldeh, Anwar AL-Mofleh1 " Optimal Sizing and Location of the Capacitor Banks in a Radial Industrial Distribution System ", *Energy and Power* 2016, 6(1): 16-20 DOI: 10.5923/j.ep.20160601.02
3. Ali S. Dalabeeh, Anwar ALMofleh, Abdallah R. Alzyoud, **Hindi T. Ayman** Economical and Reliable Expansion Alternative of Composite Power System under Restructuring, *International Journal of Electrical and Computer Engineering (IJECE)*, Vol. 8, No. 6, December 2018, pp. 4790~4799 .
4. N. K. Anushkannan, A. H. M. Almawgani, U. Arun Kumar, and **A. T. Hindi**, "CSRR backed compact two-port, dual-band MIMO antenna for mm-wave applications," *Wirel. Networks*, vol. 30, no. 3, pp. 1857–1867, 2024, doi: 10.1007/s11276-023-03628-7.
5. A. H. M. Almawgani, A. R. H. Alhawari, **A. T. Hindi**, W. H. Al-Arashi, and A. Y. Al-Ashwal, "Hybrid image steganography method using Lempel Ziv Welch and genetic algorithms for hiding confidential data," *Multidimens. Syst. Signal Process.*, vol. 33, no. 2, pp. 561–578, 2022, doi: 10.1007/s11045-021-00793-w.
6. A. R. H. Alhawari, A. H. M. Almawgani, **A. T. Hindi**, H. Alghamdi, and T. Saeidi, "Metamaterial-based wearable flexible elliptical UWB antenna for WBAN and breast imaging applications," *AIP Adv.*, vol. 11, no. 1, 2021, doi: 10.1063/5.0037232.
7. A. R. H. Alhawari, A. H. M. Almawgani, H. Alghamdi, **A. T. Hindi**, T. Saeidi, and A. Ismail, "Omega-shaped tag antenna with inductively-coupled feeding using U-shaped stepped-impedance resonators for RFID applications," *Appl. Comput. Electromagn. Soc. J.*, vol. 35, no. 8, pp. 951–961, 2020, doi: 10.47037/2020.ACES.J.350815.
8. Ali Dalabeeh, Al-Mofleh Anwar, Tariq M. Younes, Ayman Al-Rawashdeh, Ayman Hindi Increasing the required slip range of wound induction generator in wind power systems, *Bulletin of Electrical Engineering and Informatics*, Vol. 9, No. 2, April 2020, pp. 436~442.
9. Alhawari, A. R. H., A. H. M. Almawgani, **A. T. Hindi**, H. Alghamidi, and Tale Saeidi, "Metamaterial-based wearable flexible elliptical UWB antenna for WBAN and breast imaging applications," *AIP Advances*, Vol. 11, No. 1, pp. 015128, 2021.

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10. A. Hindi, "Efficient automated monitoring system for water tanks," ARPN J. Eng. Appl. Sci., vol. 15, no. 4, pp. 470–474, 2020.
 11. Abdallah R. Alzyoud , Ali S. Dalabeeh , Ayman Y. Al-Rawashdeh , Anwar Almofleh , Ahmad S. Allabadi , Tamadher Almomani , Ayman Hindi, "The impact of integration of solar farms on the power losses, voltage profile and short circuit level in the distribution system," Bull. Electr. Eng. Informatics, vol. 10, no. 3, pp. 1129–1141, 2021, doi: 10.11591/eei.v10i3.1909.
 12. Alhawari, A. R. H., Sama F Majeed, Tale Saeidi, Sajid Mumtaz, Hisham Alghamdi, **Ayman Taher Hindi**, Abdulkarem H.M. Almawgani, Muhammad Ali Imran, and Qammer H Abbasi, "Compact elliptical UWB antenna for underwater wireless communications," Micromachines, Vol. 12, No. 4: 411, 2021.
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Most Recent Professional Development Activities

NA

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Education

Degree	Discipline	Institution	Year
PhD	Radio Engineering	Vladimir University, Russia	2005
Master	Radio Engineering	Georgian University, Russia	1991
Bachelor	Electrical Engineering (Major: Radio Engineering)	Rostov on/Don University, Russia	1985

Academic Experience

2014 – Present	Assistant Professor Electrical Engineering Department, Engineering College , Najran University, Najran, KSA.
2005 – 2013	Assistant Professor Electronics and Communications Engineering Department Hadramout University, Yemen.
2010 – 2012	Head of Department Electronics and Communications Engineering Department Hadramout University, Yemen.
2008– 2010	Assistant Professor (Part Time) Alsheher-Community College, Hadramout, Yemen.
2005 – 2008	Head of Department Electronics and Communications Engineering Department Hadramout University, Yemen.
1999 – 2004	Lecturer Electronics and Communications Engineering Department Hadramout University, Yemen.

Non-Academic Experience

- None

Certificates

- Basic Training in Teaching and Learning.
- Introduction to Blackboard for teaching and learning.

Honors and Awards

- Medal of Scientific Excellence - Day of Science – Aden, Yemen – 1985.
- Medal of Scientific Excellence - Day of Science – Sana, Yemen – 1991.
- Electronics Factory Act – Vladimir, Russia – 2005.

Publications & Presentations

1. Saifur Rahman, Syed Luqman Shah, Salim Nasar Faraj Mursal, Ziaul Haq Abbas, Muhammad Usman, Muhammad Irfan, Fazal Muhammad, “Controlled Out-band Device to Device Communication in Cellular Networks Using Backup Channel in Television White Space”, 2023 18th International Conference on Emerging Technologies (ICET)
 2. Muhammad Irfan, Zohaib Mushtaq, Nabeel Ahmed Khan, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Faisal Althobiani, Imran Khan, Ghulam Abbas, “A Scalo gram-based CNN Ensemble Method with Density-Aware SMOTE Oversampling for Improving Bearing Fault Diagnosis,” IEEE Access, December 2023.
 3. Muhammad Irfan, Zohaib Mushtaq, Nabeel Ahmed Khan, Faisal Althobiani, Salim Nasar Faraj Mursal, Saifur Rahman, Muawia Abdelkafi Magzoub, Muhammad Armghan Latif, Imran Khan Yousufzai, “Improving Bearing Fault Identification by Using Novel Hybrid Involution-Convolution Feature Extraction With Adversarial Noise Injection in Conditional GANs,” IEEE Access, November 2023.
 4. Salim N. Mursal, ” Future Dynamic Reconfiguration of Yemeni Telecomm Network” Radiotechnika Journal, Vol. 3, 2012, Pp 134-148.
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5. Salim N. Mursal, "The Role of Programmable Logic in Communication Systems" *Electronica & Informatica, Digest Scientific Labour, Vladimir University, No. 4, 2003, PP 68-72.*
 6. Salim N. Mursal, "Hardware Optimized Method for Implementation of Reconfigurable DDS-Core Modulator", *Methods and Devices of Transmission & Signal Processing, Interuniversities Digest Scientific Labour, Sanct-Peterborg, No. 5, 2004, PP 53-56.*
 7. Salim N. Mursal, "Migration into Hardware Description Languages (HDL) Design", *Electronica & Informatica, Digest Scientific Labour, Vladimir University, No. 5, 2004, PP 61-65.*
 8. Salim N. Mursal, "Design of Multifunction Reconfigurable DDS-Core Modulator Based on DRFPGA-VHDL" *Electronica & Informatica, Digest Scientific Labour, Vladimir University, No. 4, 2003, PP 77-80.,*
 9. Salim N. Mursal, "FPGA Flexibility in Dynamic Reconfigurable Communication Systems", *3rd International Scientific Conference, 10-11 December 2004, Vladimir, Russia.*
 10. Salim N. Mursal, "Proposal Expert CAD System for Dynamic Reconfigurable DDS-Core", *Methods and Devices of Transmission & Signal Processing, Interuniversities Digest Scientific Labour, Sanct-Peterborg, No. 3, 2005, PP 56-66.*
 11. Salim N. Mursal, Faiz Baothman." Intuitionistic Fuzzy Search Using Dynamic Programming" *Faculty of Applied Science Journal-Hadramout University, No.4, November 2006, Pp 161-179.*
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Most Recent Professional Development Activities

7. None
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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering, Power Systems	University of Idaho, Electrical and Computer Engineering, Moscow, ID, USA	2023
Master	Electrical Engineering, Power Systems	University of Idaho, Electrical and Computer Engineering, Moscow, ID, USA	2015
Bachelor	Electrical Engineering	Florida Institute of Technology, Electrical and Computer Engineering, Moscow, ID, USA	2011

Academic Experience

25/08/2023 – present	Assistant Professor in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
05/06/2015 – 15/08/2019	Lecturer in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
21/11/2011 – 1/8/2013	Teacher Assistant in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

NA

Administrative Activities

- Member of Labs, Safety, and Learning Resources Committee Electrical Engineering Department, Engineering College, Najran University.
- Member of the Graduate Sub-Committee in Electrical Engineering Department, Engineering College, Najran University.
- Chairman of Students Affairs Committee in Electrical Engineering Department, Engineering College, Najran University.

Certificates

- High-speed Automation for Wide Areas, Schweitzer Engineering Laboratory (SEL), USA.
- Designing a Power System for Mission-Critical Applications, Schweitzer Engineering Laboratory (SEL), USA.
- Merging Cybersecurity and Physical Security for Enhanced Situational Awareness, Schweitzer Engineering Laboratory (SEL), USA.
- Dependable Time Distribution for Power System, Schweitzer Engineering Laboratory (SEL).
- Engineer Network Traffic for High Performance and Reliability, Schweitzer Engineering Laboratory (SEL), USA.
- Use of SEL Distribution Network Automation (DNA) Systems to Improve Reliability and Performance, Schweitzer Engineering Laboratory (SEL), USA.
- Configure Client and Server Communications on an SEL Real-Time Automation Controller (RTAC), Schweitzer Engineering Laboratory (SEL), USA.
- Establish Remote Access with Strong Cybersecurity That Supports NERC CIP Version 5, Schweitzer Engineering Laboratory (SEL), USA.
- Simplify Event Collection, Analysis, and Real-Time System Monitoring, Schweitzer Engineering Laboratory (SEL), USA.
- Improve Operational and Production Performance, Institute of Public Administration (IPA), UK.
- Practical Steps Towards Digital Transformation, Digital Transformation Agency - Najran University, KSA.
- Scientific Publishing Index According to International University Rankings, Deanship of Graduate Studies and Scientific Research - Najran University, KSA.
- Statistics And Data Science in Scientific Research, Deanship of Graduate Studies and Scientific Research - Najran University, KSA.
- Techniques For Preparing Scientific Research Tools Between Theory and Practice, Deanship of Graduate Studies and Scientific Research - Najran University, KSA.

Honors and Awards

-
- Earned Research Grant from Deanship of Scientific Research, NU/EP/SERC/06,2024, Najran University.
 - Earned Research Grant from Deanship of Scientific Research, NU/GP/SERC/06,2024, Najran University.
 - Earned Research Grant from Deanship of Scientific Research, NU/NRP/SERC/06,2024, Najran University.
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Publications & Presentations

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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering	University of South Florida, USA	2022
Master	Electrical Engineering	Northern Illinois University, USA	2017
Bachelor	Electrical Engineering	Umm Al-Qura University, KSA	2011

Academic Experience

08/2022 – Present	Assistant Professor, Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.
08/2018 – 05/2022	Graduate Research Assistant, Electrical Engineering Department, College of Engineering, University of South Florida, Tampa, USA.
08/2016 – 08/2017	Teaching Assistant, Electrical Engineering Department, College of Engineering, Northern Illinois University, Dekalb, USA.
07/2012 – 02/2014	Teaching Assistant, Electrical Engineering Department, College of Engineering, Najran University, Najran, KSA.

Non-Academic Experience

08/2023 – Present	Chairman of the Guidance and Student Affairs Committee, College of Engineering, Najran University
06/2023 – Present	Deputy Director of the Center for Advanced Materials and Nano Research at Najran University
08/2022 – 02/2024	Chairman of the Students Affairs Committee, Electrical Engineering Department, Najran University
11/2022 – 08/2023	Member of the Green Buildings Committee, College of Engineering, Najran University
07/2011 – 05/2012	Electrical Project Engineer, Alawi Tunsi Company, KSA.

Certificates

- Post-Crisis Leadership Course, University of South, Florida, USA.
- Business Intelligence and Decision Making, Dammam, KSA.

Honors and Awards

- Earned Research Grant from Deanship of Scientific Research, NU/RCP/SERC/12/8, 2023, Najran University.
- Earned Research Grant from Deanship of Scientific Research, NU/DRP/SERC/12/6, 2023, Najran University.
- Earned Research Grant from Deanship of Scientific Research, NU/RCP/SERC/12/8, 2023, Najran University.
- Earned Research Grant from Deanship of Scientific Research, NU/NRP/SERC/12/15, 2023, Najran University.
- Earned Research Grant from Deanship of Scientific Research, NU/RG/SERC/12/6, 2023, Najran University.

Publications & Presentations

1. Aljafari, B., Kareri, T., Thanikanti, S. B., & Selvarajan, S. (2024). Transformer-less high gain DC–DC converter design and analysis for fuel cell vehicles. *Scientific Reports*, 14(1), 19221
2. Yadav, A., Pandey, A. K., Samykano, M., Kareri, T., & Tyagi, V. V. (2024). Wheat husk derived microparticle infused organic phase change material for efficient heat transfer and sustainable thermal energy storage. *Journal of Energy Storage*, 86, 111204.
3. Rajamony, R. K., Pandey, A. K., Samykano, M., Paw, J. K. S., Kareri, T., Laghari, I. A., & Tyagi, V. V. (2024). Heat transfer and energy performance analysis of photovoltaic thermal system using functionalized carbon nanotubes enhanced phase change material. *Applied Thermal Engineering*, 243,

4. Balasubramanian, K., Pandey, A. K., Bhutto, Y. A., Islam, A., Kareri, T., Rahman, S., ... & Tyagi, V. V. (2024). Evolving Thermal Energy Storage Using Hybrid Nanoparticle: An Experimental Investigation on Salt Hydrate Phase Change Materials for Greener Future. *Energy Technology*, 2400248.
5. Yadav, A., Samykano, M., Pandey, A. K., Kareri, T., & Kalidasan, B. (2024). Optimizing thermal properties and heat transfer in 3D biochar-embedded organic phase change materials for thermal energy storage. *Materials Today Communications*, 38, 108114.
6. Aljafari, B., Kalidasan, B., Kareri, T., Alqaed, S., Bhutto, Y. A., & Pandey, A. K. (2024). Organic/carbon and organic/carbon-metal composite phase change material for thermoelectric generator: Experimental evaluation. *Journal of Energy Storage*, 78, 110082.
7. Ramu, S. K., Vairavasundaram, I., Aljafari, B., & Kareri, T. (2024). Design of PV, Battery, and Supercapacitor-Based Bidirectional DC-DC Converter Using Fuzzy Logic Controller for HESS in DC Microgrid. *Journal of Electrical and Computer Engineering*, 2024(1), 3035524.
8. Kalidasan, B., Pandey, A. K., Aljafari, B., Chinnasamy, S., Kareri, T., & Rahman, S. (2023). Thermo-kinetic behaviour of green synthesized nanomaterial enhanced organic phase change material: Model fitting approach. *Journal of Environmental Management*, 348, 119439.
9. Kalidasan, B., Pandey, A. K., Saidur, R., Aljafari, B., & Kareri, T. (2023). Expanded graphite intersperse reliable binary eutectic phase change material for low temperature thermal regulation systems. *Materials Today Sustainability*, 24, 100602.
10. Ramu, S. K., Vairavasundaram, I., Aljafari, B., & Kareri, T. (2023). Rotor Bar Fault Diagnosis in Indirect Field-Oriented Control-Fed Induction Motor Drive Using Hilbert Transform, Discrete Wavelet Transform, and Energy Eigenvalue Computation. *Machines*, 11(7), 711.
11. Kareri, T., Hossain, M. S., Ram, M. K., & Takshi, A. (2022). A flexible fiber-shaped hybrid cell with a photoactive gel electrolyte for concurrent solar energy harvesting and charge storage. *International Journal of Energy Research*, 46(12), 17084-17095.
12. Kareri, T., Yadav, R. L., & Takshi, A. (2022). Image processing analysis of supercapacitors with twisted fiber structures and a gel electrolyte. *Journal of Applied Electrochemistry*, 52, 139-148.
13. Takshi, A., Kareri, T., & Aljafari, B. (2021, August). Conducting polymer based hybrid cells for concurrent solar energy harvesting and charge storage. In *New Concepts in Solar and Thermal Radiation Conversion IV* (Vol. 11824, p. 1182403). SPIE.
14. Kareri, T., Aljafari, B., & Takshi, A. (2021, August). Hybrid photovoltaic-supercapacitors: effect of the counter electrode on the device performance. In *New Concepts in Solar and Thermal Radiation Conversion IV* (Vol. 11824, pp. 22-27). SPIE.
15. Kareri, T., Yadav, R. L., & Takshi, A. (2021, May). Impedance Spectroscopy Study of Fiber-Based Supercapacitors for Wearable Electronics Applications. In *Electrochemical Society Meeting* (No. 1, pp. 37-37). The Electrochemical Society, Inc..
16. Takshi, A., Aljafari, B., Kareri, T., & Stefanakos, E. (2021). A critical review on the voltage requirement in hybrid cells with solar energy harvesting and energy storage capability. *Batteries & Supercaps*, 4(2), 252-267.
17. Kareri, T., Aljafari, B., & Takshi, A. (2020, August). Impedance spectroscopy study of hybrid photovoltaic supercapacitors. In *New Concepts in Solar and Thermal Radiation Conversion III* (Vol. 11496, pp. 8-14). SPIE.

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Education

Degree	Discipline	Institution	Year
PhD	Electrical Engineering- (Power system)	Cardiff University, Wales, UK	2024
Master	Electrical Energy Systems	Cardiff University, Wales, UK	2019
Bachelor	Electrical Engineering	King Khalid University, Abha, KSA	2013

Academic Experience

12 / 2019 – Present	Lecturer in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
01/ 2020 – 12/ 2023	Teacher Assistant in Electrical Engineering Department, Engineering College, Cardiff University, Cardiff, UK.
06/2013 – 12 / 2019	Teacher Assistant in Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

- Power System Engineer – Saudi Electricity Company, Abha, KSA 2013.

Certificates

- Diploma in Leadership – Cardiff University – United Kingdom 2020.
- **A certificate of Associate Fellowship in Teaching from the United Kingdom (AFHEA) – 2023.**
- A certificate of completion for the LabVIEW Core 1 course – 2021.
- **A certificate of completion for the LabVIEW Core 2 course – 2021**
- **A certificate of participation in the Electric Vehicles and the Electric Grid event organized by IEEE PES Day – 2021.**
- **A certificate of completion for the Distribution Panels Low Voltage course – 2022.**
- **A certificate of classification in Electrical Engineering (Professional Grade) from the Saudi Council of Engineers – 2022.**
- **A certificate of completion for the Search Strategies to Maximize Your Research Experience workshop – 2021.**
- **A certificate of completion for the Launchpad: Introduction to Teaching and Supporting Learning workshop from Cardiff University – 2021.**
- **A certificate of participation in the Ancillary Services Tutorial at Energynautics GmbH – 2021.**
- **A certificate of completion for the Train the Trainer course – 2023.**
- **A certificate of completion for the Teaching Techniques: Creating Effective Learning Assessments course – 2023.**
- **A certificate of completion for the Teaching Techniques: Blended Learning course – 2023.**
- **A certificate of completion for the Teaching Techniques: Writing Effective Learning Objectives course – 2023.**

Honors and Awards

- Three-time Academic Excellence Award from the Cultural Attaché in the UK.

Service Activities

- Supervisor of the IEEE Club at the Engineering College, Najran University, 2024- present.
- Chairman of the Student Affairs Committee at the Engineering College, Najran University, 2024-present.
- Chairman of Academic Advising Committee at the Engineering College, Najran University, 2024-present.

Publications & Presentations

1. **Shaher, A.**; Alqahtani, S.; Garada, A.; Cipcigan, L. Rooftop Solar Photovoltaic in Saudi Arabia to Supply Electricity Demand in Localised Urban Areas: A Study of the City of Abha. *Energies* 2023, 16, 4310. <https://doi.org/10.3390/en16114310>.

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2. Alqahtani, S.; Shaher, A.; Garada, A.; Cipcigan, L. Impact of the High Penetration of Renewable Energy Sources on the Frequency Stability of the Saudi Grid. *Electronics* 2023, 12, 1470. <https://doi.org/10.3390/electronics12061470>.
 3. **A. Shaher**, S. Alqahtani, A. Garada and L. Cipcigan, "Technical potential for rooftop solar photovoltaic in Commercial and Residential Areas in Saudi Arabia," 2022 57th International Universities Power Engineering Conference (UPEC), Istanbul, Turkey, 2022, pp. 1-6, doi: 10.1109/UPEC55022.2022.9917795.
 4. A. Garada, **A. Shaher**, S. Alqahtani and L. Cipcigan, "Optimal configuration using renewable technologies for overcome blackouts in Libya power system: Al-Marj city case study," 2022 57th International Universities Power Engineering Conference (UPEC), Istanbul, Turkey, 2022, pp. 1-8, doi: 10.1109/UPEC55022.2022.9917984.
 5. S. Alqahtani, **A. Shaher**, A. Garada and L. Cipcigan, "Frequency Stability in Renewable-Rich Modern Power Systems, Saudi Grid Case Study," 2022 57th International Universities Power Engineering Conference (UPEC), Istanbul, Turkey, 2022, pp. 1-6, doi: 10.1109/UPEC55022.2022.9917788.
 6. **A. Shaher** and L. Cipcigan, "Optimising Energy Storage for Community-based Rooftop PV systems: A study of Battery Sizing with Aggregated Buildings," UPEC24, 59th International Universities Power Engineering Conference. (Submitted on 25-03-2024).
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Education

Degree	Discipline	Institution	Year
Master	Electrical Engineering and Renewable Energy system	Electrical and Electronics Engineering School, University of Leeds, Leeds, United Kingdom	2020
Bachelor	Electrical Engineering	Najran University, Najran, Saudi Arabia	2013

Academic Experience

Time	Rank	Institution
2/1/2021 – present	lecturer	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.
17/6/2014 – 1/1/2021	Teaching Assistant	Electrical Engineering Department, Engineering College, Najran University, Najran, KSA.

Non-Academic Experience

NA

Certificates

- Academic Quality Practitioner.
- Foundation Program for Quality, Evaluation Accreditation
- Facilities Management course.
- Professional Project Management Course.
- A course on the MATLAB program.
- A course on Geographical Information systems.
- Attending Saudi Smart Networks Conference in Jeddah 2014.
- Crisis and Disaster Management Course.
- Report Preparation

Honors and Awards

- NA

Publications & Presentations

7. NA

Most Recent Professional Development Activities

8. NA
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