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OBJECTIVE

Wishing to pursue a career in a challenging work environment and become a productive part of a team\work group.

EDUCATIONAL BACKGROUND

2015-2018 **Ph.D. in Computer & Electrical Engineering**
Chongqing University; **China.** One of Top Ranked Universities in Peoples Republic of China

2010-2011 **M.Sc. Computer Networking Systems**
University of Bedfordshire; **United Kingdon (U.K.)**. Discipline wise Top Ranked
Division: 1st

2004-2008 **Bachelor of Engineering in Electronics (P.E.C. No. Electro/10325)**
University of Engineering & Technology Taxila, Pakistan.
DIVISION: 1st RANK: **11th**

2001-2003 **Higher Secondary School Certificate**
PAF Degree College Faisal, Karachi, Pakistan.
PERCENTAGE: 72% RANK: **9th in college**

1999-2001 **Secondary School Certificate**
B.I.S.E. Gujranwala, Pakistan.
PERCENTAGE: 81% RANK: **2nd in Institution**

PROFESSIONAL EXPERIENCE

MAY 2023 **EDITOR: INTERNATIONAL JOURNAL OF EMERGING ENGINEERING AND TECHNOLOGY (HEC RECOGNIZED)**

MARCH 2022-ONWARDS **Assist. Professor, Fatima Jinnah Women University, Rawalpindi, Pakistan.**

- Writing research proposals for funding in the energy harvesting domain, organizing conferences/seminars/workshops along with teaching and research activities. Successfully taught power electronics, Instrumentation & measurements, control systems courses to undergraduate/postgraduate students. An active member of departmental OBE, QEC and research committees. Active reviewer of electronic devices, Networks and wireless communication-related Journals and conferences.

MARCH 2020-MARCH 2022 **Associate Professor/Head of Department Electrical Engineering (H.O.D. E.E.), GIFT (Gujranwala Institute of Future Technologies) University, Gujranwala. Pakistan.**

- Conducted OBE (outcome-based education) training, CPD (Continual professional development) planning and arrangement, acquisition of funded FYP projects through IAB (Industrial advisory board), Won funded research grant for ICT design of EV, supervised Pakistan Engineering Council (PEC) accreditation documentations and visit arrangements. Further, taught electronics/electrical Engineering courses including Antenna systems, Mobile computing, Analog & Digital Communications, Operating Systems, Databases, Computer Communication Networks, wireless communications, etc. at the graduate/Post graduate level and successfully managed Computer Engineering Dept. load.

FEBRUARY2018-MARCH 2020 **Assistant Professor/Head Electrical Engineering Department, CCET/ UET Lahore, Pakistan.**

- I have worked on ABBET accreditation and documentation and my main responsibility was teaching computer discipline courses of Introduction to Programming C++, Distributed Systems, Emerging Technologies, Microprocessors and Antenna Systems.

- Supervised Pakistan Engineering Counsel (PEC) accreditation documentation (OBE) and University of Engineering & Technology (UET) Lahore and visits. Further, taught Computer Eng. courses including Basics of Electronics, Databases, and Semiconductor Devices etc. at the graduate level & managed Departmental routine matters.

SEP 2015-MAY 2018 **Teaching assistant at Chongqing University, China**

- Involved in research & teaching activities at the graduate/post-graduate level in the area of energy harvesting systems, wireless communications and integration of renewable energy sources.

SEP 2014-SEP 2015 **Lecturer at the Department of Electrical/Computer Engineering at the University of Central Punjab (UCP), Lahore, Pakistan**

- Involved in research & teaching activities at the graduate level in the area of wireless communications/Networking and energy management of sources for wireless devices.
- Have been actively involved in PEC accreditation/documentation process

MARCH 2011-JULY 2014 **Lecturer at Britain College, Luton, United Kingdom (U.K.)**

- I taught two courses on Renewable systems and Wireless Communication, as part of the Graduate Summer School in Electronics Engineering.
- Taught courses of Power Electronics, Semiconductor devices, Control Systems.
- Installing, configuring and maintaining Cisco network services, equipment and devices. Managing all system backup restoring protocol.
- Monitoring system performance and implementing performance tuning.

APRIL 2010-JULY 2011 **Teaching Assistant at the University of Bedfordshire, United Kingdom**

- Involved in teaching and evaluating assignments at the graduate/Postgraduate level.

AUGUST 2008-APRIL 2010 **Shift Engineer at Master Textile Mills, Raiwind Road, Lahore, Pakistan.**

- Installing, automation, and commissioning of Gas Turbine
- Repair/calibration of instruments, supervise maintenance staff, repair/design of PCBs, and programming/troubleshooting of Allen Broadley PLC.
- Repair/calibration of temperature controllers, pressure transducers, flame detectors, level controllers position transducers, and digital scales.
- In daily routine work I was also responsible for monitoring of power factor of gas turbine power generation and balance load distribution.

LIST OF SELECTED PUBLICATIONS

1. Fawad Naseer, MN Khan, Abdullah Addas, Qasim Awais, "**Game Mechanics and Artificial Intelligence Personalization: A Framework for Adaptive Learning Systems"**, Education Sciences 15 (03), 301, 2024. **(I.F.=2.5)**
2. W Khalid, M Jamil, AA Khan, Q Awais, "**Open-Source Internet of Things-Based Supervisory Control and Data Acquisition System for Photovoltaic Monitoring and Control Using HTTP and TCP/IP Protocols"** Energies 17 (16), 4083, 2024. **(I.F.=3.252)**
3. W Khalid, Q Awais, M Jamil, AA Khan**," Dynamic Simulation and Optimization of Off-Grid Hybrid Power Systems for Sustainable Rural Development"**, 2024, Electronics 13 (13), 2487, **(I.F.=2.69)**
4. MN Khan, A Altalbe, F Naseer, Q Awais, **"Telehealth-Enabled In-Home Elbow Rehabilitation for Brachial Plexus Injuries Using Deep-Reinforcement-Learning-Assisted Telepresence Robots",** 2024, Sensors 24 (4), 1273, **(I.F.=3.732)**
5. Naseer, Fawad, Muhammad Nasir Khan, Zubair Nawaz, and Qasim Awais. **"Telepresence Robots and Controlling Techniques in Healthcare System."** Computers, Materials, and Continua (2023): 6623-6639. **(I.F.=3.860)**
6. Vallappil, Arshad Karimbu, Bilal A. Khawaja, Mohsin Jamil, and Qasim Awais. **"Minkowski–Sierpinski Fractal Structure-Inspired 2× 2 Antenna Array for Use in Next-Generation Wireless Systems."** Fractal and Fractional 7, no. 2 (2023): 158. ISSN: 2504-3110, **(I.F.=3.577)**
7. A Sufyan, M Jamil, Q Awais, S Ghafoor, HA Ahmad, AA Khan (2022). "**A Robust Nonlinear Sliding Mode Controller for a Three-Phase Grid-Connected Inverter with an LCL Filter"**, Energies 15 (24), 9428. **(I.F.=3.252)**
8. Akbar, K., Zou, Y., Awais, Q., Baig, M. J. A., & Jamil, M. (2022). "**A Machine Learning-Based Robust State of Health (SOH) Prediction Model for Electric Vehicle Batteries"**. Electronics, 11(8), 1216**.** **(I.F.=2.69)**
9. Ali, A., Shakoor, R., Raheem, A., Awais, Q., Khan, 2022. **Latest Energy Storage Trends in Multi-Energy Standalone Electric Vehicle Charging Stations: A Comprehensive Study.** Energies, 15(13), p.4727. **(I.F.=3.252)**
10. Q. Awais, H. T. Chattha, M. Jamil, Y. Jin, F. A. Tahir, and M. U. Rehman, **"A Novel Dual Ultrawideband CPW-Fed Printed Antenna for Internet of Things (IoT) Applications."** Wireless Communications and Mobile Computing, Volume 2018, Article ID 2179571,1530-8677,9 pages **(I.F.=1.9)**
11. Awais, M., Khan, L., Khan, S.G., Awais, Q. and Jamil, M., 2023. **"Adaptive Neural Network Q-Learning-Based Full Recurrent Adaptive NeuroFuzzy Nonlinear Control Paradigms for Bidirectional-Interlinking Converter in a Grid-Connected Hybrid AC-DC Microgrid".** Energies, 16(4), p.1902. **(I.F.=3.252)**
12. Q. Awais, Yang Jin, Hassan Tariq Chattha, Mohsin Jamil, Bilal A. Khawaja, **"A compact wideband rectenna system with high conversion efficiency for wireless energy harvesting",** IEEE Access 2018, 2169-1536, **(IF=3.557)**

13. Q. Awais, Z. Lin, et al., **"Asymmetric arc-shaped vortex-induced electromagnetic generator for harvesting energy from low-velocity flowing water,"** IET Renewable Power Generation, vol. 11, no. 12, pp. 1503-1508, 2017**. (I.F.=2.63)**

14. Z. Lin, Q. Awais et al., **"Broadband and three-dimensional vibration energy harvesting by a non-linear magnetoelectric generator,"** Applied Physics Letters, vol. 109, no. 25, p. 253903, 1077-3118, 2016**. (I.F.= 3.44)**

15. Muhammad Nasir Khan, Qasim Awais, et al.**" Maximizing Throughput of Hybrid FSO-RF Communication System: An Algorithm"**, IEEE Access 2018, 2169-1536, **(IF=3.557)**

16. M Jamil, MN Khan, Q Awais **"Neural network predictive control of vibrations in tall structure: An experimentally controlled vision",** Computers & Electrical Engineering 89, 106940 **(IF= 2.763)**

17. Amin, M.I., Hafeez, M.A. and Awais, Q., (2022). "**Rotten-Fruit-Sorting Robotic Arm:(Design of Low Complexity CNN for Embedded System)"**. Engineering Proceedings, 12(1), p.109. **IEEE Conference**

18. Mahboob, K., Awais, Q., Awais, M., Naseem, A., Ullah, S. and Khan, A., 2022. "**Visualization of Heliostat Field of Solar Thermal Tower Power Plant Using Virtual Reality (VR) Technologies"**. Engineering Proceedings, 12(1), p.79.

19. Awais, Q., Farooq, A., Ali, W., Afzal, R. and Khalid, A., 2022. "**A Novel Wideband Coplanar Waveguide (CPW) Fed Antenna for Energy Harvesting at 2.45 GHz."** Engineering Proceedings, 12(1), p.54. **(I.F.= 1.053)**

20. Mahboob, K., Awais, Q., Yahya, M., Mehtab, M. and Khan, A., 2022. "**Productivity Enhancement of Solar Water Desalination Unit Using a Solar Electric Water Heater."** Engineering Proceedings, 12(1), p.53.

21. Q Awais, et al. (2019), **"Rectangular Antenna with Vertical Slots Implemented for WLAN Applications",** Pakistan Journal of Science, 71 (4), 103. ISSN: 2411-0930, **2019.** **HEC Recognized Journal (Y-category)**

22. Q Awais, et al. (2019), **"Bow-Tie Antenna Design with Ground Slots for Wireless Energy Harvesting Applications",** Pakistan Journal of Science, 71 (4), 103. 2019. **HEC Recognized Journal (Y-category)**

23. Q Awais, et al. (2019), **"Design and analysis of CPW rectangular antenna with slots for 2.45 GHz",** Pakistan Journal of Science, 71 (4), 103. ISSN: 2411-0930, 2019. **HEC Recognized Journal (Y-category)**

24. Q Awais, et al. (2019), **"Semi-Circle Shaped Antenna for IEEE 802.11 B Network Applications",** Asia Pacific Pakistan Journal of Science, 71 (4), 103. ISSN: 2411-0930, 2019. **HEC Recognized Journal (Y-category)**

25. K. Mahboob, Q. Awais, M. Rasool and T. Fawad **"Selection of drive system for heliostat of concentrated solar thermal power plant ",** Pakistan Journal of Science, 71 (4 Suppl.): 2019, Page 126-133 ISSN: 2411-0930, 2019. **(Y-category)**

26. K. Mahboob, Q. Awais, M.S. Ullah, A. Naseem, and F. Ali **"The use of virtual reality technologies in automotive designs",** Pakistan Journal of Science, 71 (4 Suppl.): 2019, ISSN: 2411-0930, 2019. **HEC Journal (Y category)**

27. K Mahboob, S Tanveer, Q Awais, **"Types and applications of renewable energy technologies and their effect on environment in Pakistan",** Pakistan Journal of Science, 71 (4 Suppl.): 2019, ISSN: 2411-0930, 2019. **(Y category)**

28. V Wang, Q Awais **"Diabetes Mellitus Control Exogenous Insulin Infusion: A Review",** 3 (1), 18-23, 2020. **(Y category)**

29. K Mahboob, U Mushtaq, A Khan, Q Awais, "**Design and Modeling of Tubular Receiver of a Solar Tower Power Plant",** Journal of Eng. Research,3 (1), 18-23, 2021. **HEC Recognized Journal (X category)**

30. K Mahboob, Q Awais, S Tanveer, **"Economic and Environmental Effects of Plugin Hybrid and Electric Cars in Pakistan",** Journal of Eng. Research,3 (1), 18-23, 2021. **HEC Recognized Journal (X category)**

31. S Hassan, T Zahid, Q Awais **"A Review of Stable Election Protocol Variants of Wireless Sensor Network",** Pakistan Journal of Eng. Research. 3 (1), 18-23, 2021. **HEC Recognized Journal (X category)**

32. K Mahboob, MS Ullah, Q Awais, **"THE USE OF VIRTUAL REALITY TECHNOLOGIES IN AUTOMOTIVE DESIGN",** Pakistan Journal of Science, 71 (4 Suppl.): 2019, ISSN: 2411-0930, 2019. **HEC Recognized (Y category)**

33. K Mahboob, Q Awais, A Khan, MN Khan, "**Metamodeling using simulation trained artificial neural network for structure applications",** Journal of Eng. Research, 71 (4 Suppl.): 2019, ISSN: 2411-0930, 2019. **HEC Journal (X category)**

34. M. H. Malik, M. Aydin, and Q. Awais, **"Cognitive access point to handle delay sensitive traffic in WLANs,"** IEEE (CICT), pp. 317-322 2015. **IEEE Conference**

35. Muhammad Faisal, Mohsin Jamil, Qasim Awais, Usman Rashid, Muhammad Sami, Syed Omer Gilani, Yasar Ayaz and Muhammad Nasir Khan, **"Iterative Linear Quadratic Regulator (ILQR) Controller for Trolley Position Control of Quanser 3D OF Crane"**, In Proceedings of International conference on Green Computing and Engineering Technology (ICGCET), paper # 90, Dubai, UAE, 2015. **International Conference**

36. Q. Awais, M. H. Malik, S. Hussain, and H. V. Tuan, "**Traffic Engineering Using Multi-Protocol Label Switching (MPLS) for Delay Sensitive Traffic**," IEEE International Conference on Computational Intelligence & Communication Technology (CICT), pp. 465-470, 2015. **IEEE Conference**

37. Q Awais, MI Amin, MA Hafeez, **"Person Identification with Masked Face and Thumb Images under Pandemic of COVID-19",** 7th International IEEE Conference on Control, Instrumentation and Automation, 2021 **IEEE Conference**

38. M. H. malik, Q. Awais, M. Jamil, and A. Dhyani, "**Performance analysis of proactive and reactive protocols in mobile Ad-hoc networking: A simulation-based analysis**," International Conference on Robotics and Emerging Allied Technologies in Engineering (iCREATE), pp. 25-31, 2014. **International Conference**

39. M. Jamil, S. P. Shaikh, M. Shahzad, and Q. Awais, "**4G: The future mobile technology**," IEEE Region 10 Conference TENCON, pp. 1-6, 2008.

40. M. Jamil, G. M. Hashmi, Z. A. Syed, and Q. Awais, **"Harmonics in Adjustable Speed Drives: Causes, Effects, and Solutions",** International Conference on Information and Emerging Technologies, 2007, pp. 1-6, ICIET 2007.

41. Q Awais, et al. (2018). **"Design Considerations of Stand-Alone Solar Photovoltaic Systems."** 2018 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube). **IEEE Conference**

42. Q Awais, et al. (2018). **"Grid Interconnection of Micro Hydro Power Plants: Major Requirements, Key Issues and Challenges."** 2018 International conference on Recent Advances in Electrical Engineering (RAEE). **Int. Conference**

43. Q Awais, MH Malik, S Hussain "**Hybrid WLAN Markov Chain to Handle TCP and UDP Traffic",** 2015 IEEE International Conference on Computational Intelligence. **IEEE Conference**

PROJECTS

- **Funded Project 1:**
  Performance Analysis of point coordination function (PCF) and distributed coordination function (DCF) in IEEE 802.11 wireless Networks using OPNET Modeler 16.0
  Performance parameters of wireless network time delay, throughput, jitter, bandwidth usage and reliability are analyzed and compared through simulation results and verified. Contention-free communication of packets is monitored under various traffic conditions and a hybrid coordination function solution is proposed after careful comparison to remove the flaws of existing collision-based coordination channel access schemes.

- **Funded Project 2:**
  Compact wideband rectenna systems for IEEE 802.11 Computer Networks
  High-frequency structure simulator (HFSS) and Advance design systems (ADS) software package were used to design a number of novel ultra-compact wideband antennas and RF-DC rectifier systems for computer nodes. A high gain of 8.9 dB was achieved through the design of an electrically small coplanar waveguide antenna. The simulated conversion efficiency of 75.6 % and a measured RF-DC conversion efficiency of 68 % is attained. Concepts of asymmetric CPW, slots, Meta materials, fractals, differential and stacked antennas have been compared to improve output voltage, radiation patterns, voltage standing wave ratio (VSWR), current distributions and overall system operating bandwidth. The output voltage of 3.24 V is harvested at 5 dBm input Radio Frequency signal at distance reasonable distance from the source.

POST-GRADUATE RESEARCH SUPERVISION

- Investigating and Exploring the Depths: Advancing Robotics for Precise Pipeline Inspection (2025)
- Obstacle Avoidance and Human Tracking for Seamless Travel using Enhanced Robot (2025)
- Enhancing Mobility and Independence for Individuals with Limited Mobility through Voice Controlled
- Analysis and design of 5G antenna (2024)
- Mobility Aid robot (2024)
- Depression Classification Using Sound Signals Recorded in the Resting-State Condition (2024)
- Pediatric Sleep Stage Analysis Using EEG Signals
- A Novel Framework for Human Activity and Context Recognition using Smartphone Sensors (2023)
- Context-Aware User Identification Based On Activity Pattern Using Smartphone Sensors (2023)
- Gender Recognition Using EEG Signals in Response to Video Game Play (2023)
- A Framework for Expertise Classification during Game Play using EEG Signals (2023)
- Air Quality Monitoring and Control System Using IoT (2023)
- Design and Implementation of a Wearable Health Monitoring System (2023)
- Smart Glove for Rehabilitation Using Flexible Sensors (2023)
- Design and Fabrication of ambient energizer for Implantable Pacemaker (2023)
- Detection of heart disease using machine learning techniques (2022)
- Performance Evaluation of 5G Networks in Pakistan (2022)
- Design and Implementation of Autonomous Disinfecting Robot for Non-Deterministic Area (2022)
- Drone design for agricultural pesticide spraying and monitoring (2022)
- Flexible Guardians: Robots Redefining Inspection in Hazardous Environments (2021)
- Voice-Controlled Mobility Aid: Enhancing Mobility and Independence for disable person (2021)
- Exploring the Depths: Advancing Robotics for Precise Pipeline Inspection (2021)

TRAININGS AND WORKSHOPS

- A Panel Discussion on "Social Media and Artificial Intelligence as Tool of Hybrid Warfare" at Fatima Jinnah Women University, (April, 2025)
- A seminar on "An Introduction to the Paradigm of Machine Learning" at UET Taxila. Enhancing (Feb, 2025)
- Faculty Capacity Building Training for BPS and TTS organized by Center of Learning Excellence, FJWU, Rawalpindi. (2024)
- A Workshop on "How to Write a Winning Grant Proposal" organized by ORIC, Fatima Jinnah Women University, Rawalpindi. (2024)
- Emerging Need of OBE for Continual Improvement and System Control organized by QEC, FJWU, Rawalpindi (2024)
- Conducted a Seminar on "Powering the biomedical implants: Challenges and Opportunities" at NUML, Rawalpindi. (2024)

- A Seminar on "Modern electronic warfare gadgets and applications" at Rawalpindi Women University, Rawalpindi. (2024)
- A seminar on "An era of 6G communications; potential gains and associated risks" at UoG. (2024)
- Faculty Capacity Building Training for BPS and TTS organized by Center of Learning Excellence, FJWU, Rawalpindi. (2023)
- Emerging Need of OBE for Continual Improvement and System Control organized by QEC, FJWU, Rawalpindi. (2023)

SKILL SUMMARY

- **Supervision of Bachelor and Master level dissertations** and technical projects
- **2.45 GHz Communication system design** and troubleshooting
- Hands-on experience with **HFSS, ADS, MATLAB, CST, EM PRO, Altium Pro, OPNET 16.0**
- Expertise in **CPW rectenna modeling and fabrication**
- **C++, Databases, Virtual Machines, Cloud Computing system design, Cognitive radio Networks**
- **Confident and optimistic, ability to work with a team, good decision-making ability**

SCIENTIFIC AND PROFESSIONAL SOCIETIES OF WHICH A MEMBER

2011 – present Institute of Electrical and Electronic Engineers **(IEEE)**
2008 – present Professional Engineer, Pakistan Engineering Council **(PEC)**
2015 – present A Student Member of The Institution of Engineers, Pakistan **(IEP)**

HONORS AND AWARDS

2007 **1st Prize from Dr. Abdul Qadeer khan** in all Pakistan Project Exhibition, Islamabad, Pakistan
2010 University of Bedfordshire (UK) **Study Scholarship Award 2010**
2015 Chongqing University, China. Chinese **Government Scholarship Award** (2015-2018)
2016 **Higher Education Commission (HEC) Scholarship Award**, Pakistan
2018 **Badminton Competition winner (1st Prize)** from International Student Office (ISO), CQU, China

REFERENCES

1. Mazhar Hussain Malik
PH.D., PCAP, MSC, MBA (EXECUTIVE), BCS(HONS)
SFHEA, SMIEEE, FBCS, MCIIS, MACM, CENG, CITP
SENIOR LECTURER IN CYBER SECURITY AND DIGITAL FORENSICS,
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