Muhammad Salman

WORK EXPERIENCE

[05/10/2018 – Current] **University research assistant**

Electrical and Electronics Department, University of Technology

Address: Nowshera, Pakistan
Main activities and responsibilities:

- Development in Power System and Power Electronics Domain
- Conduction of laboratories session
- Content writing of research papers

[03/07/2018 – 28/07/2019] **Educational researcher**

U.S. Pakistan Center for Advanced Studies in Energy, University of Engineering and Technology

Address: Peshawar, Pakistan
Main activities and responsibilities:

- Project Design and Development
- Quality Assurance
- Report Writing

[03/05/2017 – 26/06/2018] **Educational researcher**

U.S. Pakistan Center for Advanced Studies in Energy, University of Engineering and Technology

Address: Peshawar, Pakistan
Main activities and responsibilities:

- PCB designing in Proteus and milling it with CNC machine
- Troubleshooting the finished board.
- Documentation of new projects i.e., proposals, monthly reports
- Purchasing and Managing of Semiconductor Devices

[20/08/2017 – 09/12/2017] **Exchange Research Scholar**

Arizona State University, United States

Address: Tempe, United States
Main activities and responsibilities:

- Modeling of Multi-Level Inverter in PSCAD
- Developed transmission line model and apply different faults to observe the effect of footing resistance to back flash over-voltage
- Conducted research on digital relays

EDUCATION AND TRAINING

[18/09/2016 – 09/12/2018] **Master of Science in Electrical Energy System Engineering**

US Pakistan Center for Advanced Studies in Energy, University of Engineering and Technology

Address: Peshawar, Pakistan
Main subject / occupational skills covered:
CGPA: 3.57 / 4.00
Thesis Title: Modeling, Design and Control of Multi Level Inverter Having Low Total Harmonic Distortion
Short Description: Designing and Modeling of Multi-Level Inverter by using Bio-inspired Artificial Intelligent Algorithms to decrease the total harmonic distortion and to increase the power quality.
Supervisor: Dr Abdul Basit

[23/09/2012 – 10/08/2016] **Bachelor of Science in Electrical Engineering**

University of Engineering & Technology

Address: Peshawar, Pakistan
Main subject / occupational skills covered:
CGPA: 3.32 / 4.00

Final Year Project: Head Movement Based Robotic Vehicle
Short Description: Designing and implementation of a head movement based robotic vehicle for those having physical disabilities and cannot even control the automatic wheel chair, but can only move their heads.
Supervisor: Engr Mujtaba Hassan

LANGUAGE SKILLS

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** B1

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

PUBLICATIONS

Publications

1. **Muhammad Salman**, Abdul Basit, Muhammad Shoaib Khalid, Affaq Qamar, "Reduction in Total Harmonic Distortion of Cascaded H-Bridge Multilevel Inverter with Equal Phase Method", The 16th IEEE Clemson University Power System Conference on Smart Grid Technologies and Innovation, September 4-7, 2018, Charleston, South California, USA.

2. Kamran Alam, Saddam Ali, Abdul Saboor, **Muhammad Salman**, Maoz, Muhammad Humayun, Muhammad Sadiq and Muhammad Arif, "Antireflection, Superhydrophilic Nano-Porous SiO_2 Coating based on Aerosol Impact Spray Deposition Technique for Solar PV Module", *Coatings* 2019, *9*(8), 497; https://doi.org/10.3390/coatings9080497

3. **Muhammad Salman**, Inzamam Ul Haq, Tanvir Ahmad, Haider Ali, Affaq Qamar, Abdul Rauf and Abdul Basit, "Minimization of Total Harmonic Distortions of Cascaded H-Bridge Multi-level Inverter by Utilizing Bio-Inspired AI Algorithm", EURASIP Journal on Wireless Communication and Networking, 66 (2020); https://doi.org/10.1186/s13638-020-01686-5

4. Rizwan kamal, Muhammad younas, Shakeel ahmed and **Muhammad Salman**, "Homer based Techno-Economic Comparison of Solar PV, Micro Hydro and Biomass Renewable Energy System with and without Battery Storage", International Journal of Engineering Works, Vol. 5, Issue 10, PP. 203-210, October 2018.

5. Usman Rahat, Abdul Basit and **Muhammad Salman**, "Voltage control for DC-DC converters", International Journal of Engineering Works, Vol. 5, Issue 10, PP. 198-202, October 2018.

6. **Muhammad Salman**, Abdul Basit, Aemal Ahmad, Zeeshan Saeed Shah, Kamran Alam, "Modeling of Cascaded H-Bridge Multi-level Inverter Having Low Total Harmonic Distortion by using Equal Phase Distribution Method", International Journal of Engineering Works, Vol. 6, Issue 03, PP. 84-89, March 2019.

7. Inzamam Ul Haq, Abdul Basit, Muhammad Naeem Arbab, Muhammad Aslam and **Muhammad Salman**, "Health Assessment of Transformer Winding Insulation through Fast Fourier Transform Power Spectrum", IEEE Access, (Submitted).

RECOMMENDATIONS

1. Name: Dr. Abdul Basit
Position: Assistant Professor
Organization: University of Engineering and Technology Peshawar, Pakistan
Email: abdul.basit@uetpeshawar.edu.pk

2. Name: Dr Haider Ali
Position: Assistant Professor/HoD
Organization: University of Technology Nowshera, Pakistan
Email: Haider.ali@uotnowshera.edu.pk

HONOURS AND AWARDS

Honours and awards

- Awarded Laptop from Prime Minister Foundation
- Sponsored by USAID for research training at Arizona State University
- Awarded by USAID scholarship for graduate studies
- Final year project funded by National Grassroot ICT R&D fund
- HEC need and merit based scholarship for undergraduate studies

JOB-RELATED SKILLS

Job-related skills

- Highly proficient in applying the course material in analyzing the problem situations.
- Good teamwork skills in group assignments.
- ability to create innovative solutions.

PRESENTATIONS

Presentations

Poster

- Reduction in total harmonic distortion of cascaded H-Bridge Multilevel inverter with different Switching angle arrangement techniques, “National Conference on Green Energy Technologies”, USPCAS-E 2018.

- Design, Modeling And Control Of Modular Multi-Level Inverter by Using Bio- Inspired Artificial Intelligent Algorithm Having Low Total Harmonic Distortion “International Conference on Sustainable Energy Pakistan”, USPCAS-E 2019.

CERTIFICATIONS

Certifications

Teaching Volunteer Arizona State University, United States
Participated as a teaching volunteer for ASU course SOS 322 on International Development and Sustainability in the role of country expert. I helped students to work on preparing a Human Development Report in the context of a class assignment.