

Engr. Shahnila Badar

Lecturer, Electronic Engineering Department, MUET Jamshoro

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WORK EXPERIENCE

- **Mehran University of Engineering & Technology** February 2025- Present
Lecturer
- **DHA SUFFA University Karachi** October 2023-February 2025
Lecturer
- **DHA SUFFA University Karachi** October 2022-Present
Visiting Lecturer
- **The University of Central Punjab, Bahawalpur Campus** April 2019-August 2020
Visiting Lecturer
- **Triple E Intern** January 2014-January 2015
Pakistan Telecommunication Company Limited
● Worked at Operation Maintenance Center (OMC ZTE) & Optical Fiber System
Department Hyderabad Division.



ACADEMIC QUALIFICATION

- **Doctor of Philosophy, Electrical Engineering**
(Research work in progress) October 2022- Present
DHA SUFFA University, Karachi
- **Master of Engineering, Electronic Engineering, Advanced Electronics & Control System**
The Islamia University of Bahawalpur, 2019-2021
CGPA: 3.85/4.00
- **Bachelor of Engineering (Electronic Engineering)**
Mehran University of Engineering and Technology, Jamshoro, 2008-2012
1st Division, 79%

MEMBERSHIPS

- **Pakistan Engineering Council (Life Member).**
Membership No: Electro/18183
- **PEC STEM Ambassador**
Membership No: PEC/STEM 118

EXTENDED RESPONSIBILITIES/ADMINISTRATIVE DUTIES

- **Warden Elsa Kazi Girls Hostel Mehran, UET Jamshoro**
- **Convener of the Laboratory Quality Management Committee (LQMC), Electronic Dept. Mehran, UET**
- **Industrial Liaison Officer, DHA SUFFA University**
- **Member of OBE Committee, DHA SUFFA University**
- **Member of Marketing and Admission Committee, DHA SUFFA University**
- **Member of Continuous Quality Improvement (CQI), DHA SUFFA University**
- **Final Year Lab In-charge, DHA SUFFA University**

COURSES TAUGHT

- Computer Communication and Networks (Theory/Lab)
- Computer Organization & Assembly Language (Theory/Lab)
- Digital Logic Design (Theory/Lab)
- Communication Systems (Theory/Lab)
- Machine Learning (Theory/Lab)
- Power Generation (Lab)
- Introduction to Embedded Systems (Lab)
- Linear Algebra (Theory)
- Probability & Statistics (Theory)

COMPUTER/ SOFTWARE EXPERTISE

- WINDOWS & LINUX Operating System (UBUNTU 20.0)
- Microsoft Office (Word, Excel and Power Point)
- MATLAB
- Proteus
- µKeil
- Python
- Packet Tracer, Network Simulator NS-3, OMNET++
- VERILOG

MAJOR PROJECTS/THESIS

- Fuzzy-Logic based model for VANET performance metrics analysis (**Master's Thesis**).
- File sharing & information dissemination in VANETs; established a vehicular Ad-Hoc network for smooth traffic control (**Bachelor's Thesis**).
- Fault analysis and troubleshooting in DXX & SDH network of HYTR south zone at PTCL.
- Network analysis of OMC ZTE along with the provision of solutions for network issues at PTCL.

CONFERENCES/ WORKSHOPS/ CERTIFICATES

- Conducted 0.5 CPD Webinar on “Machine Learning with Python (Google Colab)”, 16th September 2025 at Electronic Engineering Department, Mehran University of Engineering & Technology, Jamshoro.
- Organized a three-day training workshop on “MATLAB based Training workshop”, Sep 2024 at Electrical Engineering Department, DHA SUFFA University, Karachi.
- Presented research work on “Fault analysis in Smart Grid using AI, Comprehensive Survey” during 2nd Annual Postgraduate Research Conference, 29th February 2024 at DHA SUFFA University, Karachi.
- Presented research work on “File sharing and Information dissemination through VANETs” during 1st Annual Postgraduate Research Conference, 23rd February 2023 at DHA SUFFA University, Karachi.
- Certificate of participation on “Two Days “National Conference on Safety Assessment” in collaboration with PNRA (14-15 November 2023) held at DHA SUFFA University, Karachi.
- Appreciation certificate for coordinating and participating as an Industrial Liaison Officer during “Annual Career Fair” 25th January 2024 held at DHA SUFFA University, Karachi.
- Supervised BS-Physics 4th semester students during Project Exhibition (2020) held at University of Central Punjab, Bahawalpur Campus.
- Supervised MSC-IT 2nd semester students during Project Exhibition (2020) held at University of Central Punjab, Bahawalpur Campus.
- Supervised BSCS-2B students and secured first, second positions during IT Gala (2019) held at University of Central Punjab, Bahawalpur Campus.
- Participated and secured Position in "PTCL values Competition" (2014) at PTCL HYTR Region.
- Participated in poster completion held during space week (2012) at Mehran UET.
- Volunteered in organizing IMTIC (2011) at Mehran UET, National Engineering Exhibition, and Tech Combat.
- Participated in National Engineering Project Exhibition (2011) organized by Mehran university of engineering & technology.
- Participated in SCONEST IEEE (2011) at Mehran UET Conference.

- Certificate of Participation as an “Organizer” in “MicroMaze” 2011 at Mehran UET.
- Certificate of Participation in JCI IEEE workshop on "Career Advancement: A multi-fold Approach" (2009) at Mehran, UET.

RESEARCH INTERESTS

- Smart Grid
- Electric Vehicle
- Artificial Intelligence
- Machine Learning
- Communication Systems

PUBLICATIONS

1. **S. B. Baloch**, Muhammad Tayyab Yaqoob, Asif Gulraiz, and Rabbia Muhammad Qasmi, “Fuzzy-Logic Based Model for VANET Performance Metrics Analysis”, SSURJET, vol. 14, no. 1, pp. 48–54, Apr. 2024. **(HEC Recognized: Y-Category)**
2. R. M. Qasmi, L. Moin, Muhammad Tayyab Yaqoob, **Shahnila Badar**, and Razi Ahmed, “Mathematical Modeling of Neuron Using Hodgkin-Huxley Model”, PJETS, vol. 12, no. 1, pp. 148-155, Jul. 2024. **(HEC Recognized: Y-Category)**
3. Adnan Alam Khan, Syed Asif Ali, Muhammad Zulqarnain Siddiqui, **Engr. Shahnila Badar**, Osama Ahmed Siddiqui, Maleeha Anwar, “Optimizing Environmental Parameters with Intelligent Systems to Enhance Prawn Survival”, Power System Technology, Vol. 48, No. 1, pp. 743-751, Jun. 2024 **(HEC Recognized: X-Category)**
4. Qazi, Farheen & Agha, Dur-E-Shawar & Naseem, Muhammad & **Badar, Shahnila** & Khan, Fozia. (2023). Improving Round Robin Scheduling with Dynamic Time Quantum (IRRDQ). Journal of Applied Engineering & Technology (JAET). 7. 70-82. 10.55447/jaet.07.02.115. **(Y-Category)**
5. Asif Gulraiz, Haseeb Gulraiz, Mohiuddin Zia, **Shahnila Badar**, Syed Sajjad Haider Zaidi, "Utilizing IoT and Cloud Computing for Weather-Health Monitoring Application," International Journal of Electrical Engineering and Computer Science, vol. 6, pp. 152-158, 2024, DOI:10.37394/232027.2024.6.18
6. Shaikh, M. M., **Badar, S.**, Dahri, S., Ansari, N. M., & Panhwar, F. (2024). A Mobile IoT Approach to Predict and Mitigate Arterial Hypertension Risks in Expectant Mothers. *Journal of Applied Engineering & Technology (JAET)*, 8(2), 31–46. <https://doi.org/10.55447/jaet.08.02.166>