

RABIA WAHEED KHWAJA

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OBJECTIVE

To share my skills and Knowledge with the upcoming generations, nourishing and shaping the minds of the youngsters, giving them direction, and enabling them to make a mark and reach heights in their careers.



EDUCATION

PhD | Electronics Dept., NED University of Engg. And Tech.

2022-ON GOING

Area: Artificial Intelligence-Based State of Charge Monitoring System for Battery Powered Applications.

Master of Engg. | Electronics Dept., NED University of Engg. And Tech.

2013 – 2015

- Area: Micro System design
Independent Study Project (ISP): Temperature Dependent Electrical Characterization of Schottky Diodes
- CGPA 3.74

Bachelor of Engg. | Electronics Dept., NED University of Engg. And Tech.

2007-2011

- A-Grade

A-levels | Beacon House School System.

2005– 2007

O-levels | Beacon House School System.

2002 – 2005



EXPERIENCE

Lecturer | NED University, Karachi.

March, 2026- Present

Lecturer | Bahria University, Karachi.

January-March, 2026

Visiting Faculty | Karachi University, Chemical Engg. dept.

Fall 2025- Present

Lab Teacher | NED University of Engg. And Tech.

FALL 2022 – Present

Lecturer | Dadabhoy Institute, Karachi.

2016 – 2021

Content Writer |(Freelance)

2017 – 2024



SKILLS

- MatLab
- Multisim
- LabView
- Arduino
- Synthesis and fabrication of
- OrCAD
- Raspberry Pi
- Python
- TensorFlow



TEACHING EXPERIENCE

- Electrical Department, Bahria University
Undergraduate Labs
 1. Sensors and actuators
 2. Machine Learning
 3. Linear circuit Analysis
- Department of Chemical Engineering, Karachi
University Undergraduate Courses:
 1. Electrical and Electronics Engineering
- Department of Electronics Engineering, NED University of Engg. and
Tech., Karachi.
Lab Courses:
 1. Instrumentation and control
 2. Engineering drawing and workshop
 3. Embedded Electronics
 4. Robotics

- Electrical Department, Dadabhoy Institute, Karachi Undergraduate Courses:
 1. Industrial Electronics
 2. Basic Electronics
 3. Digital Logic Design
 4. Linear Algebra
 5. Applied Mathematics



PUBLICATION

- Shah, W.; Khwaja, R.W.; Faraz, S.M.; Awan, Z.H.; Sayyad, M.H. Photovoltaic and Impedance Analysis of Dye-Sensitized Solar Cells with Counter Electrodes of Manganese Dioxide and Silver-Doped Manganese Dioxide. Eng. Proc. 2023, 46, 31.
- R.W. Khawaja, S.M. Faraz, “A Precise Machine Learning Model for State-of-Charge Estimation in Lithium-Ion Batteries” (approved)
- R.W. Khawaja, S.M. Faraz, “Lightweight LSTM Network with Pruning and Quantization for State-of-Charge Estimation in Lithium-Ion Batteries” (approved)



CONFERENCES AND WORKSHOPS

- PAK-CHINA, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology-SU International Conference on Advances In Emerging Solar Cell Technologies.
- Workshop on Solar Cell Fabrication and Characterization at Ghulam Ishaq Khan Institute of Engineering Sciences and Technology.



EVENTS ORGANIZED

Host and organizer, Half-Day Seminar on “Role of Women Leadership and Inclusion in Tech and Academia”. Organized by NED University in collaboration with British Council and HEC, held on October 25, 2023, at NED University, Karachi.



STUDENT SUPERVISION

Supervised 3rd-year Electrical Engineering students during an 8-week internship at the Electronic Design Center on a project on an Artificial Intelligence solution for battery management, from February 1 to March 31, 2025.