Resume of Saba Javed

PERSONAL INFORMATION

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PROFESSIONAL JOB EXPERIENCE

1. Associate Professor in Electronic Department at NED University of Engineering &Technology. (October 2025 to date)
2. Assistant Professor in Electronic Department at NED University of Engineering &Technology. (August 2022 to September 2025)
3. British Council Women in STEM Post Doctoral Research Fellow at The University of Edinburgh, Scotland, United Kingdom (Feburary 2024 to January 2025)
4. Assistant Professor at Karachi Institute of Economics &Tecgnology (KIET) (March 2016 to July 2022)
5. Lecturer at Karachi Institute of Economics &Tecgnology (KIET) (September 2011 to 2016)
6. Visiting Faculty in Well reputed Public/Private sector Universities.

Undergraduate Courses Taught

1. AC&DC Circuit analysis (Theory & Labs)
2. Fundamental of Engineering (Theory & Labs)
3. Linear Control systems (Theory & Labs)
4. Electrical Network Analysis (Theory & Labs)
5. Industrial Control Electronics (Theory &Labs)
6. Power Electronics (Theory & Labs)
7. Introduction to Mechatronics.
8. Instrumentation and Control (Theory & Labs)

MS/PhD Courses Taught

1. Introduction to Mechatronics
2. Advance Power Electronics
3. Introdution to intelligent Control Techniques

Other administrative Responsibilities

1. Class Advisor Third year Electronic Engineering.
2. Focal Person, Health & Safety Committee, NED, UET, responsible for coordinating committee activities, ensuring compliance with safety policies, and serving as the primary point of contact for health and safety matters.
3. Editor, Interact 2023 (NED, UET), managed the EasyChair system, including assigning papers to reviewers, compiling accepted submissions, checking plagiarism, and preparing publishing-ready versions for MDPI proceedings.
4. Website Manager, Climatech 2023 (NED, UET): Oversaw design, updates, and maintenance of the event website, ensuring accurate information, smooth functionality, and timely communication with participants
5. Actively Participated in maintaining Self Assessment Report (SAR) of Undergraduate Program for Pakistan Engineering Council (PEC) at NED,UET.
6. Served as an active member of a two-person team responsible for developing the Self Assessment Report (SAR) of Masters Program at NED, UET.
7. External Reviewer in Program Assessment (PA) team to Review MS and PhD SAR at Mohammad Ali Jinnah University (MAJU).
8. Reviewer for Technology Forces Journal, an HEC Recognised y-category Journal published by Karachi Institute of Economics and Technology.
9. Reviewer at 50th IECON conference organised by IEEE in Chicago, USA.
10. Session Chair in 7th International Electrical Engineering Conference IEEC,2022

11. Session Chair Intellect 2022, Third International Conference on latest Trends in Electrical Engineering and Computing Technologies.

12. Program Committee member Intellect 2022, Third International Conference on latest Trends in Electrical Engineering and Computing Technologies.

13. Outcome Based Education (OBE) coordinator at KIET.

14. Publication Chair in Intellect 2017, Second International Conference on latest Trends in Electrical Engineering and Computing Technologies.

MASTER'S THESIS SUPERVISION

1. Electric Vehicle (EV) Range estimation Using Machine Learning based Techniques.

EDUCATIONAL QUALIFICATIONS

Degree	Subjects	Year	Div./Grade/CGPA	University/Board
Doctor of Philosophy (Ph.D.)	Electronics Engineering (Power Electronics & Control System)	2021	**3.58 CGPA**	Karachi Institute of Economics & Technology (KIET)
Master of Science (MS)	Electronics Engineering (Power Electronics & Control System)	2013	**3.8 CGPA With Distinction**	Karachi Institute of Economics & Technology (KIET)
Bachelor of Engineering (B.E)	Industrial Electronics	2010	**3.75 Position Holder**	Institute Of Industrial Electronics of Engineering (IIEE), **NEDUET**

RESEARCH SKILLS

1. **Modeling and simulation of solar PV system**
   Design and Development of Accurate PV simulators in MATLAB/SIMULINK
   Design and Development of Power Electronics Converters for Solar PV Systems
   Maximum Power Point Algorithms for optimal extraction of Solar Energy
2. **Power Electronics Circuit Design**
   Design of power converters (DC-DC, AC-DC, DC-AC, and AC-AC converters)
   Sound Understanding of topologies like buck, boost, flyback, full-bridge, and resonant converters
   Design for high-efficiency and low thermal losses
3. **PCB Layout and Design**
   PCB design for converters (high voltage/high current traces, creepage/clearance)
   Tools: Altium Designer, Eagle, EasyEDA, Proteus.
4. **Control Systems**
   Design and implementation of feedback and control loops for power converters
   Digital control using microcontrollers or DSPs (e.g., TI C2000 series, dsPIC, AVR)
5. **Testing and Validation**
   Hardware prototyping and testing: oscilloscope, power analyzer, signal generator
   Design validation and testing for compliance (thermal, EMI, safety standards)
   Fault analysis and failure mode investigation
6. **Firmware Development**
   Programming microcontrollers/DSPs for power electronics control o C/C++ for embedded systems Experience with real-time control algorithms

RESEARCH PUBLICATION

1. S Zamir, Kashif Ishaque, **S Javed,** et. al, "Stagnation-Free PSO: A Random Reinitialization PSO (R^2PSO) Algorithm for Parameter Extraction of Solar Cells with improved speed, Accuracy and Consistency", *IEEE Access*, 2025, DOI: 10.1109/ACCESS.2025.3609672

2. **S Javed**, Kashif Ishaque, Jonathan Shek, Saqib Jamshed Rind, "Enhancing MPPT Performance Using Adaptive Population Size and Run Length Distribution Analysis: A Simulation and Experimental Study", *Energy Science & Engineering*, 2025,
3. **S Javed**, Kashif Ishaque, Jonathan Shek, Saqib Jamshed Rind, "A low-cost microcontroller Implementation of Fuzzy controller for Renewable Energy Converters, *International Transactions on Electrical Energy Systems*, 2025, DOI: 10.1155/etep/9913666
4. SJ Rind, **S Javed** et.al "Sliding mode control rotor flux MRAS based speed sensorless induction motor traction drive control for electric vehicles", *AIMS Electronics and Electrical Engineering*, 2023, DOI: 10.3934/electreng.2023019
5. S Zamir, **S Javed**, Saqib Rind, "A Comprehensive MATLAB based Optical Mark Reader and Database Generation System for the Windows Operating System", *QUEST Research Journal of Engineering Science and Technology*. 2023, DOI: 10.52584/qrj.2102.05
6. **S Javed**, K. Ishaque et. al "A Simple yet Fully Adaptive PSO Algorithm for Global Peak Tracking of Photovoltaic Array Under Partial Shading Conditions", *IEEE Transactions on Industrial Electronics*, 2022, DOI: 10.1109/tie.2021.3091921
7. **S Javed**, K. Ishaque "A comprehensive analyses with new findings of different PSO variants for MPPT problem under partial shading", *Ain Shams Engineering Journal*, 2022, DOI: 10.1016/j.asej.2021.101680
8. **S Javed**, Gulham e Mustafa Abro et.al "Piece-wise linear Fuzzy sliding mode controller for deep Submergence Rescue Vehicle", *Sir Syed University Research Journal of Engineering and Technology*, 2021, DOI: 10.33317/ssurj.371
9. Ashab Mirza, **S Javed** "An Effective & Efficient Implementation of OBE Framework within Constrained Pakistani Environment to Attain Desired Learning Outcomes", *Sir Syed University Research Journal of Engineering & Technology*. 2021, DOI: 10.33317/ssurj.390
10. **S Javed**, K. Ishaque et. al "A simplified yet effective fuzzy logic controller for chemical ship tanker", *Journal of Intelligent & Fuzzy Systems*, 2015, DOI: 10.3233/ifs-151708
11. Zeeshan Ali, **S Javed**, Kashif Ishaque, Shiraz Latif, and Muhammad G.U. Khan "Comparative Tuning of the Conventional Fuzzy Logic Controller for the Buck Power Converter", IASTED Modelling and Simulation. 2013, DOI: 10.2316/p.2013.802-066
12. **S Javed**, Max Malyi, Jonathan Shek, "A Simplified Fuzzy Sliding Mode Controller for PV Emulation", 13th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), 2024, DOI: 10.1109/icrera62673.2024.10815266
13. Aidha, **S Javed** and Yongheng Yang "Investigation of MPPT in Marine Bifacial PV Modules Utilizing a Cuk Converter with Consideration of Wave Dynamics and Albedo Fluctuations", IEEE International Communication Energy Conference, 2025 (Accepted).

AWARDS AND HONOR

1. British Council Women in STEM Post-doc fellow 2023-2024 at The University of Edinburgh, Scotland, United Kingdom.
2. Distinction in MS Electronics at Karachi Institute of Economics and Technology (KIET).
3. MS Leading to PhD Fellowship at Karachi Institute of Economics and Technology (KIET).
4. Academic Excellence and Scholarship during 4-year of Undergraduate studies at Institute of Industrial Electronics Engineering.
5. Bronze Medal in Bachelor Degree at Institute of Industrial Electronics Engineering.
6. PhD with Top Tier Publication in IEEE Transaction Journal.

REFERENCES

1. Dr. Kashif Ishaque
   Professor, Mohammad Ali Jinnah University (MAJU), Karachi-75190, Pakistan.
   Cell # 03332283832, Email: kashif.ishaque@jinnah.edu.pk.

2. Engr. Ashab Mirza, Associate Professor, IIEE, PCSIR, Karachi. (Retired)
   Address: ST-22/C, Block-6, Gulshan-e-Iqbal, University Road, Karachi.
   Cell # 0322 2637 339, Email: ashab@iiee.edu.pk