

# MUHAMMAD USMAN RAFIQUE



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## CAREER OBJECTIVE

Looking for a position for teaching faculty in your institution to use my strong passion for student's development, together with skills and experience that will enable me to make a significant difference at your institute.

## EDUCATION

Degree Obtained	Institute	CGPA/Marks	Session
<b>M.Sc. Energy Engineering</b>	University of Engineering & Technology, Lahore	3.45/4.00	2016-2018
<b>Bachelor of Electrical Engineering</b>	The University of Faisalabad	3.54/4.00	2010-2014
<b>F.Sc. Pre-Engineering</b>	Shiblee College of Science and Commerce	749/1100	2008-2010
<b>Matriculation</b>	Govt. City Muslim High school	667/850	2006-2008

## WORK EXPERIENCE

- **NIP internee as an Electrical Engineer at WAPDA since June-2016 to May-2017.**
  - Grid Station working principle.
  - Types and working principle of field instruments.
  - ERP simulation.
- **Electrical Engineer at Al-Aziz Packages Group since June- 2015 to May-2016.**
  - Load Management.
  - PCB repairing.
  - Plant operation, maintenance and troubleshooting.
- **Electrical Instructor at Muhammad Ali Jinnah Polytechnic Institute since March-2013 to june-2015.**
  - Practical work (PCB designing, Proteus, simulink).
  - Theoretical work (Basic Electrical Fundamentals).
- **Internship at Ibrahim Fibres since June-2013 to July-2013.**

- P&I process description.
- Types and working principle of field instruments.

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## PROJECT/RESEARCH WORK

- **“Hybrid High Frequency Power Inverter”**. The main features are:
  - Mini transformer power conversion so, light weighted, inexpensive, and power efficient transformation
  - Hybrid power distribution through WAPDA and solar panel
  - Intelligent load management systems
- **“Demineralization of Biofuel”**. The main features are:
  - To lower the mineral contents in biomass and coal while combustion
  - Optimized power generation
  - Reduction in ash content up to 90% and increment in energy value up to 8%
- **“Optimized Hybrid Power Distribution for Remote Areas”**. The main features are:
  - To design an efficient hybrid system having low power generation cost
  - To analyse its parameters by technical and economical perspective
  - To analyse simulated model of proposed system

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## MAJOR COURSES

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|------------------------------|--|
| ➤ Industrial process control | ➤ Power Electronics                      |
| ➤ Statistics and Forecasting | ➤ PV System Design                       |
| ➤ Clean Coal Technology      | ➤ Design and Management of Energy System |

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## SOFTWARE/TECHNICAL SKILLS

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|-----------------|-----------------|
| ➤ Mikro C       | ➤ PCB Designing |
| ➤ Packet tracer | ➤ MATLAB        |

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## Energy Forecasting Tools

- LEAP
- Artificial Neural Network
- Regression Analysis

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## Publications Under Review

- **Journal: Fuel Processing Technology**  
Title: Physiochemical and thermal study of the demineralized cotton stalk as a fuel for the optimum boiler operation
- **Journal: Biomass & Bioenergy**  
Title: An investigation on impact of demineralization of lignocellulosic corncob biomass using leaching agents for its utilization in the industrial boilers
- **Journal: Energy and Environment**

Title: To investigate the effect of demineralizing agents and their concentration on ash content and thermal degradation behaviour of coconut husk

## Energy Projects

- Forecast the energy demands for **Al-Aziz Packages Company** till the year 2014 to 2030.
- Analyze the energy consumption behavior for **WAPDA & SNGPL**.
- Techno-Economic analysis for renewable energy resources of **Chak 50/DB Gharbi, Bahawalpur**.

## HONORS AND ACHIEVEMENTS

- Won 2 times merit-based scholarship at The University of Faisalabad.
- Awarded IEEE certificates through participating in IEEE events.
- Won 2 times merit-based scholarship at Shiblee College of Science and Commerce.

## References

Name	University/Sector	Position	Phone	Email
<b>Dr. Sayyed Mohsin Kazmi</b>	UET, Lahore	Associate Professor	+9203334626903	drkazmi@uet.edu.pk
<b>Dr. Ch. Haider Al</b>	UET, Lahore	Assistant Professor	+923338115101	haiderali@uet.edu.pk
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