



**Full Name:** Engr. Syed Saad Ali

**Designation:** Lecturer

**Department:** Electrical Engineering

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## Short Introduction

Engr. Syed Saad Ali is a dynamic and dedicated lecturer in the Department of Electrical Engineering at the Faculty of Engineering Practices & Sciences. He holds both a bachelor's and a master's degree in Electrical Engineering, bringing a deep understanding of the discipline along with a strong passion for teaching. His areas of focus include Industrial Electronics, Linear Circuit Analysis, Electronic Devices, Electronic Circuit Design, and Power Generation.

His research and publications primarily focus on Engineering and Artificial Intelligence applications in Electrical Engineering, Electrical Power Engineering, IoT-based systems, DC-DC converters, and automation-driven energy-saving solutions. He has published his work in recognized HEC Y-category and Scopus indexed Journals.

He has extensive experience supervising several undergraduate projects, particularly in Electrical Engineering Technology. Notably, seven of the final-year projects under his supervision have been fully funded by the Ignite National Technology Fund (Ministry of Information Technology and Telecommunication).

## Experience

<b>08/2023 – Present</b> <b>Designation:</b> Lecturer <b>Department:</b> Electrical Engineering	<b>Nazeer Hussain University</b>	<b>Karachi</b>
<b>01/2020 – 08/2023</b> <b>Designation:</b> Laboratory Engineer <b>Department:</b> Electrical Engineering	<b>Nazeer Hussain University</b>	<b>Karachi</b>



## Educational Information

- **Master of Engineering (M.E)-Electrical (2023) from Hamdard University.**  
**Thesis Topic: Techno-economic Feasibility Analysis for Gas Turbine and Reciprocating Engine Based Power Generation Using Biogas**
- **Bachelor of Engineering (B.E) - Electrical (2018) from Nazeer Hussain University Karachi.**  
**PEC registered Engineer.**

## Achievements, Research/Publications

### **Professional Associations:**

- **Registered Pakistan Engineering Council member**
- **IEEE member**

### **Publications:**

- **Syed Saad Ali**, Shujaat Ali, Saqib Munawwar, Fasih Ahmed, M. Nawaz Rahim, M. Sohail Tanoli, M. Kamran, Perfshan Erum, Aisha Ghufraan “Modeling and Implementation of a Density-Based Traffic Management System via Programmable Logic Controller”, International Journal of Innovations in Science and Technology Vol. 7 No. 3(2025) (HEC Y Category).
- **Syed Saad Ali**, Shujaat Ali, Khurram Iqbal, Saqib Munawwar, Bilawal Raza, Aftab Ahmed Almani, Muhammad Jawad “Design and control of efficient wireless electrical energy transfer”, Policy Research Journal Vol. 3 No. 7(2025) (HEC Y Category).
- **Syed Saad Ali**, Syed Safdar Hussain, Khurram Iqbal, Hammad Khawer, Shujaat Ali, Adnan Ahmed Siddiqui, Umme Aiman” Towards sustainable energy management: an ioe integrated intelligrid home framework” Center for Management Science Research, 3(5) 2025, 159-169.
- Khurram Iqbal, Syed Saad Ali, Abdul Ahad, Ghulam Mohiuddin Khan, Ahmed Hamza Khan, Yousuf Qasim “Artificial intelligence based real-time smoke and fire detection and security management algorithms”, VFAST Transactions on Software Engineering Vol. 13 No. 1(2025) (HEC Y Category).
- Shujaat Ali, **Syed Saad Ali**, Sajjad Ali , Asad A. Zaidi, Ahsan Zafar, Saqib Munawwar, Muhammad Shafique “Development of automated fire control system: An integrated solution for gas, fire and smoke detection”, Pakistan Journal of Engineering, Technology & Sciences Vol. 13 No. 1(2025) (HEC Y Category).



- **Syed Saad Ali**, Shujaat Ali, Asad A. Zaidi, Junaid Khan, Ahsan Zafar, Saqib Munawwar, Hermain Fayyaz Karim “Techno-economic feasibility and sustainability of a solar-powered smart irrigation system in Pakistan”, International Journal of Energy, Environment, and Economics Volume 32 Issue 3 2025 (HEC Y Category).
- Farhat M. Khan, Saqib Munawwar, **Syed Saad Ali**, Khurram Iqbal, Mahrukh Shoaib, Shumaila Qamar, Hamza Saleem, & Bilawal Raza “Intelligent Bluetooth-driven Automation: Multi- sensor integration for real-time smart home control” Spectrum of Engineering Sciences, Volume 3 No. 7 2025 (HEC Y Category).
- **Syed Saad Ali**, Muhammad Ayaz Shirazi, Khurram Iqbal, Muhammad Arshad Yaqoob, Sajid Ali “Artificial intelligence in diabetes detection: a comprehensive review of methods, challenges, and future directions”, The Research of Medical Science Review Vol. 3 No. 8(2025) (HEC Y Category).
- Asif Raza, Muzammil Ahmad Khan, Muhammad Kashif Shaikh, Osama Ahmed Siddiqui, **Syed Saad Ali**, Jahangir Ahsan “Emergencare: mobile emergency alert and support system”, Kashf Journal of Multidisciplinary Research Vol. 2 No. 01 (2025): Jan 2025 (HEC Y Category).
- Khurram Iqbal, **Syed Saad Ali**, Zubair Sajid, Mirza Samad, Laiba Mubarak, Sajid Ali” Advancement in Smart Vision Systems: A Computer Vision-Based Assistive System for Visually Impaired Individuals” VAWKUM Transactions on Computer Sciences Vol. 13 No. 1 (2025): January-June (HEC Y Category).
- **Syed Saad Ali**, Asad A. Zaidi, Rashid Hussain, Abdul Hameed Memon, Shujaat Ali, “Techno-economic Feasibility Analysis for Gas Turbine and Reciprocating Engine Based Power Generation Using Biogas: A case study of Karachi, Pakistan”, The Energy and Thermofluids Engineering journal Vol. 5 (2025) (Scopus Indexed).
- Shujaat Ali, **Syed Saad Ali**, Muzammil Ahmad Khan, Muhammad Ahmed Hussain, Masroor Khan, Hermain Fayyaz Karim “IoT enabled implementation of a smart energy management system for real-time monitoring and controlling”, VAWKUM Transactions on Computer Sciences Vol. 12 No. 2 (2024) (HEC Y Category).
- **Syed Saad Ali**, Shujaat Ali, Muzammil Ahmad Khan, Muhammad Muzzammil, Muhammad Faraz Khan, Khurram Iqbal, Syed Atir Iftikhar “Advancing lithium-ion battery management: a portable arduino-based health monitoring solution”, Kashf Journal of Multidisciplinary Research Vol. 1 No. 12 (2024): Dec 2024(HEC Y Category).
- **Syed Saad Ali**, Shujaat Ali , Junaid Khan , Zarak Khan , Muhammad Saleem , Saqib Munawwar “Design and implementation of a sustainable microcontroller based solar power automatic water irrigation control and monitoring system”, Pakistan Journal of Engineering, Technology & Sciences Vol. 12 No. 1 (2024) (HEC Y Category).



- Shujaat Ali, Yanbo Che, **Syed Saad Ali**, Ronak Ali, Muhammad Shakir “Application of Robust Control in Power Electronic DC-DC Converter”, 5th International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS-2023).
- Shujaat Ali, **Syed Saad Ali**, Ubaid ullah, Farhat Muhammad Khan, Ronak Ali “ Lighting Control with Building Automation and Motion Sensors for Energy Efficiencies” 3rd International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS),2018.

### **Research Grants:**

- **Title: Wireless electrical power transfer system, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 63,700/.**
- **Title: Design and development of gas, fire, smoke, detection, control and management system, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 79,000/**
- **Title: Design & implementation of a three phase industrial equipment safety trainer, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 63,714/**
- **Title: Smart water consumption measuring system, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 52,726/**
- **Title: Trainer for Monitoring and Protection of Various Electrical Motors, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 76,761/**
- **Title: Design IoT based Three Phase Transmission Line Fault Detection & Analysis System Using Arduino, National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 42,872/**
- **Title: Arduino Based Portable Lithium-Ion Cell Health Analyzing Machine National Grassroots ICT Research initiative (NIGRI), IGNITE, Ministry of IT. Total Award Amount: 60,000**