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### Qualification

Year	Degree/Certificate	Name of the Institute/ University	Field of study
Ongoing	PhD	University of Nebraska-Lincoln, NE, USA	Engineering
2018	MS	BUIITEMS, Quetta, Pakistan	Electrical Engineering
2012	BS	BUIITEMS, Quetta, Pakistan	Electronic Engineering

### Publications in HEC Recognized journals

S. No	Title of Paper	Name of Journal	National/ International	Publication date
1	Genetic algorithm optimization of heliostat field layout for the design of a central receiver solar thermal power plant	Elsevier - Heliyon	International	November 2023
2	A Data-Driven Comparative Analysis of Lithium-Ion Battery State of Health and Capacity Estimation	Taylor & Francis – Electric Power Components and Systems	International	January 18, 2023

### Paper Presented

S. No	Title of Paper	Name of Conference	National/ International	Date
1	Machine Learning-Enabled Power Converter Optimization for Next-Generation Data Centers: A Review	IEEE ECCE 2023 – Nashville, USA	International	Oct 29 – Nov 2, 2023
2	Learning Predictive Models for Underground Coal Mine Environment Using Sensor Data	IEEE ICE Cube 2021 – Quetta, Pakistan	International	Oct 27-28, 2021
3	Heliostat Field Layout: An Overview of Modern Trends in Generation,	5 <sup>th</sup> IECC 2020 – Karachi,	National	Feb 21-22, 2020

	Optimization, and Control Strategies	Pakistan		
4	Battery Health Monitoring for Commercialized Electric Vehicle Batteries: Lithium-Ion	IEEE PGSRET 2019 – Istanbul, Turkey	International	Aug 26-27, 2019
5	A Comparative Study of Faults in Grid-Tied Inverters and Their Possible Solutions	IEEE ICECCE 2019 – Mingora Swat, Pakistan	International	July 24-25, 2019
6	State of The Art Tidal Energy Systems: Issues, Challenges, and Possible Solutions	IEEE PGSRET 2018 – Islamabad, Pakistan	International	Sept 10-12, 2019
7	A Study of Asymmetrical Multilevel Inverter Topologies with Less Number of Devices and Low THD: A Review			
8	Efficiency and Cost Analysis of Power Sources in Impressed Current Cathodic Protection System for Corrosion Prevention in Buried Pipelines of Balochistan, Pakistan	IOP ICAET 2018 – Quetta, Pakistan	International	April 2-3, 2019

#### Books Authored/ Edited

S. No	Name of book	Publisher	ISBAN
1	The Story of Geopolitics and Socioeconomic Realms – CPEC Chapter “Harnessing the Energy Landscape: Policies, Solutions, and Generation Scenarios for CPEC”.	China Study Center, BUIITEMS, Quetta	978-969-23925-0-1

#### Work Experience

S. No	From (year)	To (year)	Name of the Institution/ Organization	Position held
1	Jan 2015	Till Date	BUIITEMS, Quetta	Lecturer
2	Nov 2012	Dec 2012	AH Automation Pvt. Ltd, Islamabad	Assistant Technical Manager
3	Mar 2013	Apr 2013	PTCL, Lahore	Intern
4	Aug 2011	Sep 2011	QESCO, Quetta	Intern
5	Feb 2011	Mar 2011	PTV, Quetta	Intern
6	Jul 2010	Mar 2011	BUIITEMS, Quetta	Research Assistant

<b>Area of specialization</b>	Industrial Control Systems and Hardware Security
<b>Research Interest</b>	Power Electronics, Industrial Automation, Industrial Internet of Things, AI, Digital Twin, Hardware Security, and Renewable Energy Technology.
<b>Future Research Plans</b>	Machine learning-enabled converter optimization for next generation data centers, hardware security of industrial control systems in industry 4.0, digital twins of industrial internet of things for program integrity and attestation, and energy harvesting for intermittent computing systems.
<b>HEC Approved supervisor</b>	No
<b>If Yes, provide HEC URL</b>	Not Applicable
<b>Research grants/ Projects</b>	7 IGNITE ICT R&D Undergraduate student research grants

**Awards and Memberships**

- Fulbright PhD Scholarship 2021
- Member IEEE
- Member IEEE Power and Energy Society
- Member Power America
- Registered Engineer PEC

**Bio**

Engr. Syed Owais Athar was born in Quetta, Pakistan. He received a B.S. in electronic engineering and an M.S. with distinction in electrical engineering from Balochistan University of Information Technology, Engineering and Management Sciences (BUIITEMS), Quetta, Pakistan in 2012 and 2018, respectively. He is currently enrolled as a Fulbright Ph.D. Scholar at the University of Nebraska-Lincoln, Lincoln, Nebraska, USA.

Engr. Syed between 2012 and 2013 served as an Assistant Technical Manager in AH Automation (Pvt.) Ltd., Islamabad. Later in 2015, he joined the Balochistan University of Information Technology, Engineering, and Management Sciences, Quetta as a Lecturer in the Department of Electronic Engineering and is currently on study leave to pursue higher studies. He supervised 9 master thesis students and 31 undergraduate final-year projects out of which 7 received IGNITE ICT R&D research grants.

His research interests are machine learning-based power electronic converter design, real-time control, and optimization for various applications; redundant and optimal power architectures for the next-generation data centers enabling cloud computing, automation of industrial control systems and assembly lines; applications of power and industrial electronics; IOT-enabled next-generation smart industries (Industry 4.0); smart renewable energy technologies; energy harvesting for intermittent computing systems; intermittent computing systems; digital twins, and hardware security of programmable logic controllers for industrial control system and cyber-physical systems.

He is a Registered Engineer at the Pakistan Engineering Council (PEC). He is a member of multiple international organizations and accrediting bodies like the Institute of Electrical and Electronics Engineers (IEEE), IEEE Power and Energy Society, and Power America. He is the founder and President of the Society of Electronic Engineering (SEEB) BUIITEMS and the advisor of the IEEE Power and Energy Society BUIITEMS Branch Chapter. He is a Microsoft Certified Educator and certified Microsoft Office Expert.