



## **Shayan Tariq Jan**

Lecturer

Department of Energy Technology

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### **EDUCATION**

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| <b>PhD in Renewable Energy Engineering</b><br>USPCAS-E, University of Engineering and Technology, Peshawar, Pakistan              | In Progress  |
| <b>Masters in Energy System Engineering</b><br>USPCAS-E, National University of Sciences & Technology (NUST), Islamabad, Pakistan | Aug 2017     |
| <b>Photovoltaic Reliability Lab Training</b><br>Arizona State University, Arizona, USA  | Aug-Dec 2016 |
| <b>Technology Entrepreneurship</b><br>Arizona State University, Arizona, USA  | Aug-Dec 2016 |
| <b>Bachelor in Electrical Engineering (Power)</b><br>Air University, Islamabad, Pakistan  | June 2014    |

### **AWARDS AND ACHIEVEMENTS**

- **Full MS Scholarship**, NUST, 2014–2017.
- **USAID Energy Exchange Program**, Arizona State University, USA, Fall Semester, 2016.

### **TEACHING INTERESTS**

Photovoltaic, Renewable Energy Resources & Technologies, Power System Analysis, Power Electronics.

### **RESEARCH INTERESTS**

3<sup>rd</sup> Generation Perovskite Solar Cells, Numerical Modelling of PV cells, Photovoltaic systems, Power Converters, Renewable Energy.

### **EXPERIENCE**

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| • <b>Lecturer</b> , Department of Energy Technology<br>University of Technology Nowshera, KPK, Pakistan           | Aug 2022 – Present   |
| • <b>Lab Engineer</b> , Department of Electrical Engineering<br>Iqra National University, Peshawar, KPK, Pakistan | Oct 2019 – July 2022 |
| • <b>Lecturer</b> , Department of Electrical Technology<br>Iqra National University, Peshawar, KPK, Pakistan      | Sep 2017 – Sep 2019  |
| • <b>Research Scholar</b> , Photovoltaic Reliability Lab<br>Arizona State University, Arizona, USA                | Aug 2016 – Dec 2016  |
| • <b>Teaching Assistant</b> , MRC<br>National University of Sciences & Technology (NUST), Islamabad, Pakistan     | Feb 2016 – May 2016  |

## **SOFTWARE SKILLS**

- SCAPS-1D.
- Ret Screen
- Homer Pro
- MATLAB
- Lab View

## **RESEARCH PROJECTS**

- Efficiency & Stability Enhancement of Lead-Free Perovskite Solar Cells using Novel Charge Transport Materials (Ph. D)
- A Study on grid tied Photovoltaic System converters for the application of Power Conditioning (M.S)
- Power Generation from speed breaker using hydraulic pump (B.S)

## **RESEARCH PUBLICATIONS**

1. Influence of layer thickness, defect density, doping concentration, interface defects, work function, working temperature and reflecting coating on lead-free perovskite solar cell  
Authors: **ST Jan**, M Noman  
Journal: Solar Energy, Volume 237, 1 May 2022 [29-43]  
<https://doi.org/10.1016/j.solener.2022.03.069>
2. Reduction of Electrical Stresses in Grid Micro Inverter through Semiconductor Switches  
Authors: M Tahir, S Ahmed, **ST Jan**.  
Journal: International Journal of Nanoelectronics and Materials, VOL. 15, NO 2, APRIL 2022 [107-128].
3. A comprehensive overview on the impact of widespread deployment of Electric Vehicles on Power Grid  
Authors: AZ Khan, **ST Jan**, AK Janjua, ZN Ahmad.  
Conference: IEEE International Conference on Smart Grid and Smart Cities (ICSGSC) IEEE, Singapore, July 23-26 2017.  
[DOI: 10.1109/ICSGSC.2017.8038575](https://doi.org/10.1109/ICSGSC.2017.8038575)
4. A study on GaN based converters for the application of Power Conditioning of Photovoltaic systems  
Authors: **ST Jan**, AZ Khan, AK Janjua, ZN Ahmad.  
Conference: IEEE International Conference on Electrical Engineering, IEEE, Lahore, Pakistan. March 2-3 2017  
[DOI: 10.1109/ICEE.2017.7893438](https://doi.org/10.1109/ICEE.2017.7893438)
5. Transformer Failure Causes & Impact  
Authors: **ST Jan**, R Afzal, AZ Khan.  
Conference: International Conference Data Mining, Civil and Mechanical Engineering. Bali, Indonesia, Feb 1-2, 2015, iieng.org.  
<http://dx.doi.org/10.15242/II.E0215039>