

Ihsan Ullah Khalil

Assistant Professor  
Pakistan Navy Engineering College

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About

Dr. Ihsan Ullah Khalil is working as Assistant Professor in the Pakistan Navy Engineering College. Dr. Ihsan Ullah Khalil has a PhD in Electrical Engg.. Dr. Ihsan Ullah Khalil has published 28 research articles & conference papers having a citation count of 302, carried out 0 projects and filed 0 intellectual property.

Qualifications

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|-------------------------------------------------------------------------|-------------|
| <b>PhD in Electrical Engg.</b><br>NUST, Islamabad , Pakistan            | 2018 - 2024 |
| <b>MS in Electrical Engg.</b><br>City University (PAK) , Pakistan       | 2015 - 2017 |
| <b>BE in Electronics</b><br>International Islamic University , Pakistan | 2007 - 2011 |

Experience

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| <b>Assistant Professor</b><br>Pakistan Navy Engineering College                                                    | 2025- Present |
| <b>Temporary Visiting Faculty</b><br>College of Electrical & Mechanical Engineering                                | 2023 - 2023   |
| <b>Research Associate</b><br>NUST , NUST College of Electrical and Mechanical Engineering, NUST                    | 2022 - 2024   |
| <b>Lecturer</b><br>Abasyn University , Abasyn University                                                           | 2018 - 2022   |
| <b>Lab Engineer</b><br>Abasyn University , Abasyn University                                                       | 2016 - 2018   |
| <b>USaid Project member</b><br>US Pakistan Energy Center , Abasyn University-UET Peshawar                          | 2016 - 2017   |
| <b>Principal and Instructor</b><br>Muslim College of Technology, Peshawar , Muslim College of Technology, Peshawar | 2011 - 2016   |

Research Articles

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Deep learning based vision transformer approach for detecting overlapping PV faults using multi labeling</b><br><i>Umais Khan Ihsan Ullah Khalil Matiullah Ahsan Sarim Farqaleet Khan</i><br><i>Measurement</i> , Volume 256, Part E, Article Number 118537<br><b>Impact Factor:</b> 5.600   <b>Quartile:</b> 1<br><b>DOI:</b> <a href="https://doi.org/10.1016/j.measurement.2025.118537">https://doi.org/10.1016/j.measurement.2025.118537</a> | 2025 |
| <b>Comparative analysis of mathematical and simulation models for electric field generated beneath 400 kV overhead transmission lines</b><br><i>Matiullah Ahsan Md Nor Ramdon Baharom Ihsan Ullah Khalil Zainab Zainal</i><br><i>Measurement</i> , Volume:256<br><b>Impact Factor:</b> 5.600   <b>Quartile:</b> 1<br><b>DOI:</b> <a href="https://doi.org/10.1016/j.measurement.2025.118566">https://doi.org/10.1016/j.measurement.2025.118566</a>  | 2025 |
| <b>Analysis of high-ampacity and low-sag conductors of 275 kV overhead transmission lines using reconductoring technique</b>                                                                                                                                                                                                                                                                                                                        | 2025 |

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| <p><i>Matiullah Ahsan MD Nor Ramadon Baharom Ihsan Ullah Khalil Zainab Zainal</i><br/> <i>Electric Power Systems Research</i>, Volume 246, Article Number 111719</p> <p><b>Impact Factor:</b> 3.300   <b>Quartile:</b> 2<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.epshr.2025.111719">https://doi.org/10.1016/j.epshr.2025.111719</a></p>                                                                                                                                                                               |      |
| <p><b>Simulation-based analysis of electric field characteristics under high-voltage double-circuit and quadrupole overhead transmission lines</b></p> <p><i>Matiullah Ahsan MD Nor Ramdon Baharom Ihsan Ullah Khalil Zainab zainal</i><br/> <i>Journal of Electrostatics</i>, Volume 135, Article Number 104080</p> <p><b>Impact Factor:</b> 1.900   <b>Quartile:</b> 2<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.elstat.2025.104080">https://doi.org/10.1016/j.elstat.2025.104080</a></p>                             | 2025 |
| <p><b>A fuzzy reconfiguration approach for mitigating power losses in PV systems</b></p> <p><i>Ihsan Ullah Khalil Azhar UI Haq Marium Jalal Mati Ullah Ahsan Usman Ghumman</i><br/> <i>Results in Engineering</i>, Volume 25, Article Number 103965</p> <p><b>Impact Factor:</b> 6.000   <b>Quartile:</b> 1   <b>Citations:</b> 4<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.rineng.2025.103965">https://doi.org/10.1016/j.rineng.2025.103965</a></p>                                                                    | 2025 |
| <p><b>Improving electric field stress using grading ring devices for insulated cross-arm</b></p> <p><i>Matiullah Ahsan Md Nor Ramdon Baharom Zainab Zainal Ihsan Ullah Khalil Norain Sahari Ramy N.R. Ghaly</i><br/> <i>Results in Engineering</i>, Volume 23, Article Number 102550</p> <p><b>Impact Factor:</b> 6.00   <b>Quartile:</b> 1   <b>Citations:</b> 2<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.rineng.2024.102550">https://doi.org/10.1016/j.rineng.2024.102550</a></p>                                    | 2024 |
| <p><b>Simulation based comparative analysis of electric field stress on insulated cross-arm</b></p> <p><i>Matiullah Ahsan Md Nor Ramdon Baharom Zainab Zainal Ihsan Ullah Khalil</i><br/> <i>Results in Engineering</i>, Volume 23, Article Number 102394</p> <p><b>Impact Factor:</b> 6.000   <b>Quartile:</b> 1   <b>Citations:</b> 5<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.rineng.2024.102394">https://doi.org/10.1016/j.rineng.2024.102394</a></p>                                                              | 2024 |
| <p><b>Measuring and simulation of magnetic field generated by high voltage overhead transmission lines</b></p> <p><i>Matiullah Ahsan Md Nor Ramdon Baharom Zainab Zainal Ihsan Ullah Khalil</i><br/> <i>Results in Engineering</i>, Volume 23, Article Number 102688</p> <p><b>Impact Factor:</b> 6.000   <b>Quartile:</b> 1   <b>Citations:</b> 6<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.rineng.2024.102688">https://doi.org/10.1016/j.rineng.2024.102688</a></p>                                                   | 2024 |
| <p><b>Parameters design optimization of grading ring based on electric field analysis through response surface methodology</b></p> <p><i>Matiullah Ahsan Md Nor Ramdon bin Baharom Zainab binti Zainal Ihsan Ullah Khalil</i><br/> <i>e-Prime - Advances in Electrical Engineering, Electronics and Energy</i>, Volume 8, Article Number 100569</p> <p><b>Impact Factor:</b> N/A   <b>Citations:</b> 5<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.prime.2024.100569">https://doi.org/10.1016/j.prime.2024.100569</a></p> | 2024 |
| <p><b>Enhancing photovoltaic systems using Gaussian process regression for parameter identification and fault detection</b></p> <p><i>Aqdas Javaid Imran Shafi Ihsan Ullah Khalil Shazor Ahmad MejdI Safran Sultan Alfarhood Imran Ashraf</i><br/> <i>Energy Reports</i>, Volume 11, Pages 4485-4499</p> <p><b>Impact Factor:</b> 5.200   <b>Quartile:</b> 2   <b>Citations:</b> 6<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.egy.2024.04.026">https://doi.org/10.1016/j.egy.2024.04.026</a></p>                         | 2024 |
| <p><b>A modified chess knight reconfiguration approach for mitigating power losses in PV systems</b></p> <p><i>Ihsan Ullah Khalil Azhar UI haq</i><br/> <i>Energy Reports</i>, Volume:11, Page:2204-2219</p> <p><b>Impact Factor:</b> 5.2   <b>Quartile:</b> 2   <b>Citations:</b> 11<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.egy.2024.01.066">10.1016/j.egy.2024.01.066</a></p>                                                                                                                                      | 2024 |
| <p><b>A deep learning-based transformer model for photovoltaic fault forecasting and classification</b></p> <p><i>Ihsan Ullah Khalil Azhar UI haq Naeem ul Islam</i><br/> <i>Electric Power Systems Research</i>, Volume 228, Article Number 110063</p> <p><b>Impact Factor:</b> 3.9   <b>Quartile:</b> 2   <b>Citations:</b> 18<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.epshr.2023.110063">https://doi.org/10.1016/j.epshr.2023.110063</a></p>                                                                       | 2024 |
| <p><b>A novel procedure for photovoltaic fault forecasting</b></p> <p><i>Ihsan Ullah Khalil Naeem ul Islam Azhar UI haq</i><br/> <i>Electric Power Systems Research</i>, Volume 226, Article Number 109881</p>                                                                                                                                                                                                                                                                                                                    | 2024 |

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| <b>Impact Factor: 3.9   Quartile: 2   Citations: 9</b><br><b>DOI:</b> <a href="https://doi.org/10.1016/j.epsr.2023.109881">https://doi.org/10.1016/j.epsr.2023.109881</a>                                                                                                                                                                                                                                                                                                                              |      |
| <b>High gain coupled inductor SEPIC based boost inverter using extended SPWM</b><br><i>Haris Ataullah Taosif Iqbal Ihsan Ullah Khalil Taimoor Hassan Enas Ali Saad A. Mohamed Abdelwahab</i><br><i>Energy Reports</i> , Volume 10, Pages 4013-4024<br><b>Impact Factor: 5.2   Quartile: 2   Citations: 3</b><br><b>DOI:</b> <a href="https://doi.org/10.1016/j.egyr.2023.10.057">https://doi.org/10.1016/j.egyr.2023.10.057</a>                                                                        | 2023 |
| <b>A Novel Row Index Mathematical Procedure for the Mitigation of PV Output Power Losses during Partial Shading Conditions</b><br><i>Muhammad Zeeshan Naeem Ul Islam Faiz Ullah Ihsan Ullah Khalil Jaebyung Park</i><br><i>Symmetry</i> , Volume 15(3), Article Number 768<br><b>Impact Factor: 2.940   Quartile: 2   Citations: 4</b><br><b>DOI:</b> <a href="https://doi.org/10.3390/sym15030768">https://doi.org/10.3390/sym15030768</a>                                                            | 2023 |
| <b>Analysis of the Dual Active Bridge-Based DC-DC Converter Topologies, High-Frequency Transformer, and Control Techniques</b><br><i>Haris Ataullah Taosif Iqbal Ihsan Ullah Khalil Usman Ali Vojtech Blazek Lukas Prokop Nasim Ullah</i><br><i>Energies</i> , Volume 15(23), Article Number 8944<br><b>Impact Factor: 3.252   Quartile: 3   Citations: 24</b><br><b>DOI:</b> <a href="https://doi.org/10.3390/en15238944">10.3390/en15238944</a>                                                      | 2022 |
| <b>Analysis and Verification of Leakage Inductance Calculation in DAB Converters Based on High-Frequency Toroidal Transformers under Different Design Scenarios</b><br><i>Haris Ataullah Taosif Iqbal Ihsan Ullah Khalil Al-Sharef Mohammad Nasim Ullah Mohamed Emad Farrag</i><br><i>Energies</i> , Volume 15(17), Article Number 6176<br><b>Impact Factor: 3.252   Quartile: 2   Citations: 5</b><br><b>DOI:</b> <a href="https://doi.org/10.3390/en15176176">https://doi.org/10.3390/en15176176</a> | 2022 |
| <b>Unified Fuzzy Logic based Approach for Detection and Classification of PV Faults Using I-V trend line</b><br><i>Taosif Iqbal Imran Hussain Ihsan Ullah Khalil Aqsa Islam Mati Ullah Ahsan Md. Shahariar Chowdhury Kuaanan Techato Nasim Ullah</i><br><i>Energies</i> , Volume 15(14), Article Number 5106<br><b>Impact Factor: 3.252   Quartile: 3   Citations: 8</b><br><b>DOI:</b> <a href="https://doi.org/10.3390/en15145106">https://doi.org/10.3390/en15145106</a>                            | 2022 |
| <b>A novel approach of overtaking maneuvering using modified RG method</b><br><i>Usman Ghumman Hamid Jabbar Mohsin Islam Tiwana Kunwar Faraz Ihsan Ullah Khalil</i><br><i>PLoS One</i> , Volume 17(1), Pages e0260455<br><b>Impact Factor: 3.240   Quartile: 2   Citations: 2</b><br><b>DOI:</b> <a href="https://doi.org/10.1371/journal.pone.0260455">https://doi.org/10.1371/journal.pone.0260455</a>                                                                                               | 2022 |
| <b>Feedback PID Controller-Based Closed-Loop Fast Charging of Lithium-Ion Batteries Using Constant-Temperature–Constant-Voltage Method</b><br><i>Ayesha Kaleem Ihsan Ullah Khalil Sara Aslam Nasim Ullah Sattam Al Otaibi Merfat Algethami</i><br><i>Electronics</i> , Volume 10, Article Number 2872<br><b>Impact Factor: 2.690   Quartile: 3   Citations: 15</b><br><b>DOI:</b> <a href="https://doi.org/10.3390/electronics1022872">https://doi.org/10.3390/electronics1022872</a>                  | 2021 |
| <b>Solver-Based Mixed Integer Linear Programming (MILP) Based Novel Approach for Hydroelectric Power Generation Optimization</b><br><i>Azhar-ul-Haq Aqib Perwaiz Jasvinder Kumar Ihsan Ullah Khalil Khalid Mehmood</i><br><i>IEEE Access</i> , Volume 8, Pages 174880-174892<br><b>Impact Factor: 3.367   Quartile: 2   Citations: 11</b><br><b>DOI:</b> <a href="https://doi.org/10.1109/ACCESS.2020.3024727">10.1109/ACCESS.2020.3024727</a>                                                         | 2020 |
| <b>Comparative Analysis of Photovoltaic Faults and Performance Evaluation of Its Detection Techniques</b><br><i>Azhar-ul-Haq Yousef Mahmoud Marium Jalal Muhammad Aamir Mati Ullah Ahsan Khalid Mehmood Ihsan Ullah Khalil</i><br><i>IEEE Access</i> , Volume 8, Pages 26676-26698<br><b>Impact Factor: 3.367   Quartile: 2   Citations: 79</b><br><b>DOI:</b> <a href="https://doi.org/10.1109/ACCESS.2020.2970531">10.1109/ACCESS.2020.2970531</a>                                                   | 2020 |
| <b>A Unified Approach for Analysis of Faults in Different Configurations of PV Arrays and its Impact on Power Grid</b><br><i>Saba Gul Marium Jalal Almas Anjum Azhar-ul-Haq Ihsan Ullah Khalil</i><br><i>Energies</i> , Volume 13, Issue 1, Article Number 156                                                                                                                                                                                                                                         | 2019 |

**Impact Factor:** 2.702 | **Quartile:** 3 | **Citations:** 27  
**DOI:** <https://doi.org/10.3390/en13010156>

Cross-Border Power Trade and Grid Interconnection in SAARC Region: Technical Standardization and Power Pool Model2019

*Azhar-ul-Haq Muhammad Almas Anjum Mohammad Shahmeer Hassan Marium Jalal Shoaib Ahmad Ihsan Ullah Khalil Asad Waqar*  
*IEEE Access* , Volume 7 , Pages 178977-179001  
**Impact Factor:** 3.745 | **Quartile:** 1 | **Citations:** 21  
**DOI:** 10.1109/ACCESS.2019.2958407

Conference Proceedings

Optimized PV System Integrated Microgrid Configuration2023

*Azhar UI haq Saad Ahmed Ihsan Ullah Khalil Marium Jalal*  
*2023 IEEE 20th International Conference on Smart Communities: Improving Quality of Life using AI, Robotics and IoT (HONET)* res.country(233,)  
**Citations:** N/A  
**DOI:** 10.1109/HONET59747.2023.10374941

Optimal Configuration of Microgrids with Increased Distributed Energy Resources2022

*Azhar UI Haq SAAD AHMAD MARIUM JALAL Ihsan Ullah Khalil*  
*19th International Conference on Sustainable Energy Technologies*, res.country(224,)  
**Citations:** N/A  
**DOI:** <https://wsset.org/istanbul-2022/>

Editorial Activities

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|-----------------------------------------------------------------------------------------------------------------|------|
| <b>IEEE Latin America Transactions</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.3</b>             | 2025 |
| <b>Expert Systems With Applications</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 7.5</b>            | 2025 |
| <b>Computers &amp; Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 0.4</b>      | 2025 |
| <b>IEEE Latin America Transactions</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.3</b>             | 2025 |
| <b>Energy Reports</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 4.7</b>                              | 2025 |
| <b>Alexandria Engineering Journal</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 6.2</b>              | 2025 |
| <b>Electric Power Systems Research</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 3.9</b>             | 2025 |
| <b>Journal of Renewable and Sustainable Energy</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.9</b> | 2025 |
| <b>Signal, image and video processing</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 2.0</b>          | 2025 |
| <b>Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 2.8</b>                      | 2024 |
| <b>Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.6</b>                      | 2024 |
| <b>Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.6</b>                      | 2024 |
| <b>Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.6</b>                      | 2024 |
| <b>Electrical Engineering</b><br>Reviewed Papers for Journals<br><b>Impact Factor: 1.6</b>                      | 2024 |