

Muhammad Farasat Abbas

Assistant Professor

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About

Dr. Muhammad Farasat Abbas is working as Assistant Professor in the US-Pakistan Center for Advanced Studies in Energy. Dr. Muhammad Farasat Abbas has a PhD in Electrical Engineering (High Voltage). Dr. Muhammad Farasat Abbas has published 19 research articles & conference papers having a citation count of 82, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Electrical Engineering (High Voltage) Xi'an Jiaotong University , China	2016 - 2021
MS in Electrical Engineering (Power System) Xi'an Jiaotong University , China	2013 - 2015
BSc in Electrical (Power) Engineering Islamia University of Bahawalpur , Pakistan	2008 - 2012

Experience

Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2025- Present
Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2022 - 2022
Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2022 - 2025

Research Articles

Thermal degradation and multi-performance aging assessment of low voltage nuclear cable <i>Ehtasham Mustafa Usama Ibrahim Naveed Ahmed Iftikhar Ahmed Abdul Rehman Abbasi Aamir Nawaz Muhammad Farasat Abbas Zaltan Adam Tamus</i> <i>Electric Power Systems Research</i> , Volume:250, Article Number 112128 Impact Factor: 4.200 Quartile: 2 DOI: https://doi.org/10.1016/j.epsr.2025.112128	2026
Polarity-driven pulsed discharge plasma characteristics and hydrogen production optimization in methanol solution <i>Jingyu Liu Bing Sun Yutong Yang Muhammad Farasat Abbas Jiabao Sun Victor F. Tarasenko Yanbin Xin</i> <i>International Journal of Hydrogen Energy</i> , Volume:157, Article Number 150455 Impact Factor: 8.300 Quartile: 1 DOI: https://doi.org/10.1016/j.ijhydene.2025.150455	2025
Impact of Electro-UV Aging on the Insulation Performance of PVC/ZnO Nanocomposites for Outdoor Applications <i>Muhammad Farasat Abbas Salman Khan Aymen Flah Claude Ziad El-Bayeh Kamel A. Shoush Bander Saman Wasim Ullah</i> <i>IEEE Access</i> , Volume 13, Pages 67415-67433 Impact Factor: 3.400 Quartile: 1 DOI: https://doi.org/10.1109/ACCESS.2025.3559243	2025
Numerical investigation of positive and negative streamers in CO2/O2 mixtures <i>Hafiz Muhammad Tahir Nisar Muhammad Farasat Abbas Guang Yu Sun</i> <i>Physics of Plasmas</i> , Volume:32, Issue:2, Article Number 022109 Impact Factor: 2.000 Quartile: 3 DOI: https://doi.org/10.1063/5.0247448	2025

Examining the Interplay of Dust and Defects: A Comprehensive Experimental Analysis on the Performance of Photovoltaic Modules <i>Ahsan Azeem Muhammad Farasat Abbas Naveed Ahmed Syed Ali Abbas Kazmi Talal Alharbi Abdulelah Alharbi Sherif S.M. Ghoneim</i> <i>Heliyon</i> , Volume 10, Issue 17, Article Number e36796 Impact Factor: 3.400 Quartile: 1 DOI: https://doi.org/10.1016/j.heliyon.2024.e36796	2024
Techno-economic assessment and optimization framework with energy storage for hybrid energy resources in base transceiver stations-based infrastructure across various climatic regions at a country scale <i>Muhammad Bilal Ali Syed Ali Abbas Kazmi Shahid Nawaz Khan Muhammad Farasat Abbas</i> <i>Journal of Energy Storage</i> , Volume 72, Part A, Article Number 108036 Impact Factor: 9.4 Quartile: 1 Citations: 18 DOI: https://doi.org/10.1016/j.est.2023.108036	2023
Performance assessment and root-cause analysis of a deteriorating On-Grid Industrial PV System for the identification of newly originating power degrading defect <i>Raja ammar tasadduq Khan Muhammad Farasat Abbas Atif Naveed Khan Naveed Ahmed Mumtaz Ahmed Qaisrani Mohsen Assadi</i> <i>Energy for Sustainable Development</i> , Volume 76, Article Number 101306 Impact Factor: 5.5 Quartile: 2 Citations: 5 DOI: https://doi.org/10.1016/j.esd.2023.101306	2023
Positive Streamer Initiation in SF6/CO2 Based on Zener's Field Ionization <i>Muhammad Farasat Abbas Yan Liang He Guang Yu Sun An Bang Sun Elsayed Tag Eldin Sherif S. M. Ghoneim</i> <i>IEEE Access</i> , Volume: 11, Page(s): 91767-91776 Impact Factor: 3.9 Quartile: 2 Citations: 4 DOI: 10.1109/ACCESS.2023.3308688	2023
An alternative simulation approach for surface flashover in vacuum using a 1D2V continuum and kinetic model <i>Guang-Yu Sun Ru-Hui Lian Shu Zhang Xiong Yang Muhammad Farasat Abbas Chao Wang Bao-Hong Guo Bai-Peng Song Guan-Jun Zhang</i> <i>Journal of Physics D: Applied Physics</i> , Volume 56, Number:36, Article ID: 365205, Impact Factor: 3.409 Quartile: 2 Citations: 7 DOI: 10.1088/1361-6463/acd561	2023
3D particle-in-cell simulation of positive streamer initiation in highly pressurized gaseous, liquid and supercritical CO2 with field ionization <i>Muhammad Farasat Abbas Xu-Chu Yuan Han-Wei Li Jian-Yi Xue An-Bang Sun Guan-Jun Zhang</i> <i>High Voltage</i> , Volume 6, Issue 1, Pages 16-24 Impact Factor: 4.714 Quartile: 1 Citations: 6 DOI: https://doi.org/10.1049/hve2.12020	2022
On the pulsed–pulseless mode transition of negative DC corona in atmospheric nitrogen <i>Xing Zhang Yulin Guo Anbang Sun Yanru Li Guanjun Zhang Xuchu Yuan Muhammad Farasat Abbas</i> <i>Physics of Plasmas</i> , Volume 28, Issue 6, Article Number 063505 Impact Factor: 2.023 Quartile: 3 Citations: 4 DOI: https://doi.org/10.1063/5.0042885	2021
The Influence of O2 on Positive Streamer Initiation in Supercritical CO2 With Field Ionization Using a 3-D Particle Model <i>Muhammad Farasat Abbas Guang Yu Sun Xu Chu Yuan Xiao Ran Li Xing Zhang Anbang Sun GuanJun Zhang</i> <i>IEEE Transactions on Plasma Science</i> , Volume 49, Issue 6, Pages 1786-1793 Impact Factor: 1.222 Quartile: 4 Citations: 1 DOI: 10.1109/TPS.2021.3080038	2021
A 3D numerical study of positive streamers interacting with localized plasma regions <i>Xu Chu yuan Han Wei Li Muhammad Farasat Abbas Xiao Ran Li Zheng Wang Guan Jun Zhang An Bang Sun</i> <i>Journal of Physics D: Applied Physics</i> , Volume 53, Number 42, Article Number 425204 Impact Factor: 3.207 Quartile: 2 Citations: 19 DOI: https://doi.org/10.1088/1361-6463/ab9e38	2020

Conference Proceedings

Machine Learning based Fault Classification using Stray Flux and Stator Current in Induction Motor <i>Najeeb Ullah Muhammad Farasat Abbas Syed Ali Abbas Kazmi Muhammad Numan Hassan Abdullah Khalid</i> <i>2023 3rd International Conference on Artificial Intelligence (ICAI), res.country(282,)</i> Citations: N/A DOI: 10.1109/ICAI58407.2023.10136678	2023
Fractal analysis of positive streamer branching produced with field ionization in gaseous, liquid, and supercritical CO₂ <i>Muhammad Farasat Abbas Xing Zhang Anbang Sun Guanjun Zhang</i> <i>2021 IEEE 4th International Electrical and Energy Conference (CIEEC), res.country(274,)</i> Citations: N/A DOI: 10.1109/CIEEC50170.2021.9510711	2021
3D Particle-in-Cell Simulation of Positive Needle-to-Plane Streamer Discharge in SF₆ with Field Ionization <i>Muhammad Farasat Abbas Han Wei Li He Yan-Liang Anbang Sun Guanjun Zhang</i> <i>2019 IEEE Conference on Electrical Insulation and Dielectric Phenomena (CEIDP), res.country(233,)</i> Citations: N/A DOI: 10.1109/CEIDP47102.2019.9010540	2019
Advances in Simulation of Partial Discharge Characteristics of Air Gap Defects in Solid Insulating Materials <i>Muhammad Farasat Abbas Anbang Sun Zhang Guanjun Mingxiao Zhu</i> <i>The 18th National Conference on Plasma Science and Technology, res.country(48,)</i> Citations: N/A DOI: https://www.cstam.org.cn/getAcaEventById/825	2017
Inrush current discrimination in power transformer differential protection using wavelet packet transform based technique <i>Muhammad Farasat Abbas Liu Zhiyuan Hao Zhiguo Zhang Guanjun</i> <i>2016 IEEE PES Asia-Pacific power and energy engineering conference (APPEEC), res.country(48,)</i> Citations: N/A DOI: 10.1109/APPEEC.2016.7779634	2016

Editorial Activities

Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2024
 Reviewed Papers for Journals Impact Factor: 1.3	2024
 Reviewed Papers for Journals Impact Factor: 2.357	2024
Applied Physics Letters Reviewed Papers for Journals Impact Factor: 3.5	2024
IEEE Transactions on Plasma Science Reviewed Papers for Journals Impact Factor: 1.5	2024
Journal of Physics D: Applied Physics Reviewed Papers for Journals Impact Factor: 3.4	2024
Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2024
Physics of Plasmas	2023

Reviewed Papers for Journals Impact Factor: 2.357	
Plasma Sources Science and Technology Reviewed Papers for Journals Impact Factor: 4.124	2023
Journal of Physics D Reviewed Papers for Journals Impact Factor: 3.409	2023
IEEE Transactions on Plasma Science Reviewed Papers for Journals Impact Factor: 1.5	2023
Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.2	2023
Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2023
Reviewed Papers for Journals Impact Factor: N/A	2023
Journal of Physics D-Applied Physics Reviewed Papers for Journals Impact Factor: 3.409	2023
Reviewed Papers for Journals Impact Factor: EI Compendex, Scopus	2023
Journal of Applied Physics Reviewed Papers for Journals Impact Factor: 2.877	2023
Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2023
Physics of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2022
Physics Of Plasmas Reviewed Papers for Journals Impact Factor: 2.357	2022
AIP Advances Reviewed Papers for Journals Impact Factor: 1.697	2022
Reviewed Papers for Journals Impact Factor: 1.368	2022
Reviewed Papers for Journals Impact Factor: 2.357	2022
Reviewed Papers for Journals Impact Factor: 2.357	2022
Reviewed Papers for Journals Impact Factor: 1.839	2022

