

Muhammad Numan

Assistant Professor

US-Pakistan Center for Advanced Studies in Energy

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About

Dr. Muhammad Numan is working as Assistant Professor in the US-Pakistan Center for Advanced Studies in Energy. Dr. Muhammad Numan has a PhD in Electrical Power. Dr. Muhammad Numan has published 30 research articles & conference papers having a citation count of 548, carried out 1 projects and filed 0 intellectual property.

Qualifications

PhD in Electrical Power Shanghai Jiaotong University , China	2016 - 2021
MS in Electrical Power North China Electric Power University , China	2013 - 2016
BE in Electrical Power NUST, Islamabad , Pakistan	2009 - 2013

Experience

Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2023- Present
Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2022 - 2022
Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2022 - 2023
Assistant Professor US-Pakistan Center for Advanced Studies in Energy	2021 - 2022
Assistant Professor NUST , USPCAS-E, NUST	2021 - 2022

Awards

PhD Studentship Grant Recipient of Highly Competitive Shanghai Government Scholarship PhD Studentship Grant from Shanghai Municipality Council	2016
FDP Abroad Selected for the NUST FDP program in the field of Electrical Power Engineering from North China Electric Power University, Beijing, China	2013
CSC Scholar Awarded with the Chinese Scholarship council (CSC) scholarship for the entire MS degree in the field of Electric Power Systems and its Automation	2013
Academic Scholar Academic Scholar of Shell Pakistan Pvt (ltd) for the entire Bachelor Degree in Electrical Power Engineering (2009-2013).	2009

Research Projects

National Projects

Socio-Economic Assessment and Low Carbon Expansion planning model for Energy Projects under CPEC	2024
Funding Agency: HEC	
Amount: PKR 9,057,528.00	
Status: Approved_inprocess	

International Projects

Research Articles

Optimal distributed energy resources accommodation with techno-economic benefits using cheetah optimizer	2025
<i>Muhammad Shaarif Muhammad Yousif Muhammad Numan Muhammad Zubair Iftikhar Izhar us Salam Thamer A. H. Alghamdi</i>	
<i>IET Generation, Transmission & Distribution</i> , Volume19, Issue 1, Article Number e13322	
Impact Factor: 2.000 Quartile: 3 Citations: 1	
DOI: http://dx.doi.org/10.1049/gtd2.13322	
Enhancing sustainability in electric mobility: Exploring blockchain applications for secure EV charging and energy management	2024
<i>Muhammad Tayyab Rana Muhammad Numan Muhammad Yousif Tanveer Hussain Akif Zia Khan Xianxian Zhao</i>	
<i>Computers & Electrical Engineering</i> , Volume 119, Part A, Article Number 109503	
Impact Factor: 4.000 Quartile: 1 Citations: 11	
DOI: https://doi.org/10.1016/j.compeleceng.2024.109503	
Enhancing grid flexibility with coordinated battery storage and smart transmission technologies	2024
<i>Ayesha Muhammad Numan Musaed Alhussein Muhammad Faisal Baig Khursheed Aurangzeb</i>	
<i>Journal of Energy Storage</i> , Volume 100, Part B, Article Number 113607	
Impact Factor: 8.900 Quartile: 1 Citations: 3	
DOI: https://doi.org/10.1016/j.est.2024.113607	
Design islanded hybrid micro-grid and analyzing its socio-economic technical and environmental aspects for off-grid electrification in developing countries	2024
<i>Saleem Ullah Muhammad Yousif Muhammad Zeeshan Abid Muhammad Numan Mubashar Aslam Kataria</i>	
<i>Energy and Environment</i> , Pages 1-29	
Impact Factor: 3.154 Quartile: 3 Citations: 6	
DOI: https://doi.org/10.1177/0958305X221133256	
Decentralized Smart Energy Management in Hybrid Microgrids: Evaluating Operational Modes, Resources Optimization, and Environmental Impacts	2023
<i>Moatasim Billah Muhammad Yousif Muhammad Numan Izhar Us Salam SYED ALI ABBAS KAZMI THAMER A. H. ALGHAMDI</i>	
<i>IEEE Access</i> , Volume:11, Page:143530-143548	
Impact Factor: 3.9 Quartile: 2 Citations: 10	
DOI: 10.1109/ACCESS.2023.3343466	
Optimal Control and Communication Strategies in Multi-Energy Generation Grid	2023
<i>Muhammad Waseem Khan Guojie Li Keyou Wang Muhammad Numan Linyuin Xiong Muhammad Azam Khan</i>	
<i>IEEE Communications Surveys & Tutorials</i> , Volume 25, Issue 4, Pages 2599-2653	
Impact Factor: 35.6 Quartile: 1 Citations: 15	
DOI: 10.1109/COMST.2023.3304982	
Optimizing Distributed Generation Placement and Sizing in Distribution Systems: A Multi-Objective Analysis of Power Losses, Reliability, and Operational Constraints	2023
<i>Izhar Us Salam Muhammad Yousif Muhammad Numan Kamran Zeb Moatasim Billah</i>	
<i>Energies</i> , Volume 16, Issue 16, Article Number 5907	
Impact Factor: 3.2 Quartile: 3 Citations: 24	
DOI: 10.3390/en16165907	
Site suitability for solar and wind energy in developing countries using combination of GIS- AHP; a case study of Pakistan	2023
<i>Muhammad Ali Raza Muhammad Yousif Muhammad Hassan Muhammad Numan Syed Ali Abbas Kazmi</i>	
<i>Renewable Energy</i> , Volume 206, Pages 180-191	

Impact Factor: 8.634 Quartile: 1 Citations: 66 DOI: https://doi.org/10.1016/j.renene.2023.02.010	
Backstepping based real twisting sliding mode control for photovoltaic system <i>Sarmad Majeed Malik Mansoor Asif Muhammad Numan Sahid Ullah Yingyun Sun Junjie Hu Muhammad Kamran Bodla</i> <i>Frontiers in Energy Research</i> , Volume 10, Article Number :1087593 Impact Factor: 3.858 Quartile: 3 Citations: 1 DOI: 10.3389/fenrg.2022.1087593	2023
Impact of Dynamic Thermal Rating on optimal siting and sizing of energy storage systems under Renewable Portfolio Standards requirements <i>Muhammad Numan Mansoor Asif Muhammad Waseem Khan Sarmad Majeed Malik Fakhar Uddin Khilji</i> <i>Sustainable Energy, Grids and Networks</i> , Volume 32, Article Number 100881 Impact Factor: 5.405 Quartile: 1 Citations: 13 DOI: https://doi.org/10.1016/j.segan.2022.100881	2022
Optimal Restoration Sequence of Parallel Power System Using Genetic Algorithm † <i>Saad Ullah Aftab Muhammad Numan Hasaan Farooq Naseer Ahmed Zain Ul Hassan</i> <i>Engineering Proceedings</i> , Volume 20, Issue 1, Article Number 38 Impact Factor: N/A Citations: 2 DOI: https://doi.org/10.3390/engproc2022020038	2022
Exploiting the Inherent Flexibility in Transmission Network for Optimal Scheduling, Wind Power Utilization, and Network Congestion Management <i>Akif Zia Khan Kashif Imran Muhammad Numan Mansoor Asif Sarmad Majeed Malik</i> <i>IEEE Access</i> , Volume 9, Pages 88746-88758 Impact Factor: 3.476 Quartile: 2 Citations: 22 DOI: 10.1109/ACCESS.2021.3090089	2021
Network overloading management by exploiting the in-system batteries of electric vehicles <i>Usama Rahman Donghan Feng Hao Su Muhammad Numan Farukh Abbas</i> <i>International Journal of Energy Research</i> , Volume 45, Issue 4, Pages 5866-5880 Impact Factor: 4.672 Quartile: 1 Citations: 10 DOI: 10.1002/er.6207	2021
Coordinated operation of reconfigurable networks with dynamic line rating for optimal utilization of renewable generation <i>Muhammad Numan Donghan Feng Farukh Abbas Salman Habib Su Hao</i> <i>International Journal of Electrical Power and Energy Systems</i> , Volume 125, Article Number 106473 Impact Factor: 5.659 Quartile: 1 Citations: 41 DOI: doi:10.1016/j.ijepes.2020.106473	2021
Optimal energy management of residential battery storage under uncertainty <i>Hao Su Yun Zhou Donghan Feng Hengjie Li Muhammad Numan</i> <i>International Transactions on Electrical Energy Systems</i> , Volume 31, Issue 2, Article Number e12713 Impact Factor: 2.860 Quartile: 2 Citations: 6 DOI: 10.1002/2050-7038.12713	2021
Impact assessment of a co-optimized dynamic line rating and transmission switching topology on network expansion planning <i>Muhammad Numan Donghan Feng Farukh Abbas Usama Rahman Waqas Ahmad Wattoo</i> <i>International Transactions on Electrical Energy Systems</i> , Volume 30, Issue 8, Article Number e12457 Impact Factor: 2.86 Quartile: 2 Citations: 16 DOI: https://doi.org/10.1002/2050-7038.12457	2020
Enhanced control strategies of VSG for EV charging station under a low inertia microgrid <i>Aazim Rasool Xiangwu Yan Urfa Rasool Farukh Abbas Muhammad Numan Haaris Rasool Mohsin Jamil</i> <i>IET Power Electronics</i> , Volume 13, Issue 13 Impact Factor: 2.641 Quartile: 2 Citations: 18 DOI: doi: 10.1049/iet-pel.2019.1592	2020
A framework for stochastic estimation of electric vehicle charging behavior for risk assessment of distribution networks <i>Salman Habib Muhammad Mansoor Khan Farukh Abbas Muhammad Numan Yaqoob Ali</i> <i>Frontiers in Energy</i> , Volume 14, Issue 2, Pages 298–317	2020

Impact Factor: 2.709 | **Quartile:** 3 | **Citations:** 35
DOI: 10.1007/s11708-019-0648-5

A heuristically optimized comprehensive charging scheme for large-scale EV integration 2020
Farukh Abbas Donghan Feng Salman Habib Muhammad Numan Usama Rahman
International Transactions on Electrical Energy Systems, Volume 30, Issue 5, Article Number e12313
Impact Factor: 2.860 | **Quartile:** 2 | **Citations:** 5
DOI: DOI: 10.1002/2050-7038.12313

Mobilizing grid flexibility through optimal transmission switching for power systems with large-scale renewable integration 2020
Muhammad Numan DongHan Feng Farukh Abbas Salman Habib Aazim Rasool
International Transactions on Electrical Energy Systems, Volume 30, Issue 3, Article Number e12211
Impact Factor: 2.86 | **Quartile:** 2 | **Citations:** 12
DOI: <https://doi.org/10.1002/2050-7038.12211>

An Improved Optimal Forecasting Algorithm for Comprehensive Electric Vehicle Charging Allocation 2019
Farukh Abbas Donghan Feng Salman Habib Aazim Rasool Muhammad Numan
Energy Technology, Volume 7, Issue 10, Article Number 1900436
Impact Factor: 3.631 | **Quartile:** 3 | **Citations:** 22
DOI: 10.1002/ente.201900436

Optimal asset allocation of wind energy units in conjunction with demand response for a large-scale electric grid 2019
Waqas Ahmad Wattoo Muhammad Yousif Muhammad Tuoqeer Anwar Muhammad Numan Donghan Feng Sohaib Tahir
International Journal of Energy Research, Volume 43, Issue 10, Pages 5447-5459
Impact Factor: 3.741 | **Quartile:** 1 | **Citations:** 3
DOI: <https://doi.org/10.1002/er.4663>

Conference Proceedings

Machine Learning based Fault Classification using Stray Flux and Stator Current in Induction Motor 2023
Najeeb Ullah Muhammad Farasat Abbas Syed Ali Abbas Kazmi Muhammad Numan Hassan Abdullah Khalid
2023 3rd International Conference on Artificial Intelligence (ICAI), res.country(282,)
Citations: N/A
DOI: 10.1109/ICAI58407.2023.10136678

Impact Analysis of Future Probabilistic Growth of Rooftop PV in Gulshan-e-Iqbal Feeder of LESCO 2022
Raveena Kumari Kashif Imran Arqam Ilyas Farah ul Ain Muhammad Numan Sohail Khan
6th International Conference on Energy, Environment, and Sustainable Development 2022 (EESD2022), res.country(177,)
Citations: N/A
DOI: Not Available

Book Chapters

Agents-Based Energy Scheduling of EVs and Smart Homes in Smart Grid 2023
Muhammad Waseem Khan Guojie Li Keyou Wang Muhammad Numan Linyuin Xiong Sunhua Huang Muhammad Azam Khan
In: *Book on Smart Grid 3.0: Computational and Communication Technologies*, 1st Edition, Chapter 8, Page:185-219
Citations: 1
DOI: https://doi.org/10.1007/978-3-031-38506-3_8

A Comprehensive Topological Assessment of Power Electronics Converters for Charging of Electric Vehicles 2021
Salman Habib Farheen Ehsan Haoming Liu Muhammad Haroon Nadeem Farukh Abbas Muhammad Numan
In: *Book on Flexible Resources for Smart Cities*, First Edition, Chapter 7, Pages 133-183
Citations: 6
DOI: 10.1007/978-3-030-82796-0_7

Editorial Activities

Reviewed Papers for Journals Impact Factor: 2.503	2022
Reviewed Papers for Journals Impact Factor: -	2022
Reviewed Papers for Journals Impact Factor: 5.659	2022
Reviewed Papers for Journals Impact Factor: -	2022
Reviewed Papers for Journals Impact Factor: 3.858	2022
Reviewed Papers for Journals Impact Factor: 3.367	2021