Basharat Ullah

Assistant Professor

College of Electrical & Mechanical Engineering

Email: basharat.ullah@ceme.nust.edu.pk

Contact:

LinkedIn: https://www.linkedin.com/in/basharat-ullah-phd-675645136/



About

Dr. Basharat Ullah is working as Assistant Professor in the College of Electrical & Mechanical Engineering. Dr. Basharat Ullah has a PhD in Electrical Machines Design. Dr. Basharat Ullah has published 51 research articles & conference papers having a citation count of 276, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Electrical Machines Design COMSATS, Abbottabad , Pakistan	2019 - 2023
MS in Power Electronics and Control NUST, Islamabad , Pakistan	2015 - 2017
BSc in Electronics UET Peshawar , Pakistan	2011 - 2015
Experience	
Assistant Professor College of Electrical & Mechanical Engineering	2023- Present
Research Associate COMSATS Abbottabad Campus , Abbottabad	2022 - 2023

Lab Engineer

 ${\tt COMSATS} \ {\tt Abbottabad} \ , \ {\tt COMSATS}, \ {\tt Abbottabad}$

Reseach Associate

 ${\tt COMSATS} \ {\tt Abbottabad} \ , \ {\tt COMSATS}, \ {\tt Abbottabad}$

Qurtuba University of Science and IT, D.I.Khan, Sheikh Yousaf Road, D.I.Khan

2018 - 2019

2021 - 2022

2019 - 2021

Research Articles

Lecturer

Energy Management System and Control of Plug-in Hybrid Electric Vehicle Charging Stations in a Grid-Connected Microgrid

2024

Muhammad Roaid Tayyab Ashfaq Sidra Mumtaz Fahad Raddah Albogamy Saghir Ahmad Basharat Ullah Sustainability , Volume 16(20), Article Number 9122

Impact Factor: 3.300 | Quartile: 2 | Citations: 4

DOI: 10.3390/su16209122

Mathematical Modeling and Experimental Validation of a Fault-Tolerant Dual Stator LHEFSM for Rail Transit Applications

2024

Basharat Ullah Faisal Khan Shahid Hussain Fahad Raddah Albogamy

IEEE Access, Volume 12, Pages 121586-121595 **Impact Factor:** 3.400 | **Quartile:** 2 | **Citations:** 1

DOI: 10.1109/ACCESS.2024.3452984

Automatic Generation Control in Renewables-Integrated Multi-Area Power Systems: A Comparative Control Analysis

2024

Tayyab Ashfaq Sidra Mumtaz Saghir Ahmad Basharat Ullah Fahad Raddah Albogamy

Sustainability, Volume 16(13), Article Number 5735 Impact Factor: 3.300 | Quartile: 2 | Citations: 3

DOI: 10.3390/su16135735

Performance analysis and design optimization of asymmetric interior permanent magnet synchronous machine for electric vehicles applications Niaz Muhammad Faisal Khan Basharat Ullah Baheej Alghamdi IET Electric Power Applications, Pages 1-11 Impact Factor: 1.7 Quartile: 3 Citations: 5 DOI: 10.1049/elp2.12402	2023
Electromagnetic Performance Investigation of Rectangular-Structured Linear Actuator with End Ferromagnetic Poles Zahoor Ahmad Basharat Ullah Faisal Khan Shafaat Ullah Irfan Sami Energies, Volume 16, Issue 15, Article Number 5758 Impact Factor: 3.2 Quartile: 3 Citations: 1 DOI: 10.3390/en16155758	2023
Decentralized, Democratized, and Decarbonized Future Electric Power Distribution Grids: A Survey on the Paradigm Shift From the Conventional Power System to Micro Grid Structures Neelofar Shaukat Md. Rabuil Islam Md. Moktadir Rahman Bilal Khan Basharat Ullah S. M. Ali Afef Fakih IEEE Access, Volume:11, Page:60957-60987 Impact Factor: 3.9 Quartile: 2 Citations: 36 DOI: 10.1109/ACCESS.2023.3284031	2023
Design and Analysis of an Asymmetric Spoke and Delta-Shape Interior Permanent Magnet Synchronous Machine Niaz Muhammad Faisal Khan Basharat Ullah Saira Tariq Ahmad H. Milyani IEEE Access, Volume:11, Page:54849-54858 Impact Factor: 3.9 Quartile: 2 Citations: 7 DOI: 10.1109/ACCESS.2023.3280856	2023
Design Optimization and Resonance Analysis of Rectangular Structured Moving Magnet Linear Actuator Muhammad Jawad Haitao Yu Zahoor Ahmad Basharat Ullah Baheej Alghamdi IEEE Access, Volume:11, Page:46476-46486 Impact Factor: 3.9 Quartile: 2 Citations: 2 DOI: 10.1109/ACCESS.2023.3272898	2023
Optimization and Experimentation of Fault-Tolerant Field Excited Linear Flux Switching Machine With Concentrated and Toroidal Windings for Rail Transportation System Shahid Hussain Faisal Khan Wasiq Ullah Basharat Ullah Bakhtiar Khan IEEE Transactions on Industry Applications, Volume 59, Issue 2, Pages 1361-1371 Impact Factor: 4.4 Quartile: 2 Citations: 7 DOI: 10.1109/TIA.2022.3223341	2023
Design and FEM analysis of high-power density C-core permanent magnet transverse flux generator with reduced PM volume Ali Muhammad Faisal Khan Basharat Ullah Ahmad H. Milyani Abdullah Ahmad Azhari IET Renewable Power Generation, Volume 17, Issue 4, Pages 885-893 Impact Factor: 2.6 Quartile: 4 Citations: 1 DOI: 10.1049/rpg2.12642	2023
Novel Partitioned Stator Flux-Switching Permanent Magnet Linear Machine: Design, Analysis, and Optimization Saira Tariq Faisal Khan Basharat Ullah Niaz Muhammad Baheej Alghamdi Machines, Volume 11, Issue 3, Article Number 390 Impact Factor: 2.6 Quartile: 2 Citations: 2 DOI: 10.3390/machines11030390	2023
Electromagnetic and experimental analyses of a low-cost miniature tubular moving magnet linear oscillating actuator for miniature compressor applications Sumeet Khalid Faisal Khan Basharat Ullah Zahoor Ahmad Ahmad H. Milyani Sultan Alghamdi IET Electric Power Applications, Volume:17, Issue:1, Pages:58-67 Impact Factor: 1.7 Quartile: 3 Citations: 1 DOI: 10.1049/elp2.12245	2023
Performance Analysis of a Modular E-Shaped Stator Hybrid Excited Flux Switching Motor With Flux Gaps	2022

Basharat Ullah Faisal Khan Zahoor Ahmad Siddique Akbar Ahmad H. Milyani Abdullah Ahmad Azhari

IEEE Access, Volume:10, Page:116098-116106 Impact Factor: 3.9 | Quartile: 2 | Citations: 3

DOI: 10.1109/ACCESS.2022.3219827

High efficiency flux switching motor

2022

Bakhtiar Khan Faisal Khan Wasiq Ullah Basharat Ullah Shahid Hussain Erwan Sulaiman Ahmad H. Milyani Eyad Talal Attar

Ain Shams Engineering Journal, Volume 13, Issue 6, Article Number 101791

Impact Factor: 6.0 | Quartile: 1 | Citations: 3

DOI: 10.1016/j.asej.2022.101791

Design and Analysis of Three Phase Axial Flux Permanent Magnet Machine with Different PM Shapes

2022

for Electric Vehicles

Ziaul Islam Faisal Khan Basharat Ullah Ahmad H. Milyani Abdullah Ahmad Azhari

Energies, Volume 15, Issue 20, Article Number 7533

Impact Factor: 3.2 | Quartile: 3 | Citations: 6

DOI: 10.3390/en15207533

Direct Model Predictive Control of Noninverting Buck-boost DC-DC Converter

2022

Basharat Ullah Hikmat Ullah Sumeet Khalid

CES Transactions on Electrical Machines and Systems, Volume:6, Issue:3, Page:332-339

Impact Factor: 0 | Citations: 38 DOI: 10.30941/CESTEMS.2022.00043

Subdomain modeling of linear hybrid excited flux switching machine

2022

Basharat Ullah Faisal Khan Muhammad Qasim

COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, Volume:41, Issue:5, Pages:1584-1603

Impact Factor: 0.700 | Quartile: 4 | Citations: 1 DOI: 10.1108/COMPEL-07-2021-0260

Design and lumped parameter magnetic network model of hybrid excited consequent pole flux switching machine

2022

Basharat Ullah Faisal Khan Bakhtiar Khan Muhammad Yousuf

COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, Volume:41, Issue:5, Pages:1376-1397

Impact Factor: 0.700 | Quartile: 4 | Citations: 1 DOI: 10.1108/COMPEL-07-2021-0235

Modeling, Optimization, and Analysis of Segmented Stator Flux Switching Linear Hybrid Excited

2022

Machine for Electric Power Train

Basharat Ullah Faisal Khan Shahid Hussain Bakhtiar Khan

IEEE Transactions on Transportation Electrification, Volume 8, Issue 3, Pages 3546-3553

Impact Factor: 7.0 | Quartile: 1 | Citations: 18

DOI: 10.1109/TTE.2022.3147263

Split Pole Permanent Magnet Vernier Machine With Halbach Array Magnets in Stator Slot Opening and

2022

Consequent Pole Rotor

Shahzad Khan Faisal Khan Wasiq Ullah Zahoor Ahmad Basharat Ullah

IEEE Access, Volume:10, Page:75672-75679 Impact Factor: 3.9 | Quartile: 2 | Citations: 3 DOI: 10.1109/ACCESS.2022.3191797

Performance Analysis of Tubular Moving Magnet Linear Oscillating Actuator for Linear Compressors

2022

Aftab Ahmad Basharat Ullah Zahoor Ahmad Guangchen Liu Muhammad Jawad

Energies, Volume:15, Issue:9, Article Number: 3224 Impact Factor: 3.2 | Quartile: 3 | Citations: 6

DOI: 10.3390/en15093224

Analysis of Linear Hybrid Excited Flux Switching Machines with Low-Cost Ferrite Magnets

2022

Muhammad Qasim Faisal Khan Basharat Ullah Himayat Ullah Jan Hend I. Alkhammash

Energies, Volume:15, Issue:4, Article Number: 1346

Impact Factor: 3.2 | Quartile: 3 | Citations: 1

DOI: 10.3390/en15041346

Analytical Modeling, Optimization, and Electromagnetic Performance Analysis of Electrically Excited

2022

Flux Switching Motor

Impact Factor: 2.1 Quartile: 3 Citations: 6 DOI: 10.1109/TMAG.2021.3080292	
Analysis of a Discrete Stator Hybrid Excited Flux Switching Linear Machine Basharat Ullah Faisal Khan Ahmad H. Milyani IEEE Access, Volume:10, Page:8140-8150 Impact Factor: 3.9 Quartile: 2 Citations: 12 DOI: 10.1109/ACCESS.2022.3143794	2022
Torque Ripples Reduction and Performance Analysis of Electrically Excited Flux Switching Motor Bakhtiar Khan Faisal Khan Wasiq Ullah Basharat Ullah Shahid Hussain IEEE Access, Volume:10, Page:4307-4317 Impact Factor: 3.9 Quartile: 2 Citations: 6 DOI: 10.1109/ACCESS.2022.3140315	2022
Electromagnetic Performance of Five Phase Non-Overlapping Stator Wound Field Flux Switching Machine Muhammad Yousuf Faisal Khan Basharat Ullah Journal of Electrical Engineering and Technology, Volume:17, Issue:1, Pages:371-380 Impact Factor: 1.9 Quartile: 3 Citations: 2 DOI: 10.1007/s42835-021-00915-1	2022
Design and thermal modeling of modular hybrid excited double-sided linear flux switching machine Himayat Ullah Jan Faisal Khan Basharat Ullah Muhammad Qasim Malak Adnan Khan Ghulam Hafeez Fahad Raddah Albogamy Energies, Volume:14, Issue:24, Article Number: 8511 Impact Factor: 3.252 Quartile: 3 Citations: 4 DOI: 10.3390/en14248511	2021
Development of a Low-Cost Modular Structure Fault Tolerant Field Excited Flux Switching Linear Machine for Urban Rail Transit Shahid Hussain Faisal Khan Wasiq Ullah Basharat Ullah Bakhtiar Khan IEEE Access, Volume:9, Page:165854-165864 Impact Factor: 3.476 Quartile: 2 Citations: 8 DOI: 10.1109/ACCESS.2021.3133299	2021
Design and analysis of dual-stator hybrid excited linear flux switching machine for long-stroke applications Basharat Ullah Faisal Khan Ahmad H. Milyani Naseer Ahmad Khalid Mehmood Cheema IET Electric Power Applications, Volume:15, Issue:12, Pages:1678-1691 Impact Factor: 2.568 Quartile: 3 Citations: 10 DOI: 10.1049/elp2.12130	2021
Design and analysis of semi-closed stator core transverse flux permanent magnet generator Ali Muhammad Faisal Khan Muhammad Yousuf Basharat Ullah World Journal of Engineering, Volume:20, Issue:3, Page:389-398 Impact Factor: N/A DOI: 10.1108/WJE-03-2021-0144	2021
Lumped parameter model and electromagnetic performance analysis of a single-sided variable flux permanent magnet linear machine Basharat Ullah Faisal Khan Muhammad Qasim Bakhtiar Khan Ahmad H Milyani Khalid Mehmood Cheema Zaki uddin Energies, Volume 14, Issue 17, Article Number 5494 Impact Factor: 3.252 Quartile: 3 Citations: 6 DOI: https://doi.org/10.3390/en14175494	2021
Design and finite element analysis of modular C-Core stator tubular linear oscillating actuator for miniature compressor Sumeet Khalid Faisal Khan Zahoor Ahmad Basharat Ullah World Journal of Engineering, Volume:20, Issue:2, Page:266-272 Impact Factor: N/A Citations: 5	2021

Bakhtiar Khan Faisal Khan Wasiq Ullah Shahid Hussain Basharat Ullah IEEE Transactions on Magnetics, Volume 58, Issue 2, Article Number 8201806

DOI: 10.1108/WJE-03-2021-0142

Laplacian in non-subsampled shearlet transform domain

Hikmat Ullah Basharat Ullah Longwen Wu Fakheraldin Y.O. Abdalla Guanghui Ren Yaqin Zhao

Biomedical Signal Processing and Control, Volume 57, Article Number 101724

Impact Factor: 3.880 | Quartile: 2 | Citations: 64 DOI: https://doi.org/10.1016/j.bspc.2019.101724

Conference Proceedings

Performance Comparison of Flux Switching Permanent Magnet Linear Machine with and Without Flux

2023

Gaps

Saira Tariq Faisal Khan Niaz Muhammad Basharat Ullah

2023 International Conference on Technology and Policy in Energy and Electric Power: Decarbonizing the Power Sector: Opportunities and Challenges for Renewable Energy Integration, Proceedings, res.country(100,)

Citations: N/A

DOI: 10.1109/ICT-PEP60152.2023.10351148

Comparative Study of a Novel Symmetrical and Asymmetrical Interior Permanent Magnet Synchronous

2023

Machine for EVs Application

Niaz Muhammad Faisal Khan Saira Tariq Basharat Ullah Muhammad Atif Tahsinullah

ICT-PEP 2023 - 2023 International Conference on Technology and Policy in Energy and Electric Power: Decarbonizing the Power Sector: Opportunities and Challenges for Renewable Energy Integration, Proceedings, res.country(100,)

DOI: 10.1109/ICT-PEP60152.2023.10351158

Comparative Study of Outer Rotor Field Excited Flux Switching Machine with Feasible Rotor Poles For

2022

EV and HEV Application

Siddique Akbar Faisal Khan Wasiq Ullah Basharat Ullah Muhammad Yousuf Shahid Hussain

ICT-PEP 2022 - International Conference on Technology and Policy in Energy and Electric Power: Advanced Technology for Transitioning to Sustainable Energy and Modern Power Systems, Proceedings, res.country(100,)

Citations: N/A

DOI: 10.1109/ICT-PEP57242.2022.9988789

Speed Control of Separately Excited DC Motor Using NARMA-L2 Controller

2022

Basharat Ullah Shahid Hussain Muhammad Yousuf Faisal Khan Sumeet Khalid Siddique Akbar Ali Muhammad

ICT-PEP 2022 - International Conference on Technology and Policy in Energy and Electric Power: Advanced Technology for Transitioning to Sustainable Energy and Modern Power Systems, Proceedings, res.country(100,)

DOI: 10.1109/ICT-PEP57242.2022.9988795

Performance Improvement of Linear Tubular Permanent Magnet Actuator with Pole Shoe for Vehicle

2022

Suspension System

Oneeb Faroog Rashid Muhammad Shahzad Aamad Mustafa Basharat Ullah Faisal Khan

ICT-PEP 2022 - International Conference on Technology and Policy in Energy and Electric Power: Advanced Technology for Transitioning to Sustainable Energy and Modern Power Systems, Proceedings, res.country(100,)

Citations: N/A

DOI: 10.1109/ICT-PEP57242.2022.9988837

Design and Analysis of Modular C-core Moving Magnet Linear Oscillating Actuator for Miniature

2022

Compressor Application

Sumeet Khalid Faisal Khan Zahoor Ahmad Basharat Ullah

2022 Joint MMM-Intermag Conference, INTERMAG 2022 - Proceedings, res.country(233,)

Citations: N/A

DOI: 10.1109/INTERMAG39746.2022.9827794

Performance Analysis of Semi-Closed C-Core Permanent Magnet Transverse Flux Generator

2022

Ali Muhammad Faisal Khan Basharat Ullah Muhammad Yousuf Shahid Hussain

2022 Joint MMM-Intermag Conference, INTERMAG 2022 - Proceedings, res.country(233,)

Citations: N/A

DOI: 10.1109/INTERMAG39746.2022.9827839

Design and Analysis of a Novel Dual Stator Tubular Moving Magnet Linear Actuator for Compressor Application

2021

Zahoor Ahmad Hamid Ali Khan Shahzad Khan Basharat Ullah Sumeet Khalid Siddique Akbar

2021 International Conference on Frontiers of Information Technology, FIT 2021, res.country(177,)

Citations: N/A

DOI: 10.1109/FIT53504.2021.00062

Design and Analysis of E-Core Modular and Complementary Fault Tolerant Field Excited Flux

2021

Switching Linear Machines

Shahid Hussain Faisal Khan Wasiq Ullah Basharat Ullah Bakhtiar Khan Muhammad Qasim

2021 International Conference on Computing, Electronic and Electrical Engineering, ICE Cube 2021 - Proceedings, res.country(177,)

Citations: N/A

DOI: 10.1109/ICECube53880.2021.9628302

Electromagnetic Performance Comparison of Axial Flux Machine with different PM Shapes for Electric

2021

Vehicles

Ziaul Islam Faisal Khan Basharat Ullah Muhammad Yousuf Shahid Hussain Muhammad Qasim

ICT-PEP 2021 - International Conference on Technology and Policy in Energy and Electric Power: Emerging Energy Sustainability, Smart Grid, and Microgrid Technologies for Future Power System, Proceedings, res.country(100,)

Citations: N/A

DOI: 10.1109/ICT-PEP53949.2021.9600935

Design and Analysis of Novel Doubly Salient Linear Hybrid Excited Machine

2021

Basharat Ullah Faisal Khan Muhammad Qasim Shahid Hussain Bakhtiar Khan Ali Muhammad

ICT-PEP 2021 - International Conference on Technology and Policy in Energy and Electric Power: Emerging Energy Sustainability, Smart Grid, and Microgrid Technologies for Future Power System, Proceedings, res.country(100.)

Citations: N/A

DOI: 10.1109/ICT-PEP53949.2021.9601007

Design and Analysis of Double-Sided Linear Hybrid Excited Flux Switching Machine with Yokeless

2021

Mover

Muhammad Qasim Faisal Khan Basharat Ullah Erwan Sulaiman Himayat Ullah Jan Shahid Hussain 2021 IEEE International Power and Renewable Energy Conference, IPRECON 2021, res.country(104,)

Citations: N/A

DOI: 10.1109/IPRECON52453.2021.9641032

Design and Electromagnetic Performance Analysis of Linear Hybrid Excited Flux Switching Machine for Long Stroke Applications

2021

ong Stroke Applications

Basharat Ullah Faisal Khan Muhammad Qasim Himayat Ullah Jan Bakhtiar Khan Sumeet Khalid 2021 IEEE International Power and Renewable Energy Conference, IPRECON 2021, res.country(104,)

Citations: N/A

DOI: 10.1109/IPRECON52453.2021.9640755

Thermal and stress analysis of linear hybrid excited flux switching machine with modular stator

2021

Himayat Ullah Jan Faisal Khan Muhammad Qasim Basharat Ullah Muhammad Yousuf Ziaul Islam 2021 International Conference on Emerging Power Technologies, ICEPT 2021, res.country(177,)

Citations: N/A

DOI: 10.1109/ICEPT51706.2021.9435571

A novel double-sided linear flux switching machine with yokeless secondary for long stroke applications

2021

Muhammad Qasim Faisal Khan Basharat Ullah Himayat Ullah Jan Shahid Hussain Ziaul Islam 2021 International Conference on Emerging Power Technologies, ICEPT 2021, res.country(177,)

Citations: N/A

DOI: 10.1109/ICEPT51706.2021.9435566

Novel partitioned primary linear hybrid excited flux switching machine with segmented secondary

2021

Muhammad Qasim Faisal Khan Himayat Ullah Jan Basharat Ullah Baber Ejaz Shahid Hussain 2021 International Conference on Emerging Power Technologies, ICEPT 2021, res.country(177,)

Citations: N/A

DOI: 10.1109/ICEPT51706.2021.9435486

Editorial Activities

IEEE Transactions on Transportation Electrification

2025

Reviewed Papers for Journals

Impact Factor: 8.3

Transactions on Industrial Electronics Reviewed Papers for Journals Impact Factor: 7.2	2025
IEEE Transactions on Transportation Electrification Reviewed Papers for Journals Impact Factor: 8.3	2025
IEEE Transactions on Industrial Electronics Reviewed Papers for Journals Impact Factor: 7.2	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
Reviewed Papers for Journals	2025
N/A Reviewed Papers for Journals	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
IET Electric Power Applications Reviewed Papers for Journals Impact Factor: 1.5	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
N/A Reviewed Papers for Journals Impact Factor: N/A	2025
IEEE Access Reviewed Papers for Journals Impact Factor: 3.4	2025
IEEE Industry Applications Society Annual Meeting Reviewed Papers for Journals Impact Factor: 4.2	2025
Transactions on Industrial Electronics Reviewed Papers for Journals Impact Factor: 7.5	2025
IEEE Access Reviewed Papers for Journals Impact Factor: 3.4	2025
Transactions on Industrial Electronics	2025

Impact Factor: 7.5	
Transactions on Industrial Electronics	2024
Reviewed Papers for Journals	
Impact Factor: 7.5	
IEEE IAS Publications	2024
Reviewed Papers for Journals	
Impact Factor: 4.2	
IEEE Transactions on Transportation Electrification	2024
Reviewed Papers for Journals	
Impact Factor: 7.2	
International Journal of Applied Electromagnetics and Mechanics	2024
Reviewed Papers for Journals	
Impact Factor: 1.1	
IEEE Transactions on Industrial Electronics	2024
Reviewed Papers for Journals	
Impact Factor: 7.5	

Reviewed Papers for Journals