DR. MAZHAR H. BALOCH PhD.

[HIGHER EDUCATION COMMISSIONS, ISLAMABAD PAKISTAN APPROVED SUPERVISOR]

Current Office Address: Department of Electronic & Communication Engineering College of Engg ASU, Oman. Cell: +96890147835 (Oman), E-mail: mazhar.baloch@asu.edu.om, mazhar.hussain08ele@gmail.com,

Date of Birth 28/02/1985 Resident ID 127576898 Passport No AD3762654 (Valid Till July 2032)

(Omani)

i10 Index: Google scholar citations: 1390 h-Index:

Google Scholar Link:

https://scholar.google.com/citations?hl=en&user=Q50uuG8AAAAJ&view_op=list_works&sortby=pubdate

Scopus Citations Link: https://www.scopus.com/authid/detail.uri?authorId=56715337200

ORCID ID: https://orcid.org/0000-0002-4027-049X

Key Summary

Currently, Dr. Mazhar working as an Assistant Professor @ College of Engineering, A'Sharqiyah University, Ibra Sultanate of Oman. Dr. Mazhar Remained as an Associate Professor @ Electrical Engineering, Mehran UET, Sindh Pakistan from March 2019 to Oct 2022, and Dr. Mazhar did Doctoral Degree from the world top 20th ranked School, School of Electronics Information & Electrical Engineering, Shanghai Jiao Tong University China in 2017; he has more than 15 years' total experience as a researcher/engineering university professor/professional in industries. His research published in various reputable peer reviewed research Journals/Conferences. His field of interest is in all areas of Electrical Power & Energy Systems such as: Renewable Energy Management and Sustainable Energy Development, Control, Stability and Optimization of Wind Energy Conversion System, Energy Planning for Sustainable Development and Wind Energy Modeling, Power Economic and Management, Techno Economic Analysis, Computational Optimization Techniques, Hybrid Energy System (Wind-Solar-Hydro) Integration of Modeling, Design and Research on DC Microgrid system and AC Microgrid system, Solar energy prediction and optimizations through machine learning techniques.

Teaching and Research Responsibilities

- Working knowledge on Outcome Based Education (OBE) system implementation. In addition, experienced in preparing Outcome based Accreditation (OBA) reports (i.e., Self-Assessment & Compliances).
- Skilled in developing & implementing learning methods with student centered approach for better understanding.
- Expert in Project management and, skills, knowledge, and experience to achieve specific project objectives, strong interpersonal skills such as artificial intelligence, machine learning & ability to deal effectively in a team environment and Strive for continued excellence as a lifelong learner.

Teaching: To prepare and deliver Lectures, conduct Lab sessions, check assignments and lab

reports, and conduct, also grade the periodical tests.

To guide and supervise (undergraduate/Postgraduate) students for final year research Research:

Authorship: To author books which can be adopted as supplementary textbooks in engineering,

science, and technology.

To help students in solving their difficulties in their courses of studies, assignments etc. **Student**

and guide them to overcome their academic and non-academic problems. counseling:

Academic To actively take part in the development of curriculum of existing programs and to

foresee, plan and design new academic /degree programs planning:

undergraduate/postgraduate levels, do academic planning, including attending meetings

of senate, board of studies, board of faculty, and academic council.

Committee To participate in professional organizations of engineering, technology, planning to

arrange a conference, seminars workshops (IEEE, IET etc).

To set the question papers, evaluate and grade the answer books of the courses taught by Exam Assessment

him, conduct lab/viva-voce examination, do the invigilation duty work for theory

examination as and when assigned by the university authorities.

Admin work: To perform the admin responsibilities viz Dean/Director/Vice chancellor etc as and when

assigned to him under the purview of act/statues.

Student discipline: To take action against students as per relevant regulations and other etc.

Education History

work:

work:

	J		
Post Ph.D.	Electrical Power Engineering	Universiti Sains Malaysia, Malaysia	2019
Ph.D.	Electrical Power Engineering	Shanghai Jiao Tong University, Shanghai PRC	2017
M. Engg	Electrical Power Engineering	Mehran University of Engg & Tech Jamshoro Pakistan	2013
B. Engg	Electrical Power Engineering	Mehran University of Engg & Tech Jamshoro Pakistan	2008



Career History			<mark>~16 ye</mark>	ears' experience
Assistant Professor Elec	ctrical Engineering	@CoE, Al Sharqi	yah University, Ibra, Oman	2022 to date
Former Associate Profe Engineering	ssor Electrical	@Mehran Univer	rsity of Engg & Tech Jamshoro Pakistan	(Oct 2022- to date) 2019-2022 (Mar 2019-Oct 2022)
Former Assistant Profes	ssor Electrical	@Mehran Unive	rsity of Engg & Tech Jamshoro Pakistan	2014-2019 (Jul 2014-Mar 2019)
Former Lecturer Electric	cal Engineering	@CoE, The Islam	ia University, Bahawalpur Pakistan	2012-2014 (Jul 2012-Jul 2014)
Former Lecturer Electric	cal Engineering	@Swedish Colleg Pakistan	ge of Engg & Tech Rahim Yar Khan	2010-2012 (Mar2019-Oct2022)
Former Site Engineer E	lectrical	@Construction B	uilders, Hyderabad Pakistan	2009-2010 (2Years)
Former Project Enginee	r Electrical	@Research & De	velopment Foundation Pakistan	2008-2008 (4-Months)
Former Lecturer Electric	cal Engineering	@Mehran Univer Pakistan	rsity of Engg & Tech Jamshoro	2008-2008 (8-Months)
Administrative/M	<mark>Ianagement W</mark>	ork Experier	<mark>ice</mark>	
Member in Quality Co	mmittee		CoE @A' Sharqiyah University, Oman	2022-to date
Member in Academia a	nnd Industrial Linka	ges Committee	CoE @A' Sharqiyah University, Oman	2022-to date
Member in CoE Resear	ch Committees		CoE @A' Sharqiyah University, Oman	2023-to date
Member of Electrical Enand Commission such		ories installations	CoE @A' Sharqiyah University, Oman	2022-to date
(Renewable Energy L	-			
Machines Lab, Control Member of new Engine	•		CoE @A' Sharqiyah University, Oman	2023-to date
(Artificial Intelligence)				
Member of block fur Committee	nding research proj	posal evaluation	@A' Sharqiyah University, Oman	2024-to date
Students Advisor			CoE @A' Sharqiyah University, Oman	2022-to date
Academic Board Memb			CoE @A' Sharqiyah University, Oman	
HoD (Electronics and C	Communication Eng	ineering Dept)	CoE @A' Sharqiyah University, Oman	June 2023-to August 2023
HoD (Chairman)	Electrical E	ngineering,	@Department, Mehran University	•
			Engg & Tech Pakistan	(Feb2020- Oct2022)
Focal Person	Offices of Resear		@Mehran University of Engg & Tec	
	Commerciali	ization ORIC	Pakistan	(Jan2018- Oct2019)
Quality Auditor	Offices of Quali	ty Enhancement	@Mehran University of Engg & Tech	•
	Ce	ell	Pakistan	(Jan2018-
Common	Outcome Paced	Education (OPE)	Mohan University of Engals Tool	Oct2019)
Convener	System Washing	Education (OBE) ton Accord, USA	@Mehran University of Engg & Tech Pakistan	n 2020-2022
Convener	Calibration/ Electrical Engir	Testing Lab	@ Mehran University of Engg & Tec	h 2020-2022
Convener	Course Revie		Pakistan - @Mehran University of Engg & Tecl	h 2020-2022
· · · · · · · · · · · · · · · · · ·	Electrical Engir		Pakistan	
Convener	Sports Co	ommittee	@Mehran University of Engg & Tech Pakistan	n 2020-2022
Convener	Sports purchas	sing committee	@Mehran University of Engg & Tech	n 2020-2022

Pakistan

Taught/Teaching Courses in Undergraduate and Post-Graduate

@ A'Sharqiyah 2022-to date Digital systems, Control systems, Power Systems, Instrumentation & Undergraduate Measurement's, High Voltage Engg, Applied Engg Maths, Industrial University, Oman Inst:, Power System Operation & Control, Renewable Energy. Applied Physics, Linear Circuit Analysis, Electrical Network @ USM, Malaysia, and 2008-2022 Analysis, Electronic Devices, Electrical Machines, Digital Logic Undergraduate (Mehran UET, Islamia Design, Power Generation, Communication Systems, Advanced Uni Bhp, and Swedish **Electrical Machines, Electrical Power Transmission, Power Economics** College Engg Tech RYK) & Management, Linear Control Systems, Power System Analysis, Power Distribution & Utilization, and Power System Protection. Electrical Power Transmission and Distribution, Power System @ USM, Malaysia, and 2008-2022 Stability & Control, Power System Analysis, Power System ostgraduate^o (Mehran UET, Islamia Protection, Energy Management, Power System Planning & Uni Bhp, Swedish Management, Power Distribution & Utilization. college Engg Tech RYK)

Professional/Community Services

Associate Editor	Frontiers Research Journal	2022-to date
Editor	International Journal of Electrical Engineering and Emerging Technology	2022 to date
Conference Secretary	International Conference on Mathematics and Applied Science Held	March 2022
Keynote Speaker	@ Mehran University of Engineering & Technology Pakistan Renewable and Fossil Fuel Energy Symposium: Wind Energy an alternative approach for Power Generation, Karachi Pakistan.	2022
Reviewers	Various International Journals i.e IEEE, Elsevier, Wiley etc	2017 to date
Technical Expert (Electrical)	Bahawalpur region for re-accreditation of Various Technical Colleges	2013
Expert as a Board of Studies	Technical University Khairpur Mirs, Pakistan	2020 to 2022
Technical Session expert	International Conference @ IBA Sukkur	2018 & 2021
Expert as an External	MUET, QUEST, IBA, Technical University Khairpur Mirs, Swedish	2017-2022
Examiner	College RYK, ISRAUniversity Hyderabad, GCT Rahim Yar Khan, GCT	
	Bahawalpur, GCT Hyderabad	

Continuous Professional Development Courses

- Matlab for Engineers
- Accreditation Online Learning System of Higher Education Institutes under the Lockdown Situations-Threatsand Opportunities
- Improvement of Voltage Stability in AC Distribution Networks by optimized Control of Converters of Connected Customers
- Modern Energy Trading Practice: An Overview of Different Energy Market Algorithms and Market Structure
- Teaching is an Art"
- Managing Stress for Enhanced Performance"
- Special Workshop on High Impact Factor Survey/Review Paper/ Writing and Publishing the Research Papers

Research Projects Grants

•	Granted Research Grants Project from Ministry of Higher Education & Research Innovation (MOHERI), @	_
	A'Sharqiyah University Oman (Funding 20,000.0 Omani Riyals)	2023
•	Granted Research Grants Project from Sindh HEC Pakistan, (Funding 4.0 M PkR)	2021
•	Granted an Ignite Research Grants Project from ignite Pakistan, (Funding 0.16 M PkR)	2021
•	Granted an Ignite Research Grants Project from ignite Pakistan, (Funding 0.17 M PkR)	2020
•	Granted a Startup Research Grants Project (SRGP) from HEC Pakistan, (Funding 0.36 M PkR)	2017
•	Granted a Startup Research Grants Project (SRGP) from HEC Pakistan, (Funding 0.42 M PkR)	2018
•	Granted Malaysian Government Award for Post-Doctoral Fellowship Program. (Funding 4.2 M PkR)	2018
•	Granted Chinese Government Scholarship Award (Full) for Doctoral Program, (Funding 10.0 M PkR)	2014
•	Awarded Excellent International Student Award among 1500 International Students on Best	2014
	Research /PhDPerformance in SJTU from Ministry of Education, PR China	
•	Awarded Excellent International Student Award among 1700 International Students on Best	2015
	Research/PhD Performance from Shanghai Jiao Tong University.	
•	Awarded Excellent International Student Award among 1700 International Students on Best Research/PhD Performance from Shanghai Jiao Tong University.	2016
•	Awarded Best PhD Student among 1700 International Students from Shanghai Government China	2017
_	Awarded Best Student Award from Research Lab at SJTU	2017
•	· ·	
•	Awarded Champions in Cricket and Badminton @ SJTU	2016

<mark>Res</mark>	earch P	ublications (Journals & Conferences)	~80 Publ	ications
#	Year	Research Paper Title (Peer Reviewed)	Citations	Category
1	2023	Soomro, M.; Memon, Z.A.; <i>Mazhar H. Baloch.</i> ; Mirjat, N.H.; Kumar, L.; Tran, Q.T.; Zizzo, G. Performance Improvement of Grid-Integrated Doubly Fed Induction Generator under Asymmetrical and Symmetrical Faults. <i>Energies</i> 2023, <i>16</i> , 3350. https://doi.org/10.3390/en16083350.		3.6 IF
2	2023	Manaf Zghaibeh, Ikram Ben Belgacem, El Manaa Barhoumi, <i>Mazhar H. Baloch</i> , et.al., Optimization of green hydrogen production in hydroelectric-photovoltaic grid connected power station, International Journal of Hydrogen Energy, available online 28 June 2023, https://doi.org/10.1016/j.ijhydene.2023.06.020.	167	6.6 IF
3	2023	Shah, A.A.; Aftab, A.A.; Han, X.; <i>Mazhar H. Baloch.</i> ; Honnurvali, M.S.; Chauhdary, S.T. Prediction Error-Based Power Forecasting of Wind Energy System Using Hybrid WT–ROPSO–NARMAX Model. <i>Energies</i> 2023, <i>16</i> , 3295. https://doi.org/10.3390/en16073295.		3.6 IF
4	2023	Memon, Ali Asghar, Hao Chen, and <i>Mazhar H. Baloch</i> , "Transient modelling and simulation of a switched reluctance machine in different operating modes." Mehran University Research Journal of Engineering & Technology 42.2 (2023): 151-157		0.6 IF
5	2023	Muhammad Imran Ghoto, <i>Mazhar H. Baloch</i> , Touqeer Ahmed Jummani, Ali Asghar Memon, Parameters extraction of photovoltaic cells using swarm intelligence based optimization technique: research on single diode model and double diode model, Mehran University Research Journal Of Engineering & Technology 42.2 (2023): 158-168.		0.6 IF
6	2023	Feryal Ibrahim Jabbar, Dur Muhammad Soomro, Mohd Noor bin Abdullah, Nur Hanis Mohammad Radzi, <i>Mazhar Hussain Baloch</i> , Asif Ahmed Rahmoon, Hassan Falah FakhruldeenOptimize single line to ground fault detection in distribution grid power system using artificial bee colony, Indonesian Journal of Electrical Engineering and Computer Science, 31, 3, Pages 1286-1294, 2023.		Scopus
7	2023			Scopus
1	2022	ZM, <u>Mazhar H. Baloch</u> etal., A review on design parameters and specifications of parabolic solar dish Stirling systems and their applications, Energy Reports, Vol 8, pp-4128-4154, 2022.		6.922 IF
2	2022	Aaqib Raza, <u>Mazhar H Baloch, et.al.</u> , Artificial Intelligence and IoT-Based Autonomous Hybrid Electric Vehicle with Self-Charging Infrastructure, 2022 International Conference on Emerging Technologies in Electronics, Computing and Communication (ICETECC), IEEE.		Scopus
3	2022	Awais Ali Khoso, <i>Mazhar H. Baloch etal.</i> , The Development of Solar Powered Carport Canopies for the Charging Infrastructure of Electric Vehicles, 2022 International Conference on Emerging Technologies in Electronics, Computing and Communication (ICETECC), IEEE.	241	Scopus
4	2022	MASoomro, ZA Memon, Mahesh K, <i>Mazhar H Baloch</i> Performance Improvement of Grid Integrated Doubly Fed Induction Generator Under Asymmetrical and Symmetrical Faults, International Journal of Energy Reports, 7 (2021) 6031–6043		6.922 IF
5	2022	MASoomro, ZA Memon, Mahesh K, <u>Mazhar H Baloch</u> Symmetrical Fault Assessment of Grid Integrated Doubly Fed Induction Generator Using Modified Super-Twisting Fractional Order Terminal Sliding Mode Controller ICCE 2022 Accepted .		Scopus
1	2021	A Ahmed, <i>Mazhar H Baloch</i> , BA Mirjat, AA Memon, TA Jumani, A Research On Various PV Arrays Manufacturing Data For Power Comparison And Optimization Through Extremum Seeking Technique, IBA Sukkur Journal, Vol. 4, No. 1, pp.59-66 January – June 2021.		Web of Science
2	2021	AA Memon, S Ghirana, AR Junejo, MF Memon, <i>Mazhar H Baloch</i> , Impacts of Converting Overhead Distribution Networkof 132/11.5 kV Qasimabad Grid Station Into Underground Distribution Network, 2021 6th International Multi-Topic ICT Conference (IMTIC), 1-5		Scopus
3	2021	Ali Shan Sayed, <i>Mazhar H Baloch</i> et.al., An Effective MPPT Controller for Power Optimization of PMSG Based Wind Turbine, 2021 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube) 978-1-6654-0154- 8/21/\$31.00 ©2021 IEEE DOI: 10.1109/ICECube53880.2021.9628357		Scopus
4	2021	MASoomro, ZA Memon, Mahesh K, <i>Mazhar H Baloch</i> , Wind energy integration: Dynamic modeling and control of DFIG based on super twisting fractional order terminal sliding mode controller, Energy Reports, Vol. 7, pp-6031–6043, 2021.		Web of Science
5	2021	Mazhar H Baloch, AM Soomro, ESH Memon, DM Soomro, Analysis of Harmonic Distortion Reduction through Modular Multi-Level Inverter using Nearest Level Modulation (NLM) Control Strategy IBA Sukkur Journal, Vol. 4, No. 1, pp.67-79 January – June 2021.	256	Web of Science
6	2021	MZ Malik, <i>Mazhar H Baloch</i> , B Ali, SH Khahro, AM Soomro, G Abbas, S Zhang, Power Supply to Local Communities Through Wind Energy Integration: An Opportunity Through China Pakistan Economic Corridor (CPEC), IEEE Access, Volume 9, pp. 66751- 66768, 2021, DOI		4.6 IF
7	2021	10.1109/ACCESS.2021.3076181. MZ Malik, PH Shaikh, SA Khatri, MS Shaikh, <i>Mazhar H Baloch</i> , F Shaikh, Analysis of multi-objective optimization: a technical proposal for energy and comfort management in buildings, International Transactions on Electrical Energy Systems, Vol 31, No.2, pp. e12736.		1.36 IF
8	2021	T Ahmed, <i>Mazhar H Baloch</i> , N Khan, G Mehr, BA Mirjat, YA Memon, Experimental Analysis and Control of a Wind- Generator System through a DC-DC Boost Converter for Extremum Seeking" Engineering, Technology & Applied Science Research Journal, Vol. 11, No. 1, 2021, 6714-6718.		Web of Science
9	2021	G Mustafa, <i>Mazhar H Baloch</i> , SH Qazi, S Tahir, N Khan, BA Mirjat, An Experimental investigation & Control of Hybrid (PV-Wind) Energy Power System, Engineering, Technology & Applied Science Research Journal, Vol. 11, No. 1, 2021, 6781-6786.		Web of Science
1	2020	MZ Malik, A Ali, GS Kaloi, AM Soomro, <i>Mazhar H Baloch</i> , ST Chauhdary, Integration of Renewable Energy Project: A Technical Proposal for Rural Electrification to Local Communities,"		3.36 IF

		IEEE Access, Vol. 8, pp. 91448-91467, 2020, doi: 10.1109/ACCESS.2020.2993903.		
2	2020	WA Wattoo, Mazhar H Baloch et.al., Analysis of multi-objective optimization: a technical		
		proposal for energy and comfort management in buildings, International Transactions on		1.6 IF
_		Electrical Energy Systems, DOI: 10.1002/2050-7038.12736, e12736.		
3	2020	MZ Malik, M Kumar, AM Soomro, <i>Mazhar H Baloch</i> , M Gul, M Farhan, GS Kaloi, Strategic planning of renewable distributed generation in radial distribution system using advanced		2.26 IE
		MOPSO method, Energy Reports, Volume 6 Pages 2872-2886,2020.		3.36 IF
4	2020	Dur M.Soomro, S. K. Alswed, M.N bin Abdullah, Nur Hanis <i>Mazhar H Baloch</i> , Optimal design	165	Scopus
•		of a single-phase APF basedon PQ theory, International Journal of Power Electronics and Drive		
		System (IJPEDS) Vol. 11, No. 3, September 2020, pp. 1360~1367 ISSN: 2088-8694, DOI:		
		10.11591/ijpeds. v11.i3. pp.1360-1367.		
5	2020	FI Jabbar, D Soomro, AH Tawafan, MNB Abdullah, NHBM Radzi, <i>Mazhar H Baloch</i> ,		_
		Optimization of detection single line to ground fault based on (ABCNN) algorithm International journal of Artificial Intelligence, Vol. 9, No. 4, December 2020, pp. 623~629, DOI: 10.11591/ijai. V		Scopus
		9.i4. pp. 623-629.		
6	2020	MZ Malik, Mazhar H Baloch, M Gul, GS Kaloi, ST Chauhdary, AA Memon, A research on		
		conventional and modern algorithms for maximum power extraction from wind energy		3.0 IF
		conversion system: a review, Environmental Science and Pollution Research		
_	0000	https://doi.org/10.1007/s11356-020-11558-6, 2020.		
7	2020	Feryal Ibrahim Jabbar, Dur Muhammad Soomro, Adnan Hasan Tawafan, Mohd, <i>Mazhar H Baloch</i> , Optimization of detection of single line to ground fault by controlling Peterson coil		C
		through ANFIS, International Journal of Artificial Intelligence, Vol. 9, No. 3, September 2020, pp.		Scopus
		409~416, DOI: 10.11591/ijai.v9.i3.pp409-416.		
8	2020	WA Wattoo, Mazhar H Baloch et.al., Optimal Asset Allocation Strategy for Suppliers Paying Carbon		
		Tax in the Competitive Electricity Market., Journal of Electrical Engineering and Technology		0.67 IF
_		(JEET), Vol. 14, No. 6, pp.1-11, 2019.		
9	2020	A Raza, Mazhar H Baloch, S Hussain, MZ Malik, I Ali, A Ali, D Kumar, A Ali, A Home Automation Through Android Mobile App by Using Arduino UNO, IEEE 23rd International Multitopic		Scopus
		Conference (INMIC), pp.1-6, 2020.		
10	2020	MZ Malik, K Zehra, I Ali, M Ismail, A Hussain, V Kumar, M Abid, Mazhar H Baloch, Solar-Wind		Scopus
		Hybrid Energy Generation System, IEEE 23rd International Multitopic Conference (INMIC), pp.1-6,		-
		2020.		
	0040	DM Coorney VIAI Vost Markey II Balade MAI Abdullala MITM Dadri 7A Marson Mitigation of		Coonus
1	2019	DM Soomro, YW Keat, <i>Mazhar H Baloch</i> , MN Abdullah, NHM Radzi, ZA Memon., Mitigation of Voltage Sag Caused by Unbalanced Load by Using DFT Controlled DVR," 2019 IEEE International		Scopus
		Conference on Innovative Research and Development (ICIRD), Jakarta, Indonesia, 2019, pp. 1-6.		
2	2019	Mazhar H Baloch et.al., Feasibility Study of a Large-Scale & Wind Farm in Sujawal, Sindh Province of		EBSCO
		Pakistan through Two Economic Models: Levelized Cost of Energy (LCOE) & Cash Flow Model,		
		SSRG International Journal of Economics and Management Studies (SSRG-IJEMS), Vol. 6 Issue 8,		
		Aug 2019.		
3	2019	Mazhar H Baloch, J Wang, GS Kaloi, AA Memon, AS Larik, P Sharma, Techno-Economic Analysis of		1.9 IF
•	20.0	Power Generation from a Potential Wind Corridor of Pakistan: An Overview, in the Journal of		
		"Environmental Progress and Sustainable Energy", Vol. 38, No. 2, pp. 706-720, DOI 10.1002/ep, 2019.		
4	2019	GS Kaloi, <i>Mazhar H Baloch</i> , M Kumar, DM Soomro, ST Chauhdary, AA Memon, An LVRT Scheme		2.11 IF
		for Grid Connected DFIGBased WECS Using State Feedback Linearization Control Technique, Electronics 8 (7), 777, 2019. (Impact Factor 2.11). (ISI/Q2).		
5	2019	T Irshad, D Ishak, <i>Mazhar H Baloch</i> , Comparative Analysis of Rectangular and Circular Four-		Scopus
3	2013	resonator Coil System for Wireless Power Transfer Using Magnetic Resonance Coupling Technique,		эсориз
		European Journal of Electrical Engg, Vol. 21, No. 1, February, 2019, pp. 67-73.		
6	2019	MH Nadeem, X Zheng, N Tai, Mazhar H Baloch, M Yu, Y He, Transient Harmonic Voltage based		Scopus
		Protection Scheme for Multi-terminal HVDC Transmission Networks, IEEE International		
7	2010	Conference on Industrial Technology (ICIT), 2019, DOI: 10.1109/ICIT.2019.8755029, Mazhar H Baloch, ST Chauhdary, D Ishak, GS Kaloi, MH Nadeem, WA Wattoo, Hybrid Energy	157	2 62 IE
7	2019	Sources Status of Pakistan: An Optimal Technical Proposal to Solve the Power Crises Issues, <i>Energy</i>	-	2.63 IF
		Strategy Reviews, Vol. 24, pp.132-153 (2019).		
8	2019	Mazhar H Baloch, D Ishak, S Tahir Chaudary, B Ali, A Asghar Memon, Wind Power Integration: An		2.67 IF
		Experimental Investigation for Powering Local Communities, <i>Energies</i> , Vol. 12, No. 621 (2019).		
9	2019	TA Jumani, MW Mustafa, M Md Rasid, N Hussain Mirjat Mazhar H Baloch, Optimal Power Flow		2.11 IF
		Controller for Grid- Connected Microgrids using Grasshopper Optimization Algorithm, <i>Electronics</i> , Vol. 8, No. 111, PP. 1-22, (2019).		
10	2019	Baqir Ali, <i>Mazhar H Baloch</i> etal., Wind Energy Potential Assessment and Mapping through Various		Scopus
. •		Distribution Techniques: An Experimental Investigation for Windy Regions, International Journal		1
		on Energy Conversion (IRECON) Vol. 7, No. 1, 2019.		
11	2019	M Kumar, B Das, <i>Mazhar H Baloch</i> , P Nallagownden, I Elamvazuthi, A Ali, Optimal Placement and		Web of
		Sizing of distributed Generators and distributed static compensator in radial distribution system International Journal of Energy Ontimization and Eng. (IJEOF), vol. 7, Issue 4, 2019		Science
12	2019	International Journal of Energy Optimization and Eng. (IJEOE), vol.7, Issue 4, 2019. B. Memon, Mazhar H Baloch et.al., Assessment of Wind Power Potential Based on Raleigh		Web of
14	-019	Distribution Model: An Experimental Investigation for Coastal Zone, Engineering, Technology &		Science
		Applied Science Research Journal, Vol. 9, No. 1, 2019, 3721-3725.		
13	2019	Majid Ali Tunio, Pervez Hameed Shaikh, <i>Mazhar H Baloch</i> , Fabrication and Performance Analysis of		EBSCO
		Solar Tracking System by Using By-Pass Diodes and Super-Capacitor Technology, International		
		Journal of Modern Research in Engineering & Management (IJMREM), Vol 2, Issue 01, 2019, 45-48.		
		au.		

1	2018	AH Memon, <i>Mazhar H Baloch</i> , AA Sahito, AM Soomro, ZA Memon, Achieving High Input Power Factor for Critical Conduction Mode Buck-Buck/Boost Converter, <i>IEEE Access Journal</i> , vol: 6, pp:		3.6 IF
2	2018	79082 – 79093. M Hussain, <i>Mazhar H Baloch</i> , AH Memon, NK Pathan, Maximum Power Tracking System Based on Power Electronic Topology for Wind Energy Conversion System Applications" <i>Engineering</i> ,		Web of Science
3	2018	Technology & Applied Science Research Journal, Vol. 8, No. 5, 2018, 3392-3397. AA Memon, SAA Shah, W Shah, Mazhar H Baloch, GS Kaloi, NH Mirjat, A Flexible Mathematical Model for Dissimilar Operational Modes of a Switched Reluctance Machine, IEEE Access Journal, 1201.6, pp. 9642-9649, (2018)	110	3.6 IF
4	2018	vol: 6, pp: 9643-9649, (2018). S Tahir, J Wang, <i>Mazhar H Baloch</i> , et.al., Digital Control Techniques Based on Voltage Source Inverters in Renewable Energy Applications: A Review." <i>Electronics</i> , Vol. 7, No. 2, (2018).		2.11 IF
5	2018	M Kumar, ZA Memon, MA Uqaili, Mazhar H Baloch, Experimental Testing of 210 MW Generator at Thermal Power Station, International Journal of Energy Optimization and Engineering (IJEOE),		Web of Science
6	2018	vol.7, Issue 4, Oct, 2018. MK, ZAM, MAU, <i>Mazhar H Baloch</i> , An Overview of Uninterruptible Power Supply System with Total Harmonic Analysis & Mitigation: An Experimental Investigation for Renewable Energy Applications, <i>International Journal of Computer Science and Network Security</i> , vol.18 No.6, June 2018		Web of Science
7	2018	2018. S Mahesar, <i>Mazhar H Baloch</i> , GS Kaloi, M Kumar, AM Soomro, AA Solangi, Power Management of a Stand-Alone Hybrid wind/solar/Battery Energy System: An Experimental Investigation <i>International Journal of Advanced Computer Science and Applications</i> , vol.9, Issue 6, June 2018.		Web of Science
8	2018	M Ahmad, Z Wang, J Wang, <i>Mazhar H Baloch</i> , B Longxin, Q Hua, HVDC Transmission an Outlook and Significance for Pakistani Power Sector, 2018 IOP Conf. Ser.: <i>Earth Environ. Sci.</i> 133 012004.		Scopus
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10	2017	GS Kaloi, Mazhar H Baloch et.al., Stability and Control Analysis of Doubly Fed Induction Generator Wind Turbine System [OL], [31 May 2017] http://www.paper.edu.cn/en_releasepaper/content/4734485.		EBSCO
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1	2015	Mazhar H Baloch et.al., Feasible Wind Power Potential from Costal Line of Sindh Pakistan." Research Journal of Applied Sciences, Engineering and Technology 10.4 (2015): 393-400. (Scopus/Q3)	Scopus
2	2015	Mazhar H Baloch et.al., A Point of View: Analysis and Investigation of Wind Power from Southern Region of Pakistan." International Journal on Energy Conversion (IRECON) 3.3 (2015): 103-110. (Scopus/Q3)	Scopus
3	2015	MU, Mazhar H Baloch et.al., Impact of Solar Energy Based Power Grid for Future Prospective of Pakistan, International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering vol: 9, No: 1, 2015. (EBSCO).	EBSCO
1	2014	GS Kaloi, <i>Mazhar H Baloch</i> , MK Maheshwarl, RB Lashari, Analysis and Estimation of Technical Losses in Urban Distribution Feeders Bahawalpur." <i>Sindh University Research Journal-SURJ</i> (<i>Science Series</i>) 46, no. 1 (2014).	Web of science
2	2014	Mahesh Kumar, <i>Mazhar H Baloch</i> , GS Kaloi, Energy Conservation and Emission Reduction through Electric Motors in Industrial Sector of Pakistan." <i>Sindh University Research Journal-SURJ (Science Series)</i> 46, no. 1 (2014).	Web of science
1	2013	Mazhar H Baloch, MK Maheshwari, AA Memon Energy Conservation through Energy Efficient Motors in Pakistan's IndustrialSector." Sindh University Research Journal-SURJ (Science Series) 45.3 (2013).	Web of science
2	2013	MK, <i>Mazhar H Baloch</i> et.al., Need of Escalating Energy Efficiency Standards of Motors In Industrial Sector Of Pakistan", First International Conference on Modern Communication & Computing Technologies (MCCT'14), QUEST, Nawabshah, Sindh, Pakistan. 2013.	EBSCO
3	2013	MUS, Mazhar H Baloch et.al., Performance of 220kV Transmission Line Calculation for Diverse Operating Conditions for Smart Power Bulk Transfer, QUEST, in International Conference 2013.	EBSCO
4	2013	MUS, Mazhar H Baloch et.al., Smart SCADA Implementation for Small Industry, International conference in Superior University 2013.	EBSCO
5	2013	MUS, <i>Mazhar H Baloch</i> et.al., Impact of Solar Energy Based Power Grid for Future Prospective of Pakistan, International conference in Superior University 2013.	EBSCO

National/International Memberships

Pakistan Engineering Council (PEC) "RE Member" (Life time Membership)

Elect/23873 Membership No: 156076

International Association of Engineers

- Shanghai Jiao Tong University Alumni
- Mehran University Teachers Association
- Technical University Khairpur Mirs BoS Member
- Technical University Khairpur Mirs Selection Board/Committee Member
- Universiti Sains Malaysia (USM), Malaysia Member

Skills/Software's/Workshop/Seminars/Training

Artificial Intelligence, Machine Learnings, Matlab, PSCAD, Advanced System Design, Endnote, Mendaly, Origion Pro, MS Office, MS Visio, HOMER PRO, C/C++, and edraw software,

Research grants for students, Research grants for exchange students, Post-doc Research grants, IEEE training workshop, IEEE digital library, Research Proposal, Wining Research proposal grants, Matlab workshop and various other

Community Services as Reviewers

- Project title: Development of Methods and Control Techniques for Compensating Variability of HEC NRPU Solar Photovoltaic Power Systems Pakistan (2021)
- 2. *Project title:* Design of Hardware-in-Loop simulator for Modular Multilevel Converters
- Project title: Peer-to-Peer Load and Energy Management System for Local Distribution Grid
- **Project title:** Solid State Transformer for Smart Energy Management **Project title:** Emerging Trend of Electric Vehicle in Pakistan Employ for Resilience of Electric Grid
- Project title: Designing and Implementation of an Efficient, Indigenous and Regional Energy Management Model Using Load Forecasting Techniques
- Project title: Design and development of multi stage power inverters for Photovoltaic systems
- *Project title:* Design of fully integrated DC-DC voltage converter for space satellites
- Project title: Energy Profiling of Residential Customers in Pakistan for Disaggregation based Load Characterization

 Project title: A Novel Intelligent Dynamic Energy Management System with Renewable Sources for Smart Power Grid in Pakistan
 Project title: Developing Wind Forecasting System with Sparse Data Using Long Short-Term Memory (LSTM)

HEC NRPU Pakistan (2022)

- Neural Networks.

 3. *Project title:* Development of stable and efficient perovskite solar cells for Internet of things (IoT) devices.
- 4. *Project title:* Perovskite Oxide Solar Cell Next Chapter of Energy Harvesting.
- 5. *Project title:* Performance Enhancement of Concentrated Solar Power System for Thermal Desalination of Water using a Variety of Techniques.
- 6. *Project title:* Harvesting the sun advancing solar driven photocatalytic hydrogen fuel production.
- 7. Project title: Probabilistic Estimation of Wind Speed Characteristics for Pakistan's Southern Wind Corridor
- 1. **Project title:** Development of Power Conditioning Unit for PV Panel

PSF, Pakistan_2022

• <u>Indian Journal of Science and Technology ISI:</u> Research Paper: Statistical Analysis of Wind Potential in Three Coastal Regions of Baluchistan, Minor revisions

2021

- <u>Mechanical Engineering Technologies and Applications Book Chapter</u> Structural Design of a 10 kW H-Darrieus Wind Turbine, Minor revisions.
- <u>IEEE Journal of Emerging and Selected Topics in Power Electronics</u> Science Citation Index_Research Paper: Reflection Coefficient Stability Criterion for Multi-Bus Multi VSC Power Systems, Accepted

2020

- <u>SN Applied Sciences</u> Scopus_Research Paper: Technical and Economic Analysis of Wind Energy Potential in Quetta, Baluchistan, Pakistan, Major Revision
- <u>Energy Strategy Reviews</u> Science Citation Index_Research Paper: Effective Evaluation of Renewable Energy Resources of a City by Utilizing Turkish Public Incentives and Supports at Maximum Extent, Major Revision
- International Journal of Electrical Power and Energy Systems Science Citation Index_Research Paper: An Improved Fault Current Limiting Circuit for VSC-HVDC Transmission System. Major Revision

2019

- Journal of "Environmental Progress and Sustainable Energy Science Citation Index_Research Paper: Evaluation of wind energy potential and electricity generation cost in the South of Hunan Province in China. Major Revision
- <u>IBA University Research Journal DOAJ Index Research Paper: Techno-Economic Analysis of Solar Thermal Water Heaters in Pakistan.</u> Major Revision
- <u>World Journal of Science, Technology and Sustainable Development</u> Emerging Sources Citation Index_Research Paper: Techno economic assessment of wind power potential of Hawke's Bay using Weibull parameter: A review Major Revision
- Journal of Emerging and Selected Topics in Power Electronics (IEEE) _ Science Citation Index_Research
 Paper: Suitability of Line Commutated Inverter for grid integration of hybrid Wind PV sources, Major
 Revision
- <u>Indian Journal of Science and Technology</u> Emerging Sources Citation Index Research Paper: Green computing: Optimize design of solar based power supply unit for IOT, Major Revision.
- International Journal of Energy and Environment _ Science Citation Index Expanded Research Paper: An apparent assessment of performance and availability of wind farm considering statistical data of wind farm "Major Revision.

2018

- International Journal of Sustainable Energy Planning and Management_Emerging Sources Citation Index_Research Paper: Optimal Dispatch of Wind Power and BESS Combined Power System under Low Carbon Economy "Major Revision.
- <u>Indian Journal of Science and Technology</u> Emerging Sources Citation Index_Research Paper: Geothermal Power Plant Installation in Pakistan Choice of location, inspecting its potential and utilization" Minor Revision
- Indian Journal of Science and Technology_ Emerging Sources Citation Index_Research Paper: Geothermal Power Plant Installation in Pakistan Choice of location, inspecting its potential and utilization" Minor Revision
- International Journal of Electrical Power and Energy Systems_ Science Citation Index_Research Paper: A real-time optimal coordination scheme for the voltage regulation of a distribution network including an OLTC, capacitor banks, and multiple distributed energy resources, Major Revision/Accepted.
- Renewable Energy Focus Journal (Elsevier) _ Scopus Index_IEEE Energy Conversion _ Science Citation Index (Collaboration with Prof. Jie Wang)_Research Paper: Analysis of Maximum Mechanical and Electrical Power Trackers Used in Wind Energy Conversion Systems. Accepted with minor revision.
- IEEE Control System _ Science Citation Index (Collaboration with Prof. Jie Wang) _Research Paper: PI Control of Grid-Connected Photovoltaic System Based on Nonlinear Modeling and Input-to-State Stability: Analysis and Experimental Validation. Rejected
- International Conference on New Energy and Future Energy System (NEFES 2016) (Collaboration with Prof. Jie Wang)_Research Paper: Design of wide-area time-delay supplementary controller for Interconnected Network based on Hamilton Function Method. Minor comments
- Journal of Emerging and Selected Topics in Power Electronics (IEEE) _ Science Citation Index_Research
 Paper: A Novel Probabilistic Robust Coordinated Approach for Stabilization of Power Oscillations
 Considering DFIG-Based Wind Generation Systems. Minor comments
- Journal of Energy, Sustainability and Society _ Emerging Sources Citation Index_
 - ® Research Paper: Technical and economic assessment of wind power potential of

2017

- Nooriabad, Pakistan, Major revisions required.
- Research Paper: Optimal Placement and Sizing of Distributed Generators for Voltage-Dependent Load Model in Radial Distribution System, Minor Revision/Accepted
- Electrical Power System Research Journal (Elsevier) _ Science Citation Index
 - Research Paper: Performance Analysis of Diode-bridge-type Non-Superconducting Fault Current Limiter in Improving Transient Stability of DFIG Based Variable Speed Wind Generator. Minor Revision Accepted
 - Research Paper: Electric Vehicles in Automatic Generation Control for Systems with Large Integration of Variable Renewable Generation. Revisions required.
- Renewable & Sustainable Energy Reviews Journal (Elsevier) _ Science Citation Index
 - Research Paper: Is biomass power a good choice for governments in China?

Minor Revisions Required/Accept

- Energy Reports Journal (Elsevier) _ Emerging Sources Citation Index
 - Research Paper: Economic Cost Evaluation on the Viability of Offshore Wind Turbine Farms in Nigeria. Accepted.
- Journal of Power Technologies _ Emerging Sources Citation Index
 - Research Paper: Power, Energy and Cost Models of Multi-Rotor Wind Turbine. Major revisions required

Travel History

- Srilanka (2014, 2015, 2016), China (2014-1017), Kingdom of Thailand (2015 and 2019),
- Malaysia (2016 and 2018-2019), Oman (2022 to date)

<mark>Տսյ</mark>	Supervision/Co-Supervision (B.Eng. /M.Eng / PhD)						
#	YEAR/BATCH	Student		Title of M.E/MPhil Thesis	Research Paper Status		
1	2018	Saindad	M.E Pass	Power Management of a Standalone Hybrid Energy System	Power Management of a Stand-Alone Hybrid wind/solar/Battery Energy System: An Experimental Investigation, International Journal of Advanced Computer Science and Applications, vol.9, Issue 6, June 2018.		
2	2018	Musavier	M.E Pass	Modeling and Optimal Tracking Control for a Variable Speed Wind Energy Conversion System Application	Maximum Power Tracking System Based on Power Electronic Topology for Wind Energy Conversion System Applications, in International Journal of Engineering, Technology & Applied Science Research Journal, Vol. 8, No. 5, 2018, 3392-3397.		
3	2018	Mr. MajidAli Tunio	M.E Pass	Fabrication and performance analysis of solar tracking system by using bypass diodes and super-capacitor technology	Fabrication and Performance Analysis of Solar Tracking System by Using By-Pass Diodes and Super-Capacitor Technology, International Journal of Modern Research in Eng. & Management (IJMREM), Vol 2, Issue 01, 2019, 45-48.		
4	2018	Baqir Ali	M.E Pass	Techno-Economical Analysis of Wind Power through Weibull Distribution Technique: Including a Technical Proposal for Power integration with National Grid	Wind Energy Potential Assessment and Mapping through Various Distribution Techniques: An Experimental Investigation for Wind Zone in International Journal on Energy Conversion, Vol 7, NO. 1, 2019.		
5	2018	Ms Sidra	M.E Pass	Robust Control Design Performance Analysis of Wind Energy Conversion System Based on Induction Generator	LQR and Observer based controller design performance analysis of wind energy system based on induction generator, IJEEET, Under review		
6	2018	Tariq Ali	M.E Pass	Experimental Analysis and Control of Wind- Generator System Based on SCIG, PMSG through DC/DC Converter for Extremum Power Seeking	Experimental Analysis and Control of Wind-Generator System through DC-DC boost Converter for Extremum Seeking, International Journal of Engineering, Technology & Applied Science Research Journal.		
7	2019	Bisharat	M.E Pass	Wind Power Analysis through Rayleigh Distribution Technique: A Case of Pakistan	Assessment of Wind Power Potential Based on Raleigh Distribution Model: An Experimental Investigation for Costal Zone, in International Journal of Engineering, Technology & Applied Science Research Journal, Vol. 9, No. 1, 2019, 3721-3725 (Web of Science).		
8	2018	Zaheer Hussai n	M.E Pass	Geothermal energy production by utilizing abandoned wells	Electricity Generation through Oil and Gas Wells at Kandhkot Gas Field: Powering to Local Communities, Sci. int. (Lahore), 32(1), 139-143, 2020, (Web of Science).		
9	2019	GM	M.E Pass	An Experimental investigation & Control of integrated Power System based on PV-Wind Energy	An Experimental investigation & Control of Hybrid (PV-Wind) Energy Power System, International Journal of Engineering, Technology & Applied Science Research Journal, (Web of Science). Under review		

10	2019	Rashid	Final	Designing and Enhancing the Electric Vehicle	
11	2019	Asad	waiting M.E Pass	Charging Station through Green Energy Design and Optimization of carport Canopies for Maximum Power Generation for Electric Vehicle Based on Solar System	Canopies with Maximum Power Generation for Electric Vehicles Charging, International Journal of Engineering, Technology & Applied Science
12	2019	Baqar shah	M.E Pass	Implementation of Half Bride (HB) Modular Multi-Level Inverter using nearest level modulation (NLM) technique up to X- Levels for Power Quality Analysis	Research Journal, (W Analysis of Harmonic Distortion Reduction through Modular Multi- Level Inverter using Nearest Level Modulation (NLM) Control Strategy IBA Sukkur Journal, Vol. 4, No. 1, pp.67-79 January – June 2021.
13	2019	Aqeel	M.E Pass	Comparative Analysis of Various PV Module and Grid Stability through various Tracking Algorithm: Powering to Local Communities	A Research On Various PV Arrays Manufacturing Data for Power Comparison and Optimization Through Extremum Seeking Technique, IBA Sukkur Journal, Vol. 4, No. 1, pp.59-66 January – June 2021.
14	2019	Ali Shanshah	M.E Pass	Integration of Fuel Cell & Permanent Magnet Synchronous Generator Based Wind Energy Conversion System for Optimal Power Supply	An Effective MPPT Controller for Power Optimization of PMSG Based Wind Turbine, IEEE,
15	2020	Kamra nAli	M.E Pass		
16	2019	Nazia Naz	M.E Pass	Investigation of Wind Characteristics Through Cumulative Distribution Functions and Economic Evaluation Using Cash Flow Model for Wind Power Applications	
17	2020	Halar Shaikh	Initial done	The second of th	
18	2020	Imran Ali	M.E Pass	Parameters extraction of photovoltaic cells using swarm intelligence based optimization technique: research on single diode model and double diode model	Parameters extraction of photovoltaic cells using swarm intelligence based optimization technique: research on single diode model and double diode model, Mehran University Research Journal Of Engineering & Tacknelogy (4.3.2 (2022): 158.168
19	2020	Ehtasam	F M.E Pass		Technology 42.2 (2023): 158-168.
20	2019	19MEELP	M.E Pass		
21	2020	Mansoor Ahmad 17ELPHD	PhD Pass		Performance Improvement of Grid-Integrated Doubly Fed Induction Generator under Asymmetrical and Symmetrical Faults. <i>Energies</i> 2023, <i>16</i> , 3350. https://doi.org/10.3390/en16083350
22	2022	Murtaz a	Initialdone		
23	2022	Memon Sanjha	Initial done		
24	2022	Gazala	Initialdone		
Re	ferences				
	Prof D Dahar	or. man Ishak	(Post-PhD Supervisor)	Universiti Sains Malaysia, Malasysia	dahaman@usm.my
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	Prof D Ahme	Dr. Zubair ed	(B.E/M.E Supervisor)	Mehran University of Engine & Technology Jamshoro, Sin Pakistan	
	 Prof Abdul Qadir Chang 		Taught in B.E/N	M.E Mehran University of Engine & Technology Jamshoro, Sin- Pakistan	
	Prof D Asgha	Or. Ali ar Memon	Taught in B.E/N	Mehran University of Engine & Technology Jamshoro, Sin Pakistan	