S. No.	Title of Publication	Author(s)	Year	Journal / Conference
1	A Horse Herd Optimization Algorithm (HOA)-Based MPPT Technique Under Partial and Complex Partial Shading Conditions	Sajid Sarwar, Muhammad Annas Hafeez, Muhammad Yaqoob Javed, Aamer Bilal Asghar*, Krzysztof Ejsmont	2022	Energies 2022
2	A Novel Hybrid MPPT Technique to Maximize Power Harvesting from PV System under Partial and Complex Partial Shading"	Sajid Sarwar, Muhammad Yaqoob Javed, Mujtaba Hussain Jaffery, Jehangir Arshad *, Ateeq Ur Rehman, Muhammad Shafiq, and Jin-Ghoo Choi	2022	Applied Sciences,2022
3	A novel short receptive field based dilated causal convolutional network integrated with Bidirectional LSTM for short-term load forecasting	Umar Javed , Khalid Ijaz , Muhammad Jawad , Ikramullah Khosa, Ejaz Ahmad Ansari, Khurram Shabih Zaidi, Muhammad Nadeem Rafiq, Noman Shabbir	2022	Expert Systems With Applications (Elsevier) 2022
4	A Novel Temporal Feature Selection Based LSTM Model for Electrical Short-term Load Forecasting	Khalid Ijaz, Zawar Hussain, Jameel Ahmad, Syed Farooq Ali, Muhammad Adnan, and Ikramullah Khosa	2022	IEEE Access 2022
5	A Smart and Cost-efficient to prevent the bad posture effects in offices or work desks using machine learning	Jehangir Arshad, H. M. Asim, M. A. Ashraf, M. H. Jaffery, K. S. Zaidi, A. Rehman, M. D. Amatie	2022	Computational Intelligence and Neuro Science,2022
6	Adaptive Neuro-Fuzzy Algorithm for Pitch Control of Variable-Speed Wind Turbine	Aamer Bilal Asghar, Khazina Naveed, Gang Xiong, Yong Wang	2022	International Journal of Control, Automation and Systems,2022
7	An Efficient Estimation of Wind Turbine Output Power Using Neural Networks	Muhammad Yaqoob Javed, Iqbal Ahmed Khurshid, Aamer Bilal Asghar, Syed Tahir Hussain Rizvi, Kamal Shahid, Krzysztof Ejsmont	2022	Energies 2022
8	CEVGMM: Computationally Efficient Versatile Generic Memristor Model	Mubeen Zafar, Muhammad Naeem Awais, Muhammad Naeem Shehzad, Abbas Javed	2022	IEEE Transactions on Very Large Scale Integration (VLSI) Systems 2022
9	Computationally efficient memristor model based on Hann window function	Mubeen Zafar, Muhammad Naeem Awais, Muhammad Naeem Shehzad	2022	Microelectronics Journal,2022
10	Deployment of Wireless Sensor Network and IoT Platform to Implement an Intelligent Animal Monitoring System	Jehangir Arshad*, A.Rehman, A. U. Rehman, M. T. B. Othman, M. Ahmad, H. B. Tariq, M. A. Khalid, M. A. R. Moosa, M. Shafiq, H. HAmam	2022	Sustainability, 2022
11	Economic Integration of Renewable and Conventional Power Sources – a Case Study	Muhammad Mateen Afzal Awan, Muhammad Yaqoob Javed, Aamer Bilal Asghar*, Krzysztof Ejsmont, Zia Ur-Rehman	2022	Energies 2022
12	Estimation of the Solid Circulation Rate in Circulating Fluidized Bed System Using Adaptive Neuro-Fuzzy Algorithm	Aamer Bilal Asghar, Saad Farooq, Muhammad Shahzad Khurram, Mujtaba Hussain Jaffery, Krzysztof Ejsmont	2022	Energies,2022
13	Financial Hazard Assessment for Electricity Suppliers Due to Power Outages: The Revenue Loss Perspective	Ikramullah Khosa, Naveed Taimoor, Jahanzeb Akhtar, Khurram Ali, Ateeq Ur Rehman, Mohit Bajaj, Mohamed Elgbaily, Mokhtar Shouran, Salah Kamel	2022	Energies 2022
14	Finite-time L1 and L_infinity boundedness for nonlinear singular switched positive systems with D-perturbations	Shuo Li, Zhengrong Xiang, Junfeng Zhang, Imran Ghous	2022	Nonlinear Analysis: Hybrid Systems (Elsevier) 2022
15	Forensic Analysis on Internet of Things (IoT) Device using Machine to Machine (M2M) Framework	M. S. Mazhar, Y. Saleem, A. Almogren, Jehangir Arshad*, M. H. Jaffery, A. Rehman, M. Shafiq and H. Hamam	2022	Electronics, MDPI 2022

16	FSR-Based Smart System for Detection of Wheelchair Sitting Postures Using Machine Learning Algorithms and Techniques"	M. H. Jaffery, M. A. Ashraf, A. Almogren , H. M. Asim Jehangir Arshad , J. Khan, A. Rehman, and S. Hussen	2022	Journal of Sensors, 2022
17	H_infinity Stabilization Problem for Memristive Neural Networks with Time-varying Delays	Imran Ghous, Jian Lu, Zhaoxia Duan	2022	Information Sciences (Elsevier),2022
18	Implementation of a LoRaWAN Based Smart Agriculture Decision Support System for Optimum Crop Yield	Jehangir Arshad, M. Aziz,A. A. Al-Huqail,*,M. H. Zaman,M. Husnain,A. Rehman, and M. Shafiq	2022	Sustainability 2022
19	Implementation of an Intelligent Exam Supervision System using Deep Learning Algorithms	F. Mahmood, Jehangir Arshad, M. T. B. Othman, M. F. Hayat, N. Bhatti; M. H. Jaffery, A. Rehman, H. Hamam	2022	Sensors, MDPI,2022
20	Improving the QoS in 5G HetNets Through Cooperative Q-Learning	MUHAMMAD USMAN IQBAL , EJAZ AHMAD ANSARI , SALEEM AKHTAR AND ALI NAWAZ KHAN	2022	IEEE Access 2022
21	Improving the Survival Time of Multi-agents in Social Dilemmas through Neurotransmitter based Deep Q-Learning Model of Emotion	Awais Hassan, Maida Shahid, Faisal Hayat, Jehangir Arshad, Mujtaba H. Jaffery, Ateeq Ur Rehman, Kalim Ullah , Seada Hussen , Habib Hamam	2022	Journal of Healthcare Engineering,2022
22	l1-gain Controller Design for 2D Markov Jump Positive Systems with Directional Delays	Zhaoxia Duan, Choon Ki Ahn, Zhengrong Xiang, Imran Ghous	2022	IEEE Transactions on Systems, Man, and Cybernetics – Systems 2022
23	Load Management and Optimal Sizing of Special Purpose Microgrids using Two Stage PSO-Fuzzy Based Hybrid Approach	F. Azeem, A. Ahmad, T. M. Gondal, Jehangir Arshad, A. Rehman, E. M. T. E. Din, M. Shafiq, H. Hamam	2022	Energies, MDPI 2022
24	Mixed l_1/l_- Fault Detection for Positive 2D Systems with Distributed Delays"	Zhaoxia Duan, Jinling Liang, Choon Ki Ahn, Zhengrong Xiang, Imran Ghous	2022	IEEE Transactions on Systems, Man, and Cybernetics: Systems 2022
25	Novel Hybrid MPPT Technique Based On Harris Hawk Optimization (HHO) and Perturb and Observer (P&O) under Partial and Complex Partial Shading Conditions	Muhammad Annas Hafeez, Ahmer Naeem, Muhammad Akram, Muhammad Yaqoob Javed, Aamer Bilal Asghar* and Yong Wang	2022	Energies, 2022
26	On l1-gain Control for 2D Delayed Positive Systems in FM LSS Models: Necessary and Sufficient Conditions"	Zhaoxia Duan, Yuchen Han, Zhengrong Xiang, Imran Ghous	2022	International Journal of Systems Science (Taylor & Francis) 2022
27	Performance Optimization of a Ten Check MPPT algorithm for an Off-Grid Solar Photovoltaic System	Muhammad Mateen Afzal Awan, Muhammad Yaqoob Javed, Aamer Bilal Asghar*, Krzysztof Ejsmont	2022	Energies, 2022
28	Wavelet Transform Based Sparse Code Multiple Access for Power Line Communication	Muhammad Sajid Sarwar, Sobia Baig, Hafiz Asif, Kaamran Raahemifar, Samir Al-Busaidi	2022	Electronics MDPI, 2022
29	Wireless Charging Systems for Electric Vehicles	Farooq-i-Azam and Ejaz A. Ansari	2022	Renewable and Sustainable Energy Reviews (Elsevier),2022
30	Attitude in Motion: Constraints Aided Accurate Vehicle Orientation Tracking in Harsh Environment	M. Javed, M. Tahir, K. Ali	2022	IEEE Transactions on Industrial Informatics
31	Battery Size Optimization With Customer PV Installations and Domestic Load Profile	N. Shabbir, L. Kütt, V. Astapov, M. Jawad, A. Allik and O. Husev	2022	IEEE Access
32	Short-Term Wind Energy Forecasting Using Deep Learning-Based Predictive Analytics	Jin-Ghoo Choi Noman Shabbir, Lauri Kütt, Muhammad Jawad, Oleksandr Husev, Ateeq Ur Rehman, Akber Abid Gardezi, Muhammad Shafiq	2022	Computers,Materials & Continua

33	Active and Passive Fault Tolerant Control Allocation Strategy for Nonlinear Systems	S. Ijaz, H. Ijaz, M.T. Hamayun, U. Javaid	2022		International Journal of Vibration and Control
34	A Hybrid Approach for an Efficient Estimation and Control of Permanent Magnet Synchronous Motor with Fast Dynamics and Practically Unavailable Measurements	K. Shahzad, M. Jawad, K. Ali, J. Akhtar, I. Khosa, M. Bajaj, E.E. Elattar, S. Kamel	2022		Applied Sciences
35	Probabilistic analysis of an rl circuit transient response under inductor failure conditions	M. Farooq-i-Azam, Z. H. Khan, S. R. Hassan, and R. Asif,	2022		Electronics
36	Interference Avoidance in Cognitive Radio Networks Using Cooperative Localization	Muhammad Farooq-i-Azam; Qiang Ni; Mianxiong Dong; Haris Pervaiz; Charilaos Zarakovitis; Fawaz Alsolami	2022		IEEE Systems Journal
37	A new predictive control strategy for improving operating performance of a permanent magnet synchronous generator-based wind energy and superconducting magnetic energy storage hybrid system integrated with grid	N. Mughees, M. H. Jaffery, M. Jawad	2022		Journal of Energy Storage
38	Low Cost Intelligent Computer Vision based Assistive Technology for Elderly People	Dennis Cheung and Peter Joe and Muhammad Nadeem and Saleem Akhtar and M. Hassan Aslam	2022		Mehran University Research Journal of Engineering and Technology
39	An Empirical Investigation of Control Methods X3D Quadrotor Feedback Projection Control	T. Shakeel, Jehangir Arshad, M. H. Jaffery, A. Rehman, E.D. Eldin, N. A. Ghamry, M. Shafiq	2022		Applied Sciences
40	Implementation of an IoT Based Solar-Powered Smart Lawn Mower	T. Tahir, A. Khalid, Jehangir Arshad, A. Haider, A. Rehman, M. Shafiq	2022		Wireless Communications and Mobile Computing
41	Intelligent Control of Robotic Arm using Brain Computer Interface and Neural Networks	Jehangir Arshad, A. Qaisar, A. Rehman, M. Shakir, M. K. Nazir, A. Rehman	2022		Applied Sciences
42	A Large scale Evolutionary Algorithm based on Determinantal Point Processes for Large scale Multi-objective Optimization Problems	M. A. Okoth, R. Shang, L. Jiao, Jehangir Arshad, A. Rehman, and H. Hamam	2022		Electronics
43	Fault-Level grading of Photovoltaic Cells employing Light Weight Deep Learning Models	I. Khosa, A. Rehman, K. Ali, J. Akhtar, A. Armghan, Jehangir Arshad, M. D. Amantie	2022		Computational Intelligence and Neuro Science
44	Financial Hazard Prediction Due to Power Outages Associated with Severe Weather-Related Natural Disaster Categories	R. Ali, I. Khosa, A. Armghan, Jehangir Arshad, S. Rabbani, N. Alsharabi and H. Hamam	2022		Energies
45	A novel renewable powered stand-alone electric vehicle parking-lot model	M. Jawad, H. Asghar, Jehangir Arshad, A. Javed, M. B. Qureshi, S. M. Ali, N. Shabbir and A. Rassolkin	2022		Sustainable Energy, Grids and Networks
46	Broadband Chiro-Optical Effects for Futuristic Meta-Holographic Displays	HS Khaliq, J Kim, T Naeem, K Riaz, T Badloe, J Seong, J Akbar, M Zubair	2022		Advanced Optical Materials

47	Dynamic Chiral Metasurfaces for Broadband Phase-Gradient Holographic Displays	Taimoor Naeem, Joohoon Kim, Hafiz Saad Khaliq, Junhwa Seong, Muhammad Tariq Saeed Chani, Tauseef Tauqeer, Muhammad Qasim Mehmood, Yehia Massoud, Junsuk Rho	2022	Advanced Optical Materials
48	Robust nonlinear observer-based controller design for one-sided Lipschitz switched systems with time-varying delays	Waseem Iqbal, Imran Ghous, Ejaz Ahmad Ansari, Zhaoxia Duan, Muhammad Imran, Asim Ali Khan, Mirza Tariq Humayun	2022	Journal of the Franklin Institute
49	Model predictive control for Takagi–Sugeno fuzzy model-based Spacecraft combined energy and attitude control system	Sohaib Aslam, Yew-Chung Chak, Mujtaba Hussain Jaffery, Renuganth Varatharajoo, Ejaz Ahmad Ansari	2022	Advances in Space Research
50	A Survey of FDD-Based Channel Estimation Schemes with Coordinated Multipoint	B. Hassan, S. Baig, H. M. Asif, S. Mumtaz and S. Muhaidat	2022	IEEE Systems Journal
51	Feasibility Assessment of Rural Hybrid Microgrid using Canal-Based Microhydel Resources: A Case Study of Renala Khurd Pakistan	Sattar, M.; Azeem, F.; Memon, Z.; Zidan, H.; Baig, S	2022	Sustainability
52	A computationally efficient unscented Kalman smoother for ameliorated tracking of subatomic particles in high energy physics experiments	Jahanzeb Akhtar, Imran Ghous, Muhammad Jawad, Zhaoxia Duan, Ikramullah Khosa, Saim Ahmed	2022	Computer Physics Communications
53	Probability model of the exponentially rising transient response of a failed RC circuit	Muhammad Farooq-i-Azam and Muhammad Omar Farooq	2022	Engineering Failure Analysis
54	A Survey on Model-based Fault Detection Techniques for Linear Time-Invariant Systems with Numerical Analysis	Ahmad Masood, Mohd-Mokhtar Rosmiwati	2022	Pertanika J. of Science & Technology
55	Fault estimation in discrete-time linear systems with mixed uncertainties using proportional integral observer	Ahmad Masood, Mohd-Mokhtar Rosmiwati	2022	Alexandria Engineering Journal
56	A Review of Power Co-generation Technologies from Hybrid Offshore Wind and Wave Energy	Waqas Ayub, Ameer Hamza, Xiandong Ma, George Aggidis	2022	Energies
57	A Novel Mathematical Approach to Model Multi-Agent-Based Main Grid and Microgrid Networks for Complete System Analysis	Ameer Hamza, Syed Tahir Rizvi, Umair Safder, Haleema Asif	2022	Machines