Muhammad Khalid

List of Publications by Year
in descending order

157	3,292	136940 32	168376 53
papers	citations	h-index	g-index

157	157	157	2605
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optimal sizing of a wind/solar/battery hybrid gridâ€connected microgrid system. IET Renewable Power Generation, 2018, 12, 72-80.	3.1	233
2	A model predictive control approach to the problem of wind power smoothingÂwith controlled battery storage. Renewable Energy, 2010, 35, 1520-1526.	8.9	180
3	A review on the selected applications of forecasting models in renewable power systems. Renewable and Sustainable Energy Reviews, 2019, 100, 9-21.	16.4	179
4	A Method for Short-Term Wind Power Prediction With Multiple Observation Points. IEEE Transactions on Power Systems, 2012, 27, 579-586.	6.5	135
5	A Comprehensive Review of Recent Advances in Smart Grids: A Sustainable Future with Renewable Energy Resources. Energies, 2020, 13, 6269.	3.1	118
6	An Innovative Hybrid Wind-Solar and Battery-Supercapacitor Microgrid Systemâ€”Development and Optimization. IEEE Access, 2017, 5, 25897-25912.	4.2	116
7	Improving Wind Farm Dispatch in the Australian Electricity Market With Battery Energy Storage Using Model Predictive Control. IEEE Transactions on Sustainable Energy, 2013, 4, 745-755.	8.8	107
8	Minimization and control of battery energy storage for wind power smoothing: Aggregated, distributed and semi-distributed storage. Renewable Energy, 2014, 64, 105-112.	8.9	85
9	Machine learning in state of health and remaining useful life estimation: Theoretical and technological development in battery degradation modelling. Renewable and Sustainable Energy Reviews, 2022, 156, 111903.	16.4	80
10	Minimizing the energy cost for microgrids integrated with renewable energy resources and conventional generation using controlled battery energy storage. Renewable Energy, 2016, 97, 646-655.	8.9	76
11	A Review on the Selected Applications of Battery-Supercapacitor Hybrid Energy Storage Systems for Microgrids. Energies, 2019, 12, 4559.	3.1	74
12	Optimal Sizing of Battery Energy Storage for Grid-Connected and Isolated Wind-Penetrated Microgrid. IEEE Access, 2020, 8, 91129-91138.	4.2	73
13	Electric Vehicles Beyond Energy Storage and Modern Power Networks: Challenges and Applications. IEEE Access, 2019, 7, 99031-99064.	4.2	70
14	An Improved Optimal Sizing Methodology for Future Autonomous Residential Smart Power Systems. IEEE Access, 2018, 6, 5986-6000.	4.2	69
15	On maximizing profit of wind-battery supported power station based on wind power and energy price forecasting. Applied Energy, 2018, 211, 764-773.	10.1	69
16	A Constrained Monotonic Charging/Discharging Strategy for Optimal Capacity of Battery Energy Storage Supporting Wind Farms. IEEE Transactions on Sustainable Energy, 2016, 7, 1224-1231.	8.8	67
17	A Coordinated Frequency Regulation Framework Based on Hybrid Battery-Ultracapacitor Energy Storage Technologies. IEEE Access, 2018, 6, 7310-7320.	4.2	67
18	An optimal operation of wind energy storage system for frequency control based on model predictive control. Renewable Energy, 2012, 48, 127-132.	8.9	64

#	Article	IF	Citations
19	Saviztkyâ€“Golay Filtering for Solar Power Smoothing and Ramp Rate Reduction Based on Controlled Battery Energy Storage. IEEE Access, 2020, 8, 33806-33817.	4.2	61
20	An Energy Management System for Residential Autonomous DC Microgrid Using Optimized Fuzzy Logic Controller Considering Economic Dispatch. Energies, 2019, 12, 1457.	3.1	57
21	An intelligent framework for short-term multi-step wind speed forecasting based on Functional Networks. Applied Energy, 2018, 225, 902-911.	10.1	56
22	Optimal Planning of Multiple Distributed Generating Units and Storage in Active Distribution Networks. IEEE Access, 2018, 6, 55234-55244.	4.2	50
23	Co-optimized trading of wind-thermal-pumped storage system in energy and regulation markets. Energy, 2017, 138, 991-1005.	8.8	46
24	Multi-step Ahead Wind Forecasting Using Nonlinear Autoregressive Neural Networks. Energy Procedia, 2017, 134, 192-204.	1.8	46
25	Method for planning a windâ€“solarâ€“battery hybrid power plant with optimal generationâ€demand matching. IET Renewable Power Generation, 2018, 12, 1800-1806.	3.1	46
26	Minimization of Power Losses through Optimal Battery Placement in a Distributed Network with High Penetration of Photovoltaics. Energies, 2020, 13, 140.	3.1	43
27	Improving the Transient Response of Hybrid Energy Storage System for Voltage Stability in DC Microgrids Using an Autonomous Control Strategy. IEEE Access, 2021, 9, 10460-10472.	4.2	37
28	An Efficient ANFIS-Based PI Controller for Maximum Power Point Tracking of PV Systems. Arabian Journal for Science and Engineering, 2015, 40, 2641-2651.	1.1	36
29	Seven-parameter PV model estimation using Differential Evolution. Electrical Engineering, 2018, 100, 971-981.	2.0	35
30	Optimal Sizing of Battery Energy Storage for a Grid-Connected Microgrid Subjected to Wind Uncertainties. Energies, 2019, 12, 2412.	3.1	35
31	Investigation into effects of non-uniform irradiance and photovoltaic temperature on performances of photovoltaic/thermal systems coupled with truncated compound parabolic concentrators. Applied Energy, 2019, 250, 245-256.	10.1	35
32	Power Quality Improvement in Microgrids Under Critical Disturbances Using an Intelligent Decoupled Control Strategy Based on Battery Energy Storage System. IEEE Access, 2019, 7, 147314-147326.	4.2	34
33	Enhancing the reliability of a microgrid through optimal size of battery ESS. IET Generation, Transmission and Distribution, 2019, 13, 1499-1508.	2.5	27
34	Performance investigation on a novel spectral splitting concentrating photovoltaic/thermal system based on direct absorption collection. Solar Energy, 2018, 163, 552-563.	6.1	26
35	An Intelligent Battery Energy Storage-Based Controller for Power Quality Improvement in Microgrids. Energies, 2019, 12, 2112.	3.1	25
36	Heat losses and thermal stresses of an external cylindrical water/steam solar tower receiver. Applied Thermal Engineering, 2019, 163, 114241.	6.0	24

#	Article	IF	Citations
37	Multi-Input Nonlinear Programming Based Deterministic Optimization Framework for Evaluating Microgrids with Optimal Renewable-Storage Energy Mix. Sustainability, 2021, 13, 5878.	3.2	21
38	Design and performance study on a large-scale hybrid CPV/T system based on unsteady-state thermal model. Solar Energy, 2019, 177, 427-439.	6.1	20
39	Techno-Economic Assessment and Operational Planning of Wind-Battery Distributed Renewable Generation System. Sustainability, 2021, 13, 6776.	3.2	20
40	Model predictive control based efficient operation of battery energy storage system for primary frequency control. , 2010, , .		19
41	Closure to discussion on "A method for short-term wind power prediction with multiple observation points". IEEE Transactions on Power Systems, 2013, 28, 1898-1899.	6.5	19
42	Model predictive control for wind power generation smoothing with controlled battery storage. , 2009, , .		18
43	Wind Power Economic Dispatch â€“ Impact of Radial Basis Functional Networks and Battery Energy Storage. IEEE Access, 2019, 7, 36819-36832.	4.2	17
44	Moving Regression Filtering With Battery State of Charge Feedback Control for Solar PV Firming and Ramp Rate Curtailment. IEEE Access, 2021, 9, 13198-13211.	4.2	17
45	Two-Stage Stochastic Optimization of Sodium-Sulfur Energy Storage Technology in Hybrid Renewable Power Systems. IEEE Access, 2021, 9, 162962-162972.	4.2	17
46	Global Sliding-Mode Control with Fractional-Order Terms for the Robust Optimal Operation of a Hybrid Renewable Microgrid with Battery Energy Storage. Electronics (Switzerland), 2022, 11, 88.	3.1	17
47	Robust Control for Optimized Islanded and Grid-Connected Operation of Solar/Wind/Battery Hybrid Energy. Sustainability, 2022, 14, 5673.	3.2	17
48	A marketâ€oriented wind power dispatch strategy using adaptive price thresholds and battery energy storage. Wind Energy, 2018, 21, 242-254.	4.2	16
49	Optimizing a Distributed Wind-Storage System Under Critical Uncertainties Using Benders Decomposition. IEEE Access, 2019, 7, 77951-77963.	4.2	16
50	Neural network predictive control for smoothing of solar power fluctuations with battery energy storage. Journal of Energy Storage, 2021, 42, 103014.	8.1	16
51	Optimal size of battery energy storage and monotonic charging/discharging strategies for wind farms. , 2014, , .		14
52	A MILP-Based Restoration Technique for Multi-Microgrid Distribution Systems. IEEE Access, 2019, 7, 136801-136811.	4.2	14
53	Sizing and Allocation for Solar Energy Storage System Considering the Cost Optimization. , 2019, , .		14
54	Thermal losses evaluation of an external rectangular receiver in a windy environment. Solar Energy, 2019, 184, 281-291.	6.1	13

#	Article	IF	Citations
55	Past Vector Similarity for Short Term Electrical Load Forecasting at the Individual Household Level. IEEE Access, 2021, 9, 42771-42785.	4.2	13
56	Optimization and control of a distributed Battery Energy Storage System for wind power smoothing. , 2011, , .		12
57	Microgrid Reliability Evaluation Using Distributed Energy Storage Systems. , 2019, , .		12
58	Wind power dispatch control with battery energy storage using model predictive control. , 2012, , .		11
59	Impact of wind speed modelling on the predictive reliability assessment of windâ€based microgrids. IET Renewable Power Generation, 2019, 13, 2947-2956.	3.1	11
60	A comprehensive study on the effects of truncation positions of the compound parabolic concentrator eliminating multiple reflections on the performances of concentrating photovoltaic and thermal system. Applied Thermal Engineering, 2021, 183, 116162.	6.0	11
61	Integrated Power Management and Nonlinear-Control for Hybrid Renewable Microgrid. , 2021, , .		11
62	Fuzzy logic controller for solar power smoothing based on controlled battery energy storage and varying low pass filter. IET Renewable Power Generation, 2020, 14, 3824-3833.	3.1	11
63	Hybrid Energy Storage System for Voltage Stability in a DC Microgrid Using a Modified Control Strategy. , 2019, , .		10
64	Model Predictive Control Approach for Optimal Power Dispatch and Duck Curve Handling Under High Photovoltaic Power Penetration. IEEE Access, 2020, 8, 186840-186850.	4.2	10
65	Optimal Sizing and Cost Minimization of Solar Photovoltaic Power System Considering Economical Perspectives and Net Metering Schemes. Electronics (Switzerland), 2021, 10, 2713.	3.1	10
66	Diet of the Worm Lizard, Diplometopon zarudnyi (Nikolsky, 1907), in Riyadh province, Saudi Arabia (Reptilia: Trogonophidae). Zoology in the Middle East, 2016, 62, 227-230.	0.6	9
67	Energy Management Strategy Considering Battery Efficiency for Grid-Tied Microgrids During Summer in the Kingdom of Saudi Arabia. , 2019, , .		9
68	Smoothing Methodologies for Photovoltaic Power Fluctuations. , 2019, , .		9
69	A Reactive Power Compensation Strategy in Radial Distribution Network with High PV Penetration. , 2019, , .		9
70	A Review of Improvements in Power System Flexibility: Implementation, Operation and Economics. Electronics (Switzerland), 2022, 11, 581.	3.1	9
71	AC/DC fault handling and expanded DC power flow expression in hybrid multi-converter DC grids. International Journal of Electrical Power and Energy Systems, 2022, 141, 107989.	5.5	9
72	A Flexible Operation and Sizing of Battery Energy Storage System Based on Butterfly Optimization Algorithm. Electronics (Switzerland), 2022, 11, 109.	3.1	9

#	Article	IF	Citations
73	Optimal Sizing, Allocation, Dispatch and Power Flow of Energy Storage Systems Integrated with Distributed Generation Units and a Wind Farm. , 2018, , .		8
74	Double Moving Average Methodology for Smoothing of Solar Power Fluctuations with Battery Energy Storage. , 2020, , .		8
75	A method for short-term wind speed time series forecasting using Support Vector Machine Regression Model. , 2017, , .		7
76	Sizing of energy storage systems to enhance microgrid reliability. , 2018, , .		7
77	Multi-Objective Optimal DG Sizing and Placement in Distribution Systems Using Particle Swarm Optimization. , 2019, , .		7
78	Optimal Coordinated Planning of Energy Storage and Tie-Lines to Boost Flexibility with High Wind Power Integration. Sustainability, 2021, 13, 2526.	3.2	7
79	Power Quality Control of Hybrid Wind/Electrolyzer/Fuel-Cell/BESS Microgrid. , 2021, , .		7
80	Stochastic-programming-based bidding strategy for V2G services. , 2013, , .		6
81	Wind Energy Conversion Systems and Artificial Neural Networks: Role and Applications. , 2019, , .		6
82	Machine Learning Based Controlled Filtering for Solar PV Variability Reduction with BESS. , 2021, , .		6
83	Primary Frequency Regulation by Demand Side Response. Arabian Journal for Science and Engineering, 2021, 46, 9627-9637.	3.0	6
84	Nonlinear Power System Stabilizer Design for Small Signal Stability Enhancement. Arabian Journal for Science and Engineering, 2022, 47, 13893-13905.	3.0	5
85	Hybrid Solar/ PEM Fuel Cell/ and Water Electrolyzer Energy System for All-Electric Ship. , 2022, , .		5
86	A method for minimizing energy cost in a microgrid with hybrid renewable power generation using controlled battery energy storage. , 2016, , .		4
87	Implementation of electric drive system using induction motor for traction applications. , 2017, , .		4
88	An Advanced Control Strategy for Magnetic Levitation Train System Based on an Online Adaptive PID Controller. , 2017, , .		4
89	Energy Management for Standalone DC Microgrid Using Artificial Bee Colony. , 2019, , .		4
90	A Strategy for Utilization of Reactive Power Capability of PV Inverters. , 2019, , .		4

#	Article	IF	Citations
91	A Voltage Sensitivity Framework for Optimal Allocation of Battery Energy Storage Systems. , 2021, , .		4
92	Hodrick Prescott Decomposition for Battery Energy Storage Size Reduction and Wind Power Control for Microgrid Applications. , 2021, , .		4
93	Optimal Battery Energy Storage Placement in Highly PV - Penetrated Distribution Networks. , 2020, , .		4
94	Discussion on â€œNovel Supervisory Control Method for Islanded Droop-Based AC/DC Microgridsâ€• IEEE Transactions on Power Systems, 2020, 35, 4138-4138.	6.5	4
95	A Feedforward Neural Network Hydrogen Electrolyzer Output Regulator for Wind Power Control with Battery Storage. , 2021, , .		4
96	Enhancing Transient Response and Voltage Stability of Renewable Integrated Microgrids. Sustainability, 2022, 14, 3710.	3.2	4
97	Battery Integrated Optimal Power Smoothing of Solar PV Output Using Meta-Heuristic Optimization. , 2022, , .		4
98	Coordinating emission-aware energy trading with V2G services. , 2013, , .		3
99	An adaptive control algorithm for wind power dispatch using a battery energy storage system. , 2015, , .		3
100	A Nonlinear Autoregressive Neural Network Model for Short-Term Wind Forecasting. , 2017, , .		3
101	Optimal Dispatch of Distributed Generation Units, Wind Farms and Energy Storage Systems. , 2018, , .		3
102	A Novel Design of Static Electrostatic Generator for High Voltage Low Power Applications Based on Electric Field Manipulation by Area Geometric Difference. Energies, 2019, 12, 802.	3.1	3
103	Minimizing Active/Reactive Power Losses in Electricity Networks Based on Optimal Location of Battery Energy Storage System. , 2019, , .		3
104	SVC-based Controller Design via Ant Colony Optimization Algorithm. , 2019, , .		3
105	Impact of Smart Restoration and Energy Storage Systems on the Reliability of Electric Microgrid. Arabian Journal for Science and Engineering, 2020, 45, 1911-1925.	3.0	3
106	Discussion on â€œDecentralized Optimal Frequency Control in Autonomous Microgridsâ€• IEEE Transactions on Power Systems, 2020, 35, 4972-4972.	6.5	3
107	Locally Weighted Filtering for Photovoltaic Power Fluctuation Control and Time Delay Reduction with Battery Energy Storage. , 2021, , .		3
108	Ammonia Fuel Cells for Wind Power Smoothing and Control for Smart Grid Applications. , 2021, , .		3

#	Article	IF	Citations
109	Discussion on â€œMitigation of Fault Induced Delayed Voltage Recovery (FIDVR) by PV-STATCOMâ€• IEEE Transactions on Power Systems, 2022, 37, 1665-1665.	6.5	3
110	Model Predictive Control of Wind Energy Storage System for Frequency Regulation. Smart Innovation, Systems and Technologies, 2011, , 101-110.	0.6	2
111	Transmission lines induced currents in human bodies using charge simulation method. , 2012, , .		2
112	Optimization of a power system consisting of wind and solar power plants and battery energy storage for optimal matching of supply and demand. , 2015, , .		2
113	Optimizing a Grid-Connected Micro-Grid with Optimal Renewable Generation and Battery Energy Storage. , 2017, , .		2
114	Residential Demand Side Management in Smart Grid Paradigm. , 2018, , .		2
115	Towards reliable microgrids â€" An economic and environmental evaluation. , 2018, , .		2
116	A strategy for residential demand response management in modern electricity markets. , 2018, , .		2
117	Advanced Direct Torque Control of Four Switch Fed Two-Phase Symmetric Induction Motor. , 2018, , .		2
118	Reliability Assessment of Microgrids with Multiple Distributed Generations and Hybrid Energy Storage. , 2018, , .		2
119	Voltage and Frequency Control of Microgrids With Distributed Generations and Battery Energy Storage. , 2019, , .		2
120	Electric Field Computation Under a Double Circuit 380 kV Overhead Transmission Line. , 2019, , .		2
121	Evaluation of Distance Protection Responses in AC Power System With Converter Interface. , 2019, , .		2
122	Discussion on â€œShort-Term Reactive Power Planning to Minimize Cost of Energy Losses Considering PV Systemsâ€• IEEE Transactions on Smart Grid, 2020, 11, 1812-1812.	9.0	2
123	Development of Short-Term Prediction System for Wind Power Generation Based on Multiple Observation Points. , 2009, , 89-98.		2
124	On Sizing of Standalone Hybrid Wind/Solar/Battery Micro-grid System. Renewable Energy and Power Quality Journal, 2017, 1, 658-662.	0.2	2
125	Capacity Optimization and Optimal Placement of Battery Energy Storage System for Solar PV Integrated Power Network. , 2021, , .		2
126	Machine Learning Based Hydrogen Electrolyzer Control Strategy for Solar Power Output and Battery State of Charge Regulation. , 2021, , .		2

#	Article	IF	Citations
127	Soft Load Shedding Based Demand Control of Residential Consumers. Electronics (Switzerland), 2022, 11, 615.	3.1	2
128	Adaptive filtering based short-term wind power prediction with multiple observation points. , 2009, , .		1
129	Model predictive control of distributed and aggregated Battery Energy Storage System for capacity optimization. , 2011, , .		1
130	Maximizing the income for wind power plant integrated with a battery energy storage system using dynamic programming. , 2015, , .		1
131	Reliability Analysis of an Integrated PV System Using Markovian Modeling. , 2018, , .		1
132	An Efficient Scenario Generation Technique for Short-Term Wind Power Production. , 2018, , .		1
133	Hybrid Distributed Generation System Modeling for Smart Self-Healing Electric Microgrid. , 2018, , .		1
134	A Novel Operation Strategy of Battery-Supercapacitor Hybrid Energy Storage System Providing Frequency Regulation Service. , 2018, , .		1
135	Minimizing Active Power Losses in Electricity Networks Based on Optimal Location of Battery Energy Storage System. , 2019, , .		1
136	Optimal Allocation of Batteries to Facilitate High Solar Photovoltaic Penetration. , 2019, , .		1
137	Distance Protection Performance in AC Power System With Back-to-Back Converter Interface. , 2019, , .		1
138	Optimal Control of a Microgrid with Distributed Renewable Generation and Battery Energy Storage. , 2020, , .		1
139	Stochastic Approach for Optimal Sizing and Allocation of Energy Storage Systems. , 2021, , .		1
140	Multi-Input Boost Converter for Parallel Connected Renewable Energy Systems. Renewable Energy and Power Quality Journal, 0, 18, 403-408.	0.2	1
141	Wind Power Source Role in Sizing Battery Energy Storage for Secondary Frequency Application. Renewable Energy and Power Quality Journal, 0, 18, 304-308.	0.2	1
142	Experiment and Numerical Analysis of Thermal Performance of a Billboard External Receiver. Energies, 2022, 15, 2188.	3.1	1
143	Power Quality in Electrical Network â€“ A Practical Case. , 2022, , .		1
144	Direction Dependent Power Curves for Wind Power Prediction: A Case Study. Smart Innovation, Systems and Technologies, 2011, , 121-127.	0.6	0

#	Article	IF	Citations
145	Optimal hybrid wind-solar system for matching renewable power generation with demand. , 2014, , .		0
146	Metabolism of the spade-headed Amphisbaenian worm lizard, Diplometopon zarudnyi (Nikolsky, 1907), in Saudi Arabia (Reptilia: Trogonophidae). Saudi Journal of Biological Sciences, 2018, 25, 178-181.	3.8	0
147	An Intelligent Method for Very-Short Range Multi-Step Wind Power Forecasting. , 2018, , .		0
148	Economic Dispatch Using Functional Network Wind Forecast Model. , 2018, , .		0
149	Optimal Scheduling of Power Generation Units using Differential Evolution Approach: A Case Study. , 2019, , .		0
150	Reliability Assessment of Standalone Wind-Based Energy Storage System Using Monte Carlo Simulation. , 2019, , .		0
151	Comparison between Two LCL DC Transformer Topologies: SCR-LCL and IGBT-LCL. , 2019, , .		0
152	Coordinated Trading of Solar and Thermal Energy Including V2G Services. , 2013, , .		0
153	Active/Reactive Power Losses Minimization Based on Optimal Location of Battery Energy Storage System. Renewable Energy and Power Quality Journal, 0, 18, 594-598.	0.2	0
154	Optimal Allocation of Energy Storage Systems for Load Management in Distributed Renewable Generations. Renewable Energy and Power Quality Journal, 0, 18, 675-679.	0.2	0
155	Deployment of Battery Energy Storage System in a Renewable Integrated Distribution Network Based on Long-Term Load Expansion. , 2021, , .		0
156	Bubalus bubalis Blood as Biological Tool to Track Impacts from Cobalt: Bioaccumulation and Health Risks Perspectives from a Water-Soil-Forage-Livestock Ecosystem. Biological Trace Element Research, 2022, , .	3.5	0
157	Hybrid Storage System for Controlling Wind Uncertainty. , 2021, , .		0