

Mahesh Kumar Mishra

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

160
papers

3,799
citations

38
h-index

57
g-index

210
ext. papers

5,195
ext. citations

4.5
avg. IF

6.28
L-index

#	Paper	IF	Citations
160	A multi-objective control scheme of a voltage source converter with battery-supercapacitor energy storage system used for power quality improvement. <i>International Journal of Electrical Power and Energy Systems</i> , 2022 , 142, 108253	5.1	0
159	Analysis and design of gradient descent based pre-synchronization control for synchronverter. <i>IET Renewable Power Generation</i> , 2021 , 15, 297-312	2.9	1
158	Droop characteristics based damping and inertia emulation of DC link in a hybrid microgrid. <i>IET Renewable Power Generation</i> , 2020 , 14, 1044-1052	2.9	7
157	Effective Current Based Inverter Loss Computation and its Application for Energy Savings in a Microgrid Environment 2020 ,		1
156	A Comparative Performance Study of Advanced PLLs for Grid Synchronization 2020 ,		2
155	An Efficient Wind Speed Computation Method Using Sliding Mode Observers in Wind Energy Conversion System Control Applications. <i>IEEE Transactions on Industry Applications</i> , 2020 , 56, 730-739	4.3	19
154	Online electricity theft detection and prevention scheme for smart cities. <i>IET Smart Cities</i> , 2020 , 2, 155-168	1.8	3
153	An Adaptive Approach for Effective Power Management in DC Microgrid Based on Virtual Generation in Distributed Energy Sources. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 362-372	11.9	14
152	A Unified Control Scheme for a Standalone Solar-PV Low Voltage DC Microgrid System With HESS. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2020 , 8, 1351-1360	5.6	10
151	Multisource Switched Capacitor Based Boost Multilevel Inverter for Photovoltaic-Based Systems. <i>IEEE Transactions on Power Electronics</i> , 2020 , 35, 2558-2570	7.2	13
150	Instantaneous Symmetrical Component Theory Based Parallel Grid Side Converter Control Strategy for Microgrid Power Management. <i>IEEE Transactions on Sustainable Energy</i> , 2019 , 10, 682-692	8.2	16
149	Dual \mathcal{H}_∞ - \mathcal{H}_2 Theory Based Energy-Optimized Dynamic Voltage Restorer for Power Quality Improvement in a Distribution System. <i>IEEE Transactions on Industrial Electronics</i> , 2019 , 66, 2946-2955	8.9	48
148	Control Strategy for a PV-Wind based Standalone DC Microgrid with Hybrid Energy Storage System 2019 ,		1
147	Design and Stability Analysis of DC Microgrid With Hybrid Energy Storage System. <i>IEEE Transactions on Sustainable Energy</i> , 2019 , 10, 1603-1612	8.2	39
146	Study on the design and switching dynamics of hysteresis current controlled four-leg voltage source inverter for load compensation. <i>IET Power Electronics</i> , 2018 , 11, 310-319	2.2	19
145	Grid tied single-stage inverter for low-voltage PV systems with reactive power control. <i>IET Power Electronics</i> , 2018 , 11, 1766-1773	2.2	8
144	Cost Savings Oriented Microgrid Control Strategy Considering Battery Degradation 2018 ,		1

143	Optimized Design of Earthing System for Substations with High Soil Resistivity and Limited Plot Area 2018 ,		1
142	A Supervisory Power Management System for a Hybrid Microgrid With HESS. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 3640-3649	8.9	85
141	A high gain grid connected single stage inverter system with reactive power control 2017 ,		3
140	Single Phase Dynamic Voltage Restorer topology based on five-level ground point shifting inverter 2017 ,		2
139	. <i>IEEE Transactions on Energy Conversion</i> , 2017 , 32, 330-339	5.4	42
138	Online condition monitoring system for substation and service transformers. <i>IET Electric Power Applications</i> , 2017 , 11, 1187-1195	1.8	25
137	DC Grid Voltage Regulation Using New HESS Control Strategy. <i>IEEE Transactions on Sustainable Energy</i> , 2017 , 8, 772-781	8.2	80
136	Grid Adaptive Power Management Strategy for an Integrated Microgrid With Hybrid Energy Storage. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 2884-2892	8.9	64
135	PSO based power sharing scheme for an islanded DC microgrid system 2017 ,		4
134	Inertia emulation using HESS in a microgrid environment by droop control 2017 ,		1
133	Wavelet transform based algorithms for load compensation using DSTATCOM 2017 ,		1
132	Design and small signal analysis of DC microgrid with hybrid energy storage system 2017 ,		1
131	LCL filter based UPQC configuration for power quality improvement 2016 ,		3
130	Control of photovoltaic-based low-voltage dc microgrid system for power sharing with modified droop algorithm. <i>IET Power Electronics</i> , 2016 , 9, 1132-1143	2.2	52
129	A three port high gain non-isolated DC-DC converter for photovoltaic applications 2016 ,		11
128	Special Protection Scheme at BTPS Power Station. <i>Journal of the Institution of Engineers (India): Series B</i> , 2016 , 97, 97-107	0.9	1
127	. <i>IEEE Transactions on Energy Conversion</i> , 2016 , 31, 697-705	5.4	46
126	Dual distribution static compensator for three-phase four-wire distribution system. <i>IET Generation, Transmission and Distribution</i> , 2016 , 10, 399-411	2.5	3

125	Interturn Faults Detection of Transformers by Diagnosis of Neutral Current. <i>IEEE Transactions on Power Delivery</i> , 2016 , 31, 1096-1105	4.3	15
124	A comparative study of control theories for realizing APFs in distribution power systems 2016 ,		3
123	Power management of grid connected hybrid microgrid with dual voltage source inverter 2016 ,		6
122	Design of External Inductor for Improving Performance of Voltage-Controlled DSTATCOM. <i>IEEE Transactions on Industrial Electronics</i> , 2016 , 1-1	8.9	9
121	Coupled inductor-based single-stage high gain DC/AC buckBoost inverter. <i>IET Power Electronics</i> , 2016 , 9, 1590-1599	2.2	13
120	A Grid-Connected Dual Voltage Source Inverter With Power Quality Improvement Features. <i>IEEE Transactions on Sustainable Energy</i> , 2015 , 6, 482-490	8.2	46
119	An Improved Current Controller for Grid Connected Voltage Source Converter in Microgrid Applications. <i>IEEE Transactions on Sustainable Energy</i> , 2015 , 6, 595-605	8.2	18
118	LCL filter with passive damping for DSTATCOM using PI and HC regulators in dq0 current controller for load compensation. <i>Sustainable Energy, Grids and Networks</i> , 2015 , 2, 1-14	3.6	3
117	Grid interactive combined supercapacitor/battery energy storage system with power quality features 2015 ,		9
116	Dynamic Energy Management of Renewable Grid Integrated Hybrid Energy Storage System. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 7728-7737	8.9	179
115	A dual three-leg VSI based DSTATCOM in three-phase four-wire distribution systems 2015 ,		3
114	Design of current mode controlled SEPIC DC-DC converter for MPPT control of wind energy conversion systems 2015 ,		2
113	SRF based current controller using PI and HC regulators for DSTATCOM with SPWM switching. <i>International Journal of Electrical Power and Energy Systems</i> , 2015 , 67, 87-100	5.1	11
112	. <i>IEEE Transactions on Energy Conversion</i> , 2015 , 30, 150-160	5.4	74
111	Adaptive Droop Control Strategy for Load Sharing and Circulating Current Minimization in Low-Voltage Standalone DC Microgrid. <i>IEEE Transactions on Sustainable Energy</i> , 2015 , 6, 132-141	8.2	250
110	An Improved Direct AC/AC Converter for Voltage Sag Mitigation. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 21-29	8.9	63
109	Battery/supercapacitor based grid integrated microgrid with improved power quality features 2015 ,		1
108	Application of hybrid energy storage system in a grid interactive microgrid environment 2015 ,		5

107	Power management based on the operating conditions of grid, microgrid and hybrid storage 2015 ,		5
106	Energy management of hybrid microgrid with hybrid energy storage system 2015 ,		17
105	Control algorithm for a PV based hybrid microgrid 2015 ,		2
104	. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 6024-6034	8.9	31
103	Three-leg inverter-based distribution static compensator topology for compensating unbalanced and non-linear loads. <i>IET Power Electronics</i> , 2015 , 8, 2076-2084	2.2	28
102	Control algorithm for a PV powered BLDC drive for air conditioner application 2015 ,		1
101	Design and control process of SEPIC converter for maximum power extraction in wind energy conversion systems 2015 ,		1
100	MPP tracking of PV based low voltage DC microgrid system with adaptive droop algorithm 2015 ,		2
99	Predictive Voltage Control of Transformerless Dynamic Voltage Restorer. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 2693-2697	8.9	50
98	A new control strategy for interfacing battery supercapacitor storage systems for PV system 2014 ,		9
97	A Voltage-Controlled DSTATCOM for Power-Quality Improvement. <i>IEEE Transactions on Power Delivery</i> , 2014 , 29, 1499-1507	4.3	67
96	. <i>IEEE Transactions on Sustainable Energy</i> , 2014 , 5, 313-322	8.2	59
95	An improved droop control algorithm for load sharing and circulating current control for parallel DC-DC converters in standalone DC microgrid 2014 ,		2
94	Coordinated control and energy management of hybrid energy storage system in PV system 2014 ,		12
93	An Improved Hybrid DSTATCOM Topology to Compensate Reactive and Nonlinear Loads. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 6517-6527	8.9	55
92	Design and Analysis of Novel Control Strategy for Battery and Supercapacitor Storage System. <i>IEEE Transactions on Sustainable Energy</i> , 2014 , 5, 1137-1144	8.2	181
91	. <i>IEEE Transactions on Energy Conversion</i> , 2014 , 29, 602-610	5.4	152
90	A Multifunctional DSTATCOM Operating Under Stiff Source. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 3131-3136	8.9	34

89	. <i>IEEE Transactions on Power Delivery</i> , 2014 , 29, 2261-2269	4.3	55
88	Corrective Measures for the Effective Load Management and Control Under Disturbance at Bhusawal Thermal Power Station: Case Study. <i>Journal of the Institution of Engineers (India): Series B</i> , 2014 , 95, 163-173	0.9	
87	Variable Perturbation Size Adaptive P&O MPPT Algorithm for Sudden Changes in Irradiance. <i>IEEE Transactions on Sustainable Energy</i> , 2014 , 5, 718-728	8.2	165
86	Control and operation of unified power quality Conditioner with battery-ultracapacitor energy storage system 2014 ,		1
85	Design and development of real-time small-scale wind turbine simulator 2014 ,		3
84	Current sharing control strategy of parallel inverters using instantaneous symmetrical component theory 2014 ,		4
83	A single stage high gain buck-boost inverter with coupled inductor 2014 ,		3
82	Modified DSTATCOM Topology with Reduced DC Link Voltage for Reactive and Harmonic Power Compensation of Unbalanced Nonlinear Load in Distribution System. <i>International Journal of Emerging Electric Power Systems</i> , 2014 , 15, 263-277	1.4	2
81	Improved Load Compensation using Harmonic Compensator in dq0 Current Controller for DSTATCOM. <i>International Journal of Emerging Electric Power Systems</i> , 2014 , 15, 569-589	1.4	2
80	Proportional droop index algorithm for load sharing in DC microgrid 2014 ,		5
79	Adaptive perturb & observe MPPT algorithm for photovoltaic system 2013 ,		13
78	Energy conservation and power quality improvement with voltage controlled DSTATCOM 2013 ,		6
77	Power quality improvement using Zig-Zag transformer and DSTATCOM in three phase power distribution system 2013 ,		2
76	DSTATCOM with LCL filter using synchronous reference frame current controller 2013 ,		1
75	A new adaptive P&O MPPT algorithm based on FSCC method for photovoltaic system 2013 ,		14
74	Circulating current minimization and current sharing control of parallel boost converters based on Droop Index 2013 ,		16
73	A Modified Three-Phase Four-Wire UPQC Topology With Reduced DC-Link Voltage Rating. <i>IEEE Transactions on Industrial Electronics</i> , 2013 , 60, 3555-3566	8.9	83
72	Integration of PV/battery hybrid energy conversion system to the grid with power quality improvement features 2013 ,		16

71	Effective utilization of unified power quality conditioner for interconnecting PV modules with grid using power angle control method. <i>International Journal of Electrical Power and Energy Systems</i> , 2013 , 48, 131-138	5.1	37
70	A multi-functional DSTATCOM operating in voltage control mode 2013 ,		2
69	A modified DSTATCOM topology with reduced VSI rating, DC link voltage, and filter size 2013 ,		6
68	Novel adaptive P&O MPPT algorithm for photovoltaic system considering sudden changes in weather condition 2013 ,		11
67	A AC-AC converter based topology for mitigation of voltage sag with phase jump 2013 ,		3
66	LCL Filter with Active Damping using PI and SSI Regulators in Synchronous Rotating Reference Frame Current Controller for DSTATCOM. <i>International Journal of Emerging Electric Power Systems</i> , 2013 , 14, 309-326	1.4	0
65	Instantaneous symmetrical component theory based algorithm for characterization of three phase distorted and unbalanced voltage sags 2013 ,		7
64	A DSTATCOM Topology With Reduced DC-Link Voltage Rating for Load Compensation With Nonstiff Source. <i>IEEE Transactions on Power Electronics</i> , 2012 , 27, 1201-1211	7.2	63
63	Synchronization of variable speed PMSG based wind energy conversion system to the grid with power quality improvement features 2012 ,		1
62	Analysis and control of DC-DC boost converter using average power balance control (APBC) 2012 ,		3
61	Synchronous reference frame based current controller with SPWM switching strategy for DSTATCOM applications 2012 ,		8
60	A control algorithm for flexible operation of DSTATCOM for power quality improvement in voltage and current control mode 2012 ,		2
59	Dynamic energy management of micro grids using battery super capacitor combined storage 2012 ,		41
58	Minimisation of VA loading of UPQC in three-phase four-wire distribution system. <i>International Journal of Power Electronics</i> , 2012 , 4, 197	0.2	1
57	Wing Technique: A Novel Approach for the Detection of Stator Winding Inter-Turn Short Circuit and Open Circuit Faults in Three Phase Induction Motors. <i>Journal of Power Electronics</i> , 2012 , 12, 208-214	0.9	4
56	Mitigation of Voltage Sags With Phase Jumps by UPQC With PSO-Based ANFIS. <i>IEEE Transactions on Power Delivery</i> , 2011 , 26, 2761-2773	4.3	38
55	A hybrid topology for reducing DC link voltage rating in DSTATCOM applications 2011 ,		2
54	Reduced switching frequency algorithm for three-level diode clamped inverter based DVR 2011 ,		2

53	Comparison of Control Strategies for DSTATCOM in Power Distribution System. <i>International Journal of Emerging Electric Power Systems</i> , 2011 , 12,	1.4	1
52	Compensation of Voltage Sags with Phase-Jumps through DVR with Minimum VA Rating Using PSO based ANFIS Controller. <i>International Journal of Swarm Intelligence Research</i> , 2010 , 1, 19-33	1.1	
51	Complex wavelet based control strategy for UPQC 2010 ,		5
50	A DSP-based Integrated Hardware Set-up for a DSTATCOM: Design, Development, and Implementation Issues. <i>IETE Journal of Research</i> , 2010 , 56, 11	0.9	7
49	Dynamic Hysteresis Current Control to Minimize Switching for Three-Phase Four-Leg VSI Topology to Compensate Nonlinear Load. <i>IEEE Transactions on Power Electronics</i> , 2010 , 25, 1935-1942	7.2	40
48	DC Capacitor Voltage Equalization in Neutral Clamped Inverters for DSTATCOM Application. <i>IEEE Transactions on Industrial Electronics</i> , 2010 , 57, 2768-2775	8.9	71
47	Constant switching frequency band controller for dynamic voltage restorer. <i>IET Power Electronics</i> , 2010 , 3, 657	2.2	31
46	Particle Swarm Optimization-Based Feedback Controller for Unified Power-Quality Conditioner. <i>IEEE Transactions on Power Delivery</i> , 2010 , 25, 2814-2824	4.3	47
45	Modeling of a four-leg inverter based DSTATCOM for load compensation 2010 ,		3
44	Interphase AC/AC Topology for Voltage Sag Supporter. <i>IEEE Transactions on Power Electronics</i> , 2010 , 25, 514-518	7.2	79
43	DSTATCOM topologies for three-phase high power applications. <i>International Journal of Power Electronics</i> , 2010 , 2, 107	0.2	16
42	Rating and design issues of DVR injection transformer. <i>International Journal of Power Electronics</i> , 2010 , 2, 143	0.2	5
41	Compensation of voltage sags and harmonics with phase-jumps through DVR with minimum VA rating using Particle Swarm Optimization 2009 ,		9
40	A new control strategy for load compensation in power distribution system 2009 ,		1
39	Power quality survey in a technological institute 2009 ,		7
38	Minimization of VA loading of Unified Power Quality Conditioner (UPQC) 2009 ,		25
37	Improved hysteresis current control of three-level inverter for distribution static compensator application. <i>IET Power Electronics</i> , 2009 , 2, 517-526	2.2	37
36	An Optimization-Based Algorithm for Shunt Active Filter Under Distorted Supply Voltages. <i>IEEE Transactions on Power Electronics</i> , 2009 , 24, 1223-1232	7.2	44

35	A Fast-Acting DC-Link Voltage Controller for Three-Phase DSTATCOM to Compensate AC and DC Loads. <i>IEEE Transactions on Power Delivery</i> , 2009 , 24, 2291-2299	4.3	63
34	Switching Minimization of Three-Phase Four-Leg Dynamic Voltage Restorer 2009 ,		1
33	Compensation of voltage sags with phase-jumps through DVR with minimum VA rating using PSO 2009 ,		2
32	Adaptive Band Controller for Dynamic Voltage Restorer 2009 ,		1
31	Capacitor voltage balancing in neutral clamped inverters for DSTATCOM application 2009 ,		3
30	An Investigation on Design and Switching Dynamics of a Voltage Source Inverter to Compensate Unbalanced and Nonlinear Loads. <i>IEEE Transactions on Industrial Electronics</i> , 2009 , 56, 2802-2810	8.9	77
29	User-defined constant switching frequency current control strategy for a four-leg inverter. <i>IET Power Electronics</i> , 2009 , 2, 335-345	2.2	12
28	Design and Analysis of User-Defined Constant Switching Frequency Current-Control-Based Four-Leg DSTATCOM. <i>IEEE Transactions on Power Electronics</i> , 2009 , 24, 2148-2158	7.2	34
27	Ramp based constant frequency current control for DSTATCOM. <i>International Journal of Power Electronics</i> , 2009 , 1, 249	0.2	2
26	. <i>IEEE Transactions on Power Delivery</i> , 2008 , 23, 2310-2317	4.3	72
25	Unbalanced voltage sag correction with dynamic voltage restorer using particle swarm optimization 2008 ,		1
24	Design of passive filter components for switching band controlled DVR 2008 ,		7
23	A Minimally Switched Control Algorithm for Three-Phase Four-Leg VSI Topology to Compensate Unbalanced and Nonlinear Load. <i>IEEE Transactions on Power Electronics</i> , 2008 , 23, 1935-1944	7.2	53
22	Rating and design issues of DVR injection transformer 2008 ,		4
21	A novel constant switching frequency strategy for a three-leg DSTATCOM. <i>Canadian Conference on Electrical and Computer Engineering</i> , 2008 ,		2
20	Stator Winding Inter-turn Insulation Fault Detection in Induction Motors by Symmetrical Components Method. <i>Electric Power Components and Systems</i> , 2008 , 36, 741-753	1	10
19	Fuzzy logic based supervision of DC link PI control in a DSTATCOM 2008 ,		10
18	PSO-based feedback controller design of DSTATCOM for load compensation with non-stiff sources. <i>International Journal of Power Electronics</i> , 2008 , 1, 191	0.2	1

17	A Novel Load Compensation Algorithm under Unbalanced and Distorted Supply Voltages. <i>International Journal of Emerging Electric Power Systems</i> , 2007 , 8,	1.4	7
16	A Novel Method of Load Compensation Under Unbalanced and Distorted Voltages. <i>IEEE Transactions on Power Delivery</i> , 2007 , 22, 288-295	4.3	49
15	A Study on Design and Dynamics of Voltage Source Inverter in Current Control Mode to Compensate Unbalanced and Non-linear Loads 2006 ,		7
14	A control algorithm for single-phase active power filter under non-stiff voltage source. <i>IEEE Transactions on Power Electronics</i> , 2006 , 21, 822-825	7.2	47
13	A development and implementation of DSP based DSTATCOM to compensate unbalanced nonlinear loads 2006 ,		4
12	Single-Phase Fast Response Power Factor Transducer 2006 ,		1
11	Comparison of single phase shunt active power filter algorithms 2006 ,		10
10	A Fast Transient Response Single Phase Active Power Filter 2005 ,		2
9	A Novel Three-Phase Active Power Filter Control Algorithm with Unbalanced and Distorted Supply Voltages 2005 ,		2
8	Load compensation for systems with non-stiff source using state feedback. <i>Electric Power Systems Research</i> , 2003 , 67, 35-44	3.5	12
7	Control schemes for equalization of capacitor voltages in neutral clamped shunt compensator. <i>IEEE Transactions on Power Delivery</i> , 2003 , 18, 538-544	4.3	63
6	Operation of a DSTATCOM in voltage control mode. <i>IEEE Transactions on Power Delivery</i> , 2003 , 18, 258-264	4.3	76
5	A new compensation algorithm for balanced and unbalanced distribution systems using generalized instantaneous reactive power theory. <i>Electric Power Systems Research</i> , 2001 , 60, 29-37	3.5	20
4	Unified shunt compensator algorithm based on generalised instantaneous reactive power theory. <i>IET Generation, Transmission and Distribution</i> , 2001 , 148, 583		13
3	A new algorithm for active shunt filters using instantaneous reactive power theory. <i>IEEE Power Engineering Review</i> , 2000 , 20, 56-58		11
2	A new STATCOM topology to compensate loads containing AC and DC components		12
1	Compensation of Voltage Sags with Phase-Jumps through DVR with Minimum VA Rating Using PSO based ANFIS Controller		133-147