

Moumita Das

List of Publications by Year in descending order

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145
papers

5,882
citations

126708

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145
all docs

145
docs citations

145
times ranked

4041
citing authors

#	ARTICLE	IF	CITATIONS
1	MATLAB-Based Modeling to Study the Effects of Partial Shading on PV Array Characteristics. IEEE Transactions on Energy Conversion, 2008, 23, 302-310.	3.7	985
2	Maximum Power Point Tracking Scheme for PV Systems Operating Under Partially Shaded Conditions. IEEE Transactions on Industrial Electronics, 2008, 55, 1689-1698.	5.2	853
3	A Single-Stage Grid Connected Inverter Topology for Solar PV Systems With Maximum Power Point Tracking. IEEE Transactions on Power Electronics, 2007, 22, 1928-1940.	5.4	515
4	An Integrated Hybrid Power Supply for Distributed Generation Applications Fed by Nonconventional Energy Sources. IEEE Transactions on Energy Conversion, 2008, 23, 622-631.	3.7	195
5	A Hybrid Control Algorithm for Voltage Regulation in DC-DC Boost Converter. IEEE Transactions on Industrial Electronics, 2008, 55, 2530-2538.	5.2	178
6	A Single-Stage Single-Phase Transformer-Less Doubly Grounded Grid-Connected PV Interface. IEEE Transactions on Energy Conversion, 2009, 24, 93-101.	3.7	170
7	A Novel Scheme for Rapid Tracking of Maximum Power Point in Wind Energy Generation Systems. IEEE Transactions on Energy Conversion, 2010, 25, 228-236.	3.7	156
8	Design and Analysis of a High-Efficiency DC-DC Converter With Soft Switching Capability for Renewable Energy Applications Requiring High Voltage Gain. IEEE Transactions on Industrial Electronics, 2016, 63, 2936-2944.	5.2	151
9	MPPT Scheme for a PV-Fed Single-Phase Single-Stage Grid-Connected Inverter Operating in CCM With Only One Current Sensor. IEEE Transactions on Energy Conversion, 2009, 24, 256-263.	3.7	132
10	Universal Single-Stage Grid-Connected Inverter. IEEE Transactions on Energy Conversion, 2008, 23, 128-137.	3.7	129
11	A Novel Reconfigurable Microgrid Architecture With Renewable Energy Sources and Storage. IEEE Transactions on Industry Applications, 2015, 51, 1805-1816.	3.3	128
12	Novel Nonlinear Droop Control Techniques to Overcome the Load Sharing and Voltage Regulation Issues in DC Microgrid. IEEE Transactions on Power Electronics, 2018, 33, 4477-4487.	5.4	128
13	Novel High-Performance Stand-Alone Solar PV System With High-Gain High-Efficiency DC-DC Converter Power Stages. IEEE Transactions on Industry Applications, 2015, 51, 4718-4728.	3.3	126
14	A DSP Based Optimal Algorithm for Shunt Active Filter Under Nonsinusoidal Supply and Unbalanced Load Conditions. IEEE Transactions on Power Electronics, 2007, 22, 593-601.	5.4	97
15	Novel Integration of a PV-Wind Energy System With Enhanced Efficiency. IEEE Transactions on Power Electronics, 2015, 30, 3638-3649.	5.4	92
16	Experimental Evaluation of Internal Model Control Scheme on a DC-DC Boost Converter Exhibiting Nonminimum Phase Behavior. IEEE Transactions on Power Electronics, 2017, 32, 8880-8891.	5.4	88
17	Exact Maximum Power Point Tracking of Grid-Connected Partially Shaded PV Source Using Current Compensation Concept. IEEE Transactions on Power Electronics, 2014, 29, 4684-4692.	5.4	85
18	Novel Boost-SEPIC Type Interleaved DC-DC Converter for Mitigation of Voltage Imbalance in a Low-Voltage Bipolar DC Microgrid. IEEE Transactions on Industrial Electronics, 2020, 67, 6494-6504.	5.2	84

#	ARTICLE	IF	CITATIONS
19	A Novel Communication-Based Average Voltage Regulation Scheme for a Droop Controlled DC Microgrid. IEEE Transactions on Smart Grid, 2019, 10, 1250-1258.	6.2	63
20	A Frequency-Dependent Virtual Impedance for Voltage-Regulating Converters Feeding Constant Power Loads in a DC Microgrid. IEEE Transactions on Industry Applications, 2018, 54, 5630-5639.	3.3	61
21	A Cost-Effective Ultrasonic Sensor-Based Driver-Assistance System for Congested Traffic Conditions. IEEE Transactions on Intelligent Transportation Systems, 2009, 10, 486-498.	4.7	55
22	Design and Development of a Novel High Voltage Gain, High-Efficiency Bidirectional DC-DC Converter for Storage Interface. IEEE Transactions on Industrial Electronics, 2019, 66, 4490-4501.	5.2	55
23	Fuzzy Logic Control of the Ultracapacitor Interface for Enhanced Transient Response and Voltage Stability of a DC Microgrid. IEEE Transactions on Industry Applications, 2019, 55, 712-720.	3.3	53
24	Novel Control Scheme for an Interleaved Flyback Converter Based Solar PV Microinverter to Achieve High Efficiency. IEEE Transactions on Industry Applications, 2018, 54, 3473-3482.	3.3	47
25	A Novel Three-Phase Transformerless H-8 Topology With Reduced Leakage Current for Grid-Tied Solar PV Applications. IEEE Transactions on Industry Applications, 2019, 55, 1765-1774.	3.3	47
26	Control of a Stand-Alone Inverter-Based Distributed Generation Source for Voltage Regulation and Harmonic Compensation. IEEE Transactions on Power Delivery, 2008, 23, 1113-1120.	2.9	43
27	Single Phase Current Source Inverter With Multiloop Control for Transformerless Grid-PV Interface. IEEE Transactions on Industry Applications, 2018, 54, 2416-2424.	3.3	43
28	On the Input Resistance of a Reconfigurable Switched Capacitor DC-DC Converter-Based Maximum Power Point Tracker of a Photovoltaic Source. IEEE Transactions on Power Electronics, 2012, 27, 4880-4893.	5.4	41
29	An Improved Three-Phase Five-Level Inverter Topology With Reduced Number of Switching Power Devices. IEEE Transactions on Industrial Electronics, 2018, 65, 3296-3305.	5.2	41
30	Novel High Gain, High Efficiency DC-DC Converter Suitable for Solar PV Module Integration With Three-Phase Grid Tied Inverters. IEEE Journal of Photovoltaics, 2019, 9, 528-537.	1.5	41
31	Analysis and Control of a Novel Transformer-Less Microinverter for PV-Grid Interface. IEEE Journal of Photovoltaics, 2018, 8, 1110-1118.	1.5	38
32	A New Family of 1- Five-Level Transformerless Inverters for Solar PV Applications. IEEE Transactions on Industry Applications, 2019, , 1-1.	3.3	38
33	A Hybrid Nine-Level, 1- Grid Connected Multilevel Inverter With Low Switch Count and Innovative Voltage Regulation Techniques Across Auxiliary Capacitor. IEEE Transactions on Power Electronics, 2019, 34, 2159-2170.	5.4	35
34	A DSP-Based Control Algorithm for Series Active Filter for Optimized Compensation Under Nonsinusoidal and Unbalanced Voltage Conditions. IEEE Transactions on Power Delivery, 2007, 22, 302-310.	2.9	33
35	Simplified Implementation Scheme for Space Vector Pulse Width Modulation of <i>n</i> -Level Inverter With Online Computation of Optimal Switching Pulse Durations. IEEE Transactions on Industrial Electronics, 2016, 63, 6695-6704.	5.2	33
36	A Transformerless 1-, 5-Level Half-Bridge PV Inverter Configuration Based on Switched-Capacitor Technique. IEEE Transactions on Industry Applications, 2021, 57, 1619-1628.	3.3	29

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37	A novel single stage zero leakage current transformer-less inverter for grid connected PV systems. , 2015, , .		28
38	A new energy optimal control scheme for a separately excited DC motor based incremental motion drive. International Journal of Automation and Computing, 2009, 6, 267-276.	4.5	27
39	A Novel Approach for Maximum Power Tracking From Curved Thin-Film Solar Photovoltaic Arrays Under Changing Environmental Conditions. IEEE Transactions on Industry Applications, 2014, 50, 4142-4151.	3.3	27
40	Optimum Control of Selective and Total Harmonic Distortion in Current and Voltage Under Nonsinusoidal Conditions. IEEE Transactions on Power Delivery, 2008, 23, 937-944.	2.9	25
41	Model Predictive Control for Flexible Reduction of Active Power Oscillation in Grid-Tied Multilevel Inverters Under Unbalanced and Distorted Microgrid Conditions. IEEE Transactions on Industry Applications, 2020, 56, 1107-1115.	3.3	25
42	Trajectory Optimization for Loss Minimization in Induction Motor Fed Elevator Systems. IEEE Transactions on Power Electronics, 2018, 33, 5160-5170.	5.4	23
43	An Improved Reduced Complexity Model Predictive Current Controller for Grid-Connected Four-Leg Multilevel Inverter. IEEE Transactions on Industry Applications, 2020, 56, 498-506.	3.3	22
44	Comprehensive power management scheme for the intelligent operation of photovoltaic battery based hybrid microgrid system. IET Renewable Power Generation, 2020, 14, 1688-1698.	1.7	22
45	Recursive Estimation-Based Maximum Power Extraction Technique for a Fuel Cell Power Source Used in Vehicular Applications. IEEE Transactions on Power Electronics, 2013, 28, 4636-4643.	5.4	21
46	Single stage multi-port Flyback type solar PV module integrated micro-inverter with battery backup. , 2016, , .		20
47	Hybrid Control of a Boost Converter Operating in Discontinuous Current Mode. , 0, , .		18
48	Analysis and design of a ground isolated switched capacitor DC-DC converter. , 2010, , .		18
49	Reconfigurable hierarchical control of a microgrid developed with PV, wind, micro-hydro, fuel cell and ultra-capacitor. , 2013, , .		18
50	An Active Damping Technique for PI and Predictive Controllers of an Interlinking Converter in an Islanded Hybrid Microgrid. IEEE Transactions on Power Electronics, 2021, 36, 5521-5529.	5.4	18
51	Mitigation of voltage unbalance in a low voltage bipolar DC microgrid using a boost-SEPIC type interleaved dc-dc compensator. , 2016, , .		16
52	Hybrid Phase Locked Loop for Controlling Master-Slave Configured Centralized Inverters in Large Solar Photovoltaic Power Plants. IEEE Transactions on Industry Applications, 2018, 54, 3566-3574.	3.3	16
53	High Efficiency Three Phase Interleaved Buck Converter for Fast Charging of EV. , 2021, , .		16
54	An Advanced Voltage Support Scheme Considering the Impact of Zero-Sequence Voltage Under Microgrid Faults Using Model Predictive Control. IEEE Transactions on Industrial Electronics, 2020, 67, 8957-8968.	5.2	15

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55	Novel transformer-less inverter topology for single-phase grid connected photovoltaic system. , 2015, , .		14
56	Closed loop control of novel transformer-less inverter topology for single phase grid connected photovoltaic system. , 2016, , .		14
57	A novel switched-capacitor based single-phase five-level transformerless inverter. , 2018, , .		14
58	Hybrid Energy Storage System Based on a Novel Reduced Rating Multi-Input Converter. IEEE Transactions on Power Electronics, 2020, 35, 12133-12142.	5.4	14
59	A Novel Control Strategy to Achieve SOC Balancing for Batteries in a DC Microgrid Without Droop Control. IEEE Transactions on Industry Applications, 2021, 57, 4196-4206.	3.3	14
60	Three-level NPC inverter with novel voltage equalization for PV grid interface suitable for partially shaded conditions. , 2013, , .		13
61	Maximum Power Extraction From Series-Connected Fuel Cell Stacks by the Current Compensation Technique. IEEE Transactions on Power Electronics, 2015, 30, 582-589.	5.4	13
62	Dual Active Bridge Based Reduced Stage Multiport DC/AC Converter for PV-Battery Systems. IEEE Transactions on Industry Applications, 2022, 58, 2341-2351.	3.3	13
63	Novel Switched Capacitor Boost Inverter Configuration for Three-Phase Induction Motor Driven Home Appliances. IEEE Transactions on Industry Applications, 2021, 57, 1450-1458.	3.3	12
64	A Novel Single-Phase T-Type PV Inverter with Improved DC Utilization. , 2018, , .		11
65	Novel Three-Phase H10 Inverter Topology With Zero or Constant Common-Mode Voltage for Three-Phase Induction Motor Drive Applications. IEEE Transactions on Industrial Electronics, 2022, 69, 7522-7525.	5.2	11
66	A novel control strategy for stand-alone solar PV systems with enhanced battery life. , 2014, , .		10
67	Implementation of an internal model controller with anti-reset windup compensation for output voltage tracking of a non-minimum phase dc-dc boost converter using FPGA. , 2016, , .		10
68	PV Based Distributed Generation with Compensation Feature Under Unbalanced and Non-linear Load Conditions for a 3- ϕ, 4 Wire System. , 2006, , .		9
69	Design and Development of a Low-Cost Digital Magnetic Field Meter With Wide Dynamic Range for EMC Precompliance Measurements and Other Applications. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 2837-2846.	2.4	9
70	Terminal voltage analysis for the transformerless PV inverter topologies in a singleâ€phase system. IET Renewable Power Generation, 2019, 13, 2723-2739.	1.7	9
71	A Novel Voltage-Zone based power management scheme for PV- Battery based Standalone System. , 2018, , .		8
72	A Low Computational Cost Model Predictive Controller for Grid Connected Three Phase Four Wire Multilevel Inverter. , 2018, , .		8

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73	Induction Machines: A Novel, Model based Non-invasive Fault Detection and Diagnosis Technique. , 2008, , .		7
74	Single phase 9 level grid connected inverter for photovoltaic applications. , 2013, , .		7
75	A novel technique for optimising harmonics and reactive power with load balancing under nonsinusoidal supply and unbalanced load conditions. , 0, , .		6
76	Speech recognition based computer keyboard replacement for the Quadriplegics, Paraplegics, paralytics and amputees. , 2009, , .		6
77	Hardware in the loop simulation of direct synthesis based two degree of freedom PID control of DC-DC boost converter using Real Time Digital Simulation in FPGA. , 2014, , .		6
78	A new control technique to enhance the stability of a DC microgrid and to reduce battery current ripple during the charging of plug-in electric vehicles. , 2015, , .		6
79	Novel soft switched interleaved DC-DC converters for integration of renewable sources and storage into low voltage DC micro grid. , 2015, , .		6
80	An optimized dual inverter configuration for open end winding induction motor drive with Common Mode Voltage elimination. , 2016, , .		6
81	A Multi Input Converter for Interfacing Battery and Supercapacitor to the Load. , 2018, , .		6
82	A Novel Three-Phase Induction Motor Drive for Domestic Fan Application with Improved Reliability. , 2018, , .		6
83	RES and battery fed energy efficient single-phase induction motor drive system with retrofit solution. IET Electric Power Applications, 2019, 13, 332-339.	1.1	6
84	A Novel Per Unit (P.U.) Integer Format Applied to the Control of a Grid-Tied Solar PV Inverter. IEEE Transactions on Industrial Informatics, 2022, 18, 735-743.	7.2	6
85	A New Three-Phase Inverter Topology for Reducing the $\frac{dv}{dt}$ and Peak-to-Peak Value of Common Mode Voltage. IEEE Transactions on Industrial Electronics, 2022, 69, 11979-11986.	5.2	6
86	A novel and universal model for accurate prediction of PV module characteristics for power optimization under various design layouts and dynamic environmental conditions. , 2012, , .		5
87	A novel 3-phase, transformerless H-8 topology with low variation in CMV to reduce leakage current. , 2016, , .		5
88	A self-switched virtual impedance based stabilization method for a droop controlled DC microgrid with Constant Power Loads and input load filters. , 2016, , .		5
89	Dual Active Bridge based Micro-Inverter for Standalone Renewable Energy Systems with Low DC Link Capacitance. , 2020, , .		5
90	A Circuit Theoretical Approach to Hybrid Mode Switching Control of a Pseudo CCM Boost Converter. , 2006, , .		4

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91	Taguchi Based Performance and Reliability Improvement of an Ion Chamber Amplifier for Enhanced Nuclear Reactor Safety. IEEE Transactions on Nuclear Science, 2008, 55, 2303-2314.	1.2	4
92	CAN based control of DC-DC converters in distributed generation units operating in master slave configuration. , 2012, , .		4
93	Novel self balancing single phase asymmetric 9 level grid connected inverter for photovoltaic applications. , 2013, , .		4
94	Novel multi-input solar PV topologies for 1- \bar{I} and 3- \bar{I} stand alone applications to mitigate the effects of partial shading. , 2013, , .		4
95	Control of single-stage grid-connected three-phase solar photovoltaic system using sliding mode control. , 2015, , .		4
96	Hybrid Phase Locked Loop for controlling Centralized inverters in large solar Photovoltaic power plants. , 2016, , .		4
97	A Novel 1- \bar{I} , 5-level transformerless inverter with voltage boosting capability. , 2017, , .		4
98	A Simple Adaptive Fractional Order Model of Supercapacitor for Pulse Power Applications. , 2018, , .		4
99	Novel Multicarrier PWM Scheme for a Reconfigurable Single-Phase Inverter to Achieve Manifold Higher Effective Switching Frequency. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 2340-2349.	3.7	4
100	A Modified 2-level Three-Phase Inverter Topology with Common Mode Voltage Performance of a 3-level Inverter. , 2021, , .		4
101	Comparison of Mode Switched Controllers for a Pseudo Continuous Current Mode Boost Converter. , 2006, , .		3
102	Optimization of Operational Energy Cost in a Hybrid Distributed Generation System. , 2008, , .		3
103	Dynamic power control and performance analysis of Phosphoric Acid Fuel Cell - Battery hybrid system. , 2012, , .		3
104	Multi-input DC-AC converter for renewable energy applications. , 2013, , .		3
105	Jerk and loss minimization in electric elevator systems. , 2014, , .		3
106	A Sliding Mode Control based stabilization solution for multiple Constant Power Loads with identical input filters interfaced with the DC bus of a "More Electric" Aircraft. , 2016, , .		3
107	A hybrid 9-level inverter with minimum number of switches for single phase grid connected solar PV system. , 2016, , .		3
108	Advanced maximum power point tracking scheme for centralized inverters for large solar photovoltaic power plants. , 2016, , .		3

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109	Current source inverter with reduced leakage current for transformer-less Grid -PV interface. , 2016, , .		3
110	State of Charge Estimation of Supercapacitors with Fractional Order Modelling. , 2018, , .		3
111	Optimal Placement of Distributed Energy Resources in a DC Microgrid with Constant Power Loads to Minimize Bus Voltage Deviations and Line Losses. , 2019, , .		3
112	A Low Cost Electrolytic Capacitor-less Induction Motor Drive Based on a Novel Open Loop Model Predictive Control Strategy. , 2019, , .		3
113	New self-balancing 7-level inverter with coupled inductors for 1-grid-connected renewable energy systems with voltage boosting capability. IET Power Electronics, 2020, 13, 899-908.	1.5	3
114	Facade Solar PV Potential Estimation considering Rooftop Capacity and Building Code for Indian Cities. , 2020, , .		3
115	Ion mobility sensor based on photo-ionization light source for trace gas sensing. , 2010, , .		2
116	An ultracapacitor driven short-distance electric vehicle. , 2012, , .		2
117	High-gain boost converter with coupled inductor and switched capacitor for low voltage renewable energy sources. , 2014, , .		2
118	A novel control strategy for an ultra-capacitor based dynamic voltage restorer with controllable dc-link voltage. , 2015, , .		2
119	A loss optimized and cost effective droop control scheme for a DC microgrid integrated with a weak rural distribution grid. , 2016, , .		2
120	An Advanced Model Predictive Controller for Grid-Tied Four-Leg Multilevel Inverters. , 2018, , .		2
121	SoC based droop control for a DC microgrid with improved voltage regulation using Low Bandwidth Communication. , 2019, , .		2
122	Improved Set-Point Tracking and Disturbance Rejection of DC-DC Converters Using Voltage-Mode Digital Control. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 3276-3286.	3.7	2
123	A Novel Single-Phase Switched-Capacitor Based 5-level Inverter Topology Featuring Voltage Boosting Capability and Common Mode Voltage Reduction. , 2021, , .		2
124	Adaptive protection scheme with fault detection, classification and isolation features for off-grid distributed generation system. , 2012, , .		1
125	Novel self balancing single phase 7 level inverter with coupled inductors. , 2014, , .		1
126	Realization of a novel transformer-less grid-PV interfaced inverter. , 2017, , .		1

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127	Low Voltage Ride-Through Capability of a Novel Grid Connected Inverter Suitable for Transformerless solar PV grid interface. , 2018, , .		1
128	Novel Scheme For Extracting Maximum Power From Façade Based Building Integrated Photovoltaics. , 2019, , .		1
129	A Novel Virtual Inertia Implementation Scheme using Model Predictive Control for Enhancing the Voltage Stiffness of a Grid Tied DC Microgrid. , 2019, , .		1
130	Novel Boost Inverter Configuration and 3- ϕ Induction Motor Drive for Home Appliances. , 2019, , .		1
131	Load Sensorless Novel Control Scheme for Minimizing the Starting Jerk and Energy of the PMSM Driven Gearless Elevators With Varying Stiction and Rotor Flux Linkage. , 2019, , .		1
132	Experimental Evaluation of Internal Model Control for 3 ϕ Grid-tied Solar PV Inverter. , 2020, , .		1
133	Novel Pulse Power Supply Operating at High Input Power Factor. , 2006, , .		0
134	A comparative study of gamma radiation effects on a logarithmic amplifier based multiplier circuit using common and Precision Devices. Australian Journal of Electrical and Electronics Engineering, 2006, 3, 7-15.	0.7	0
135	Alternative emergency communication channel through television cable. , 2009, , .		0
136	Performance analysis of CMOS Mode Locked class E Power Amplifier. , 2010, , .		0
137	Run-time partially reconfigurable FPGA applications in PV fed systems. , 2012, , .		0
138	Rapid synchronization technique for enhanced low voltage ride-through operation of a distributed energy resource. , 2015, , .		0
139	Model-based maximum power point tracking of an ageing solar PV module. , 2018, , .		0
140	A zero current switching non isolated bidirectional converter for interfacing energy storage devices with microgrids. , 2018, , .		0
141	Comparative Experimental Study of Predictive and Resonant Controllers of Grid-Tied Inverter under Unbalanced Grid Conditions. , 2019, , .		0
142	A Multicarrier-PWM Scheme Along With a Reconfigurable Buck Converter Imitating Multiple Times Higher Switching Frequency. IEEE Transactions on Industrial Electronics, 2021, 68, 3638-3642.	5.2	0
143	Current Control of a Direct Current Motor Fed through LC-filter from Power Converter Based on Wide-Bandgap Semiconducting Devices. , 2021, , .		0
144	Optimization of Facade based Building Integration Photovoltaic Module Installation. , 2020, , .		0

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145	Novel Bidirectional DC-DC Converter with Battery Temperature Modulation Capability using High Frequency Resonant Network. , 2022, , .		0