

Tamas Kerekes

List of Publications by Year in descending order

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118
papers

5,420
citations

218677

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docs citations

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times ranked

4140
citing authors

#	ARTICLE	IF	CITATIONS
1	A Novel Modular Multilevel Converter Based on Interleaved Half-Bridge Submodules. IEEE Transactions on Industrial Electronics, 2023, 70, 125-136.	7.9	12
2	Sensorless Current Balancing Control for Interleaved Half-Bridge Submodules in Modular Multilevel Converters. IEEE Transactions on Industrial Electronics, 2023, 70, 5-16.	7.9	8
3	Communication-Free Equivalent Grid Impedance Estimation Technique for Multi-Inverter Systems. IEEE Transactions on Industrial Electronics, 2023, 70, 1542-1552.	7.9	6
4	Effect of Battery Degradation on the Probabilistic Optimal Operation of Renewable-Based Microgrids. Electricity, 2022, 3, 53-74.	2.8	7
5	Stochastic Optimal Strategy for Power Management in Interconnected Multi-Microgrid Systems. Electronics (Switzerland), 2022, 11, 1424.	3.1	10
6	Performance Assessment of Mismatch Mitigation Methodologies Using Field Data in Solar Photovoltaic Systems. Electronics (Switzerland), 2022, 11, 1938.	3.1	3
7	A Cascaded H-Bridge With Integrated Boosting Circuit. IEEE Transactions on Power Electronics, 2021, 36, 18-22.	7.9	13
8	Generalized Space Vector Modulation for Ripple Current Reduction in Quasi-Z-Source Inverters. IEEE Transactions on Power Electronics, 2021, 36, 1730-1741.	7.9	15
9	Inductor Current Ripple Analysis and Reduction for Quasi-Z-Source Inverters With an Improved ZSVM6 Strategy. IEEE Transactions on Power Electronics, 2021, 36, 7693-7704.	7.9	11
10	An Online Event-Based Grid Impedance Estimation Technique Using Grid-Connected Inverters. IEEE Transactions on Power Electronics, 2021, 36, 6106-6117.	7.9	36
11	Novel Converter Topology With Reduced Cost, Size and Weight for High-Power Medium-Voltage Machine Drives: 3x3 Modular Multilevel Series Converter. IEEE Access, 2021, 9, 49082-49097.	4.2	13
12	Performance Analysis of Modular Multilevel Converter and Modular Multilevel Series Converter under Variable-Frequency Operation Regarding Submodule-Capacitor Voltage Ripple. Energies, 2021, 14, 776.	3.1	5
13	Optimum Sizing of Photovoltaic and Energy Storage Systems for Powering Green Base Stations in Cellular Networks. Energies, 2021, 14, 1895.	3.1	14
14	A Simple Mismatch Mitigating Partial Power Processing Converter for Solar PV Modules. Energies, 2021, 14, 2308.	3.1	3
15	Reconfigurable Distributed Power Electronics Technique for Solar PV Systems. Electronics (Switzerland), 2021, 10, 1121.	3.1	2
16	Medium-Voltage Converter Solution With Modular Multilevel Structure and Decentralized Energy Storage Integration for High-Power Wind Turbines. IEEE Transactions on Power Electronics, 2021, 36, 12954-12967.	7.9	9
17	Operational Advantages and Challenges of New AC-AC Converter Solution with Modular Multilevel Structure Suitable for High-Power Medium-Voltage Electrical Machine Drives. , 2021, , .		0
18	Flexible Active Power Control for PV-ESS Systems: A Review. Energies, 2021, 14, 7388.	3.1	5

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19	Optimum Sizing of Photovoltaic-Battery Power Supply for Drone-Based Cellular Networks. Drones, 2021, 5, 138.	4.9	8
20	Dispatchable High-Power Wind Turbine Based on a Multilevel Converter With Modular Structure and Hybrid Energy Storage Integration. IEEE Access, 2021, 9, 152878-152891.	4.2	4
21	High-Power Medium-Voltage Wind Turbine Driven by Converter Solution with Modular Multilevel Structure and Decentralized Battery Integration Operating in Both Grid-Following and Grid-Forming Modes. , 2021, , .		0
22	Transformerless Inverter Topologies for Single-Phase Photovoltaic Systems: A Comparative Review. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 805-835.	5.4	248
23	Three-Port DC-DC converter based on quadratic boost converter for standalone PV/battery systems. IET Power Electronics, 2020, 13, 2106-2118.	2.1	25
24	New AC-AC Modular Multilevel Converter Solution for Medium-Voltage Machine-Drive Applications: Modular Multilevel Series Converter. Energies, 2020, 13, 3664.	3.1	8
25	Multiple-Power-Sample Based P&O MPPT for Fast-Changing Irradiance Conditions for a Simple Implementation. IEEE Journal of Photovoltaics, 2020, 10, 1481-1488.	2.5	41
26	Solar Cell Cracks and Finger Failure Detection Using Statistical Parameters of Electroluminescence Images and Machine Learning. Applied Sciences (Switzerland), 2020, 10, 8834.	2.5	26
27	Common-Mode Voltage Analysis and Reduction for the Quasi-Z-Source Inverter with a Split Inductor. Applied Sciences (Switzerland), 2020, 10, 8713.	2.5	4
28	High step-up DC-DC converter composed of quadratic boost converter and switched capacitor. IET Power Electronics, 2020, 13, 4008-4018.	2.1	15
29	Three-Phase ZVR Topology and Modulation Strategy for Transformerless PV System. IEEE Transactions on Power Electronics, 2019, 34, 1017-1021.	7.9	39
30	A Review on Transformerless Step-Up Single-Phase Inverters with Different DC-Link Voltage for Photovoltaic Applications. Energies, 2019, 12, 3626.	3.1	15
31	Characteristic Analysis of the Grid-Connected Impedance-Source Inverter for PV Applications. , 2019, , .		3
32	Case Study of Residential PV Power and Battery Storage with the Danish Flexible Pricing Scheme. Energies, 2019, 12, 799.	3.1	4
33	Switched capacitor based Z-source DC-DC converter. IET Power Electronics, 2019, 12, 3582-3589.	2.1	33
34	Modified Quasi-Z-Source Inverter with Model Predictive Control for Constant Common-Mode Voltage. , 2019, , .		0
35	A Classification of Single-Phase Transformerless Inverter Topologies for Photovoltaic Applications. , 2018, , .		4
36	Improvement of Ventilation Drive System with Solar Power and a Voltage Level Based Control Structure. , 2018, , .		0

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37	Modeling and Control of Single-Phase Quasi-Z-Source Inverters. , 2018, , .		4
38	Application Layer Design for Smart Battery Pack Control with Wi-Fi® Feedback. , 2018, , .		2
39	Optimized Integrated Harmonic Filter Inductor for Dual-Converter-Fed Open-End Transformer Topology. IEEE Transactions on Power Electronics, 2017, 32, 1818-1831.	7.9	24
40	Flux-Balancing Scheme for PD-Modulated Parallel-Interleaved Inverters. IEEE Transactions on Power Electronics, 2017, 32, 3442-3457.	7.9	25
41	Short-Circuit Degradation of 10-kV 10-A SiC MOSFET. IEEE Transactions on Power Electronics, 2017, 32, 9342-9354.	7.9	59
42	Power Ramp Limitation Capabilities of Large PV Power Plants With Active Power Reserves. IEEE Transactions on Sustainable Energy, 2017, 8, 573-581.	8.8	39
43	Mission-profile based multi-objective optimization of power electronics converter for wind turbines. , 2017, , .		4
44	Circulating current control for parallel interleaved VSCs connected in whiffletree configuration. , 2016, , .		1
45	Evaluation of circulating current suppression methods for parallel interleaved inverters. , 2016, , .		6
46	Comparative evaluation of modulation schemes for grid-connected parallel interleaved inverters. , 2016, , .		4
47	Power-Hardware-In-Loop harmonic analysis of a Smart Transformer-fed distribution grid. , 2016, , .		4
48	Fault ride-through performance evaluation of an interleaved grid-connected converter employing low switching frequency. , 2016, , .		0
49	Dual Converter Fed Open-End Transformer Topology with Parallel Converters and Integrated Magnetics. IEEE Transactions on Industrial Electronics, 2016, , 1-1.	7.9	9
50	Magnetic integration of the harmonic filter inductor for dual-converter fed open-end transformer topology. , 2016, , .		1
51	Short-circuit characterization of 10 kV 10A 4H-SiC MOSFET. , 2016, , .		20
52	Fault identification in crystalline silicon PV modules by complementary analysis of the light and dark current-voltage characteristics. Progress in Photovoltaics: Research and Applications, 2016, 24, 517-532.	8.1	28
53	Magnetic Integration for Parallel Interleaved VSCs Connected in a Whiffletree Configuration. IEEE Transactions on Power Electronics, 2016, 31, 7797-7808.	7.9	25
54	An Integrated Inductor for Parallel Interleaved Three-Phase Voltage Source Converters. IEEE Transactions on Power Electronics, 2016, 31, 3400-3414.	7.9	55

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55	Characterisation of 10 kV 10 A SiC MOSFET. , 2015, , .		5
56	Leakage current analysis of single-phase transformer-less grid-connected PV inverters. , 2015, , .		7
57	Quantifying solar cell cracks in photovoltaic modules by electroluminescence imaging. , 2015, , .		24
58	Circulating current controller for parallel interleaved converters using PR controllers. , 2015, , .		8
59	Line Filter Design of Parallel Interleaved VSCs for High-Power Wind Energy Conversion Systems. IEEE Transactions on Power Electronics, 2015, 30, 6775-6790.	7.9	108
60	A New PWM Strategy for Grid-Connected Half-Bridge Active NPC Converters With Losses Distribution Balancing Mechanism. IEEE Transactions on Power Electronics, 2015, 30, 5331-5340.	7.9	84
61	Temperatureâ€dependency analysis and correction methods of <i>in situ</i> powerâ€loss estimation for crystalline silicon modules undergoing potentialâ€induced degradation stress testing. Progress in Photovoltaics: Research and Applications, 2015, 23, 1536-1549.	8.1	38
62	Firefighter Safety for PV Systems: A Solution for the Protection of Emergency Responders from Hazardous dc Voltage. IEEE Industry Applications Magazine, 2015, 21, 75-84.	0.4	2
63	Three-phase Photovoltaic Systems: Structures, Topologies, and Control. Electric Power Components and Systems, 2015, 43, 1364-1375.	1.8	17
64	An Integrated Inductor for Parallel Interleaved VSCs and PWM Schemes for Flux Minimization. IEEE Transactions on Industrial Electronics, 2015, 62, 7534-7546.	7.9	61
65	Diagnostic method for photovoltaic systems based on light lâ€V measurements. Solar Energy, 2015, 119, 29-44.	6.1	90
66	Comparison between grid side and inverter side current control for parallel interleaved grid connected converters. , 2015, , .		2
67	An integrated inductor for parallel interleaved VSCs connected in a whiffletree configuration. , 2015, , .		4
68	Integrated inductor for interleaved operation of two parallel three-phase voltage source converters. , 2015, , .		19
69	Design of low impedance busbar for 10 kV, 100A 4H-SiC MOSFET short-circuit tester using axial capacitors. , 2015, , .		12
70	Optimal interleaving angle determination in multi paralleled converters considering the DC current ripple and grid Current THD. , 2015, , .		15
71	Modified Discontinuous PWM for Size Reduction of the Circulating Current Filter in Parallel Interleaved Converters. IEEE Transactions on Power Electronics, 2015, 30, 3457-3470.	7.9	98
72	Thermal Loading and Lifetime Estimation for Power Device Considering Mission Profiles in Wind Power Converter. IEEE Transactions on Power Electronics, 2015, 30, 590-602.	7.9	447

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73	Frequency Support Functions in Large PV Power Plants With Active Power Reserves. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 849-858.	5.4	145
74	Analytical method to calculate the DC link current stress in voltage source converters. , 2014, , .		14
75	Parallel interleaved VSCs: Influence of the PWM scheme on the design of the coupled inductor. , 2014, , .		17
76	Design of the trap filter for the high power converters with parallel interleaved VSCs. , 2014, , .		19
77	Development of a test platform for controlling parallel converters. , 2014, , .		1
78	Remote and centralized monitoring of PV power plants. , 2014, , .		5
79	Reduction of DC-link capacitor in case of cascade multilevel converters by means of reactive power control. , 2014, , .		14
80	Optimal Design of Photovoltaic Systems Using High Time-Resolution Meteorological Data. IEEE Transactions on Industrial Informatics, 2014, 10, 2270-2279.	11.3	40
81	A Self-commissioning Notch Filter for Active Damping in a Three-Phase LCL -Filter-Based Grid-Tie Converter. IEEE Transactions on Power Electronics, 2014, 29, 6754-6761.	7.9	166
82	A Hybrid Power Control Concept for PV Inverters With Reduced Thermal Loading. IEEE Transactions on Power Electronics, 2014, 29, 6271-6275.	7.9	152
83	An Optimization Method for Designing Large PV Plants. IEEE Journal of Photovoltaics, 2013, 3, 814-822.	2.5	101
84	Photovoltaic array condition monitoring based on online regression of performance model. , 2013, , .		22
85	Self-commissioning notch filter for active damping in three phase LCL-filter based grid converters. , 2013, , .		3
86	DC-bias cancellation for phase shift controlled dual active bridge. , 2013, , .		3
87	Grid integration of PV power based on PHIL testing using different interface algorithms. , 2013, , .		11
88	Benchmark networks for grid integration impact studies of large PV plants. , 2013, , .		8
89	Robustness analysis of the efficiency in PV inverters. , 2013, , .		8
90	On the Perturb-and-Observe and Incremental Conductance MPPT Methods for PV Systems. IEEE Journal of Photovoltaics, 2013, 3, 1070-1078.	2.5	629

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91	High efficiency battery converter with SiC devices for residential PV systems. , 2013, , .		5
92	Power ramp limitation and frequency support in large scale PVPPs without storage. , 2013, , .		5
93	Firefighter safety for PV systems: Overview of future requirements and protection systems. , 2013, , .		3
94	High efficient bidirectional battery converter for residential PV systems. , 2012, , .		12
95	Leakage current measurement in transformerless PV inverters. , 2012, , .		6
96	Detection of increased series losses in PV arrays using Fuzzy Inference Systems. , 2012, , .		26
97	Overview of recent Grid Codes for PV power integration. , 2012, , .		96
98	Improved voltage regulation strategies by PV inverters in LV rural networks. , 2012, , .		36
99	High flexibility and low cost digital implementation for modern PWM strategies. , 2011, , .		2
100	Control of parallel-connected bidirectional AC-DC converters in stationary frame for microgrid application. , 2011, , .		21
101	Power electronics - key technology for renewable energy systems. , 2011, , .		40
102	A New High-Efficiency Single-Phase Transformerless PV Inverter Topology. IEEE Transactions on Industrial Electronics, 2011, 58, 184-191.	7.9	648
103	A practical optimization method for designing large PV plants. , 2011, , .		11
104	A low-disturbance diagnostic function integrated in the PV arrays' MPPT algorithm. , 2011, , .		7
105	Stability analysis of grid inverter LCL-filter resonance in wind or photovoltaic parks. , 2011, , .		10
106	Robustness analysis of active damping methods for an inverter connected to the grid with an LCL-filter. , 2011, , .		37
107	Trends in power electronics and control of renewable energy systems. , 2010, , .		73
108	A photovoltaic three-phase topology to reduce Common Mode Voltage. , 2010, , .		33

#	ARTICLE	IF	CITATIONS
109	Losses and CMV evaluation in transformerless grid-connected PV topologies. , 2009, , .		36
110	Evaluation of Three-Phase Transformerless Photovoltaic Inverter Topologies. IEEE Transactions on Power Electronics, 2009, 24, 2202-2211.	7.9	374
111	The PWM strategies of grid-connected distributed generation active NPC inverters. , 2009, , .		8
112	A Single-Phase Voltage-Controlled Grid-Connected Photovoltaic System With Power Quality Conditioner Functionality. IEEE Transactions on Industrial Electronics, 2009, 56, 4436-4444.	7.9	208
113	Adaptive hysteresis band current control for transformerless single-phase PV inverters. , 2009, , .		27
114	Theory of superexchange for $3d^{n+1}d^{n-1}$ ions ($1 \leq n \leq 9$) involved in natural and artificial magnets II- derivation of the various exchange energies $J_{i,j}$ vs key molecular integrals. , 2008, , .		0
115	Common mode voltage in case of transformerless PV inverters connected to the grid. , 2008, , .		96
116	Improved MPPT method for rapidly changing environmental conditions. , 2006, , .		104
117	Improved MPPT Algorithms for Rapidly Changing Environmental Conditions. , 2006, , .		100
118	PV inverter simulation using MATLAB/Simulink graphical environment and PLECS blockset. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	34