

# Tamas Kerekes

## List of Publications by Year in descending order

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118  
papers

5,420  
citations

218677

26  
h-index

144013

57  
g-index

128  
all docs

128  
docs citations

128  
times ranked

4140  
citing authors

#	ARTICLE	IF	CITATIONS
1	A New High-Efficiency Single-Phase Transformerless PV Inverter Topology. IEEE Transactions on Industrial Electronics, 2011, 58, 184-191.	7.9	648
2	On the Perturb-and-Observe and Incremental Conductance MPPT Methods for PV Systems. IEEE Journal of Photovoltaics, 2013, 3, 1070-1078.	2.5	629
3	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
4	Evaluation of Three-Phase Transformerless Photovoltaic Inverter Topologies. IEEE Transactions on Power Electronics, 2009, 24, 2202-2211.	7.9	374
5	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
6	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
7	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
8	A Hybrid Power Control Concept for PV Inverters With Reduced Thermal Loading. IEEE Transactions on Power Electronics, 2014, 29, 6271-6275.	7.9	152
9	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
10	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
11	Improved MPPT method for rapidly changing environmental conditions. , 2006, , .		104
12	An Optimization Method for Designing Large PV Plants. IEEE Journal of Photovoltaics, 2013, 3, 814-822.	2.5	101
13	Improved MPPT Algorithms for Rapidly Changing Environmental Conditions. , 2006, , .		100
14	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
15	Common mode voltage in case of transformerless PV inverters connected to the grid. , 2008, , .		96
16	Overview of recent Grid Codes for PV power integration. , 2012, , .		96
17	Diagnostic method for photovoltaic systems based on light $\hat{v}$ measurements. Solar Energy, 2015, 119, 29-44.	6.1	90
18	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

#	ARTICLE	IF	CITATIONS
19	Trends in power electronics and control of renewable energy systems. , 2010, , .		73
20	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
21	Short-Circuit Degradation of 10-kV 10-A SiC MOSFET. IEEE Transactions on Power Electronics, 2017, 32, 9342-9354.	7.9	59
22	An Integrated Inductor for Parallel Interleaved Three-Phase Voltage Source Converters. IEEE Transactions on Power Electronics, 2016, 31, 3400-3414.	7.9	55
23	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
24	Power electronics - key technology for renewable energy systems. , 2011, , .		40
25	Optimal Design of Photovoltaic Systems Using High Time-Resolution Meteorological Data. IEEE Transactions on Industrial Informatics, 2014, 10, 2270-2279.	11.3	40
26	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
27	Three-Phase ZVR Topology and Modulation Strategy for Transformerless PV System. IEEE Transactions on Power Electronics, 2019, 34, 1017-1021.	7.9	39
28	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
29	Robustness analysis of active damping methods for an inverter connected to the grid with an LCL-filter. , 2011, , .		37
30	Losses and CMV evaluation in transformerless grid-connected PV topologies. , 2009, , .		36
31	Improved voltage regulation strategies by PV inverters in LV rural networks. , 2012, , .		36
32	An Online Event-Based Grid Impedance Estimation Technique Using Grid-Connected Inverters. IEEE Transactions on Power Electronics, 2021, 36, 6106-6117.	7.9	36
33	PV inverter simulation using MATLAB/Simulink graphical environment and PLECS blockset. Industrial Electronics Society (IECON ), Annual Conference of IEEE, 2006, , .	0.0	34
34	A photovoltaic three-phase topology to reduce Common Mode Voltage. , 2010, , .		33
35	Switched capacitor based Zâ€source DCâ€DC converter. IET Power Electronics, 2019, 12, 3582-3589.	2.1	33
36	Fault identification in crystalline silicon PV modules by complementary analysis of the light and dark currentâ€voltage characteristics. Progress in Photovoltaics: Research and Applications, 2016, 24, 517-532.	8.1	28

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37	Adaptive hysteresis band current control for transformerless single-phase PV inverters. , 2009, , .		27
38	Detection of increased series losses in PV arrays using Fuzzy Inference Systems. , 2012, , .		26
39	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
40	Magnetic Integration for Parallel Interleaved VSCs Connected in a Whiffletree Configuration. IEEE Transactions on Power Electronics, 2016, 31, 7797-7808.	7.9	25
41	Flux-Balancing Scheme for PD-Modulated Parallel-Interleaved Inverters. IEEE Transactions on Power Electronics, 2017, 32, 3442-3457.	7.9	25
42	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
43	Quantifying solar cell cracks in photovoltaic modules by electroluminescence imaging. , 2015, , .		24
44	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
45	Photovoltaic array condition monitoring based on online regression of performance model. , 2013, , .		22
46	Control of parallel-connected bidirectional AC-DC converters in stationary frame for microgrid application. , 2011, , .		21
47	Short-circuit characterization of 10 kV 10A 4H-SiC MOSFET. , 2016, , .		20
48	Design of the trap filter for the high power converters with parallel interleaved VSCs. , 2014, , .		19
49	Integrated inductor for interleaved operation of two parallel three-phase voltage source converters. , 2015, , .		19
50	Parallel interleaved VSCs: Influence of the PWM scheme on the design of the coupled inductor. , 2014, , .		17
51	Three-phase Photovoltaic Systems: Structures, Topologies, and Control. Electric Power Components and Systems, 2015, 43, 1364-1375.	1.8	17
52	Optimal interleaving angle determination in multi paralleled converters considering the DC current ripple and grid Current THD. , 2015, , .		15
53	A Review on Transformerless Step-Up Single-Phase Inverters with Different DC-Link Voltage for Photovoltaic Applications. Energies, 2019, 12, 3626.	3.1	15
54	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

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55	High step-up DC-DC converter composed of quadratic boost converter and switched capacitor. IET Power Electronics, 2020, 13, 4008-4018.	2.1	15
56	Analytical method to calculate the DC link current stress in voltage source converters. , 2014, , .		14
57	Reduction of DC-link capacitor in case of cascade multilevel converters by means of reactive power control. , 2014, , .		14
58	Optimum Sizing of Photovoltaic and Energy Storage Systems for Powering Green Base Stations in Cellular Networks. Energies, 2021, 14, 1895.	3.1	14
59	A Cascaded H-Bridge With Integrated Boosting Circuit. IEEE Transactions on Power Electronics, 2021, 36, 18-22.	7.9	13
60	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
61	High efficient bidirectional battery converter for residential PV systems. , 2012, , .		12
62	Design of low impedance busbar for 10 kV, 100A 4H-SiC MOSFET short-circuit tester using axial capacitors. , 2015, , .		12
63	A Novel Modular Multilevel Converter Based on Interleaved Half-Bridge Submodules. IEEE Transactions on Industrial Electronics, 2023, 70, 125-136.	7.9	12
64	A practical optimization method for designing large PV plants. , 2011, , .		11
65	Grid integration of PV power based on PHIL testing using different interface algorithms. , 2013, , .		11
66	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
67	Stability analysis of grid inverter LCL-filter resonance in wind or photovoltaic parks. , 2011, , .		10
68	Stochastic Optimal Strategy for Power Management in Interconnected Multi-Microgrid Systems. Electronics (Switzerland), 2022, 11, 1424.	3.1	10
69	Dual Converter Fed Open-End Transformer Topology with Parallel Converters and Integrated Magnetics. IEEE Transactions on Industrial Electronics, 2016, , 1-1.	7.9	9
70	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
71	The PWM strategies of grid-connected distributed generation active NPC inverters. , 2009, , .		8
72	Benchmark networks for grid integration impact studies of large PV plants. , 2013, , .		8

#	ARTICLE	IF	CITATIONS
73	Robustness analysis of the efficiency in PV inverters. , 2013, , .		8
74	Circulating current controller for parallel interleaved converters using PR controllers. , 2015, , .		8
75	New AC-AC Modular Multilevel Converter Solution for Medium-Voltage Machine-Drive Applications: Modular Multilevel Series Converter. Energies, 2020, 13, 3664.	3.1	8
76	Optimum Sizing of Photovoltaic-Battery Power Supply for Drone-Based Cellular Networks. Drones, 2021, 5, 138.	4.9	8
77	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
78	A low-disturbance diagnostic function integrated in the PV arrays' MPPT algorithm. , 2011, , .		7
79	Leakage current analysis of single-phase transformer-less grid-connected PV inverters. , 2015, , .		7
80	Effect of Battery Degradation on the Probabilistic Optimal Operation of Renewable-Based Microgrids. Electricity, 2022, 3, 53-74.	2.8	7
81	Leakage current measurement in transformerless PV inverters. , 2012, , .		6
82	Evaluation of circulating current suppression methods for parallel interleaved inverters. , 2016, , .		6
83	Communication-Free Equivalent Grid Impedance Estimation Technique for Multi-Inverter Systems. IEEE Transactions on Industrial Electronics, 2023, 70, 1542-1552.	7.9	6
84	High efficiency battery converter with SiC devices for residential PV systems. , 2013, , .		5
85	Power ramp limitation and frequency support in large scale PVPPs without storage. , 2013, , .		5
86	Remote and centralized monitoring of PV power plants. , 2014, , .		5
87	Characterisation of 10 kV 10 A SiC MOSFET. , 2015, , .		5
88	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
89	Flexible Active Power Control for PV-ESS Systems: A Review. Energies, 2021, 14, 7388.	3.1	5
90	An integrated inductor for parallel interleaved VSCs connected in a whiffletree configuration. , 2015, , .		4

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91	Comparative evaluation of modulation schemes for grid-connected parallel interleaved inverters. , 2016, , .		4
92	Power-Hardware-In-Loop harmonic analysis of a Smart Transformer-fed distribution grid. , 2016, , .		4
93	Mission-profile based multi-objective optimization of power electronics converter for wind turbines. , 2017, , .		4
94	A Classification of Single-Phase Transformerless Inverter Topologies for Photovoltaic Applications. , 2018, , .		4
95	Modeling and Control of Single-Phase Quasi-Z-Source Inverters. , 2018, , .		4
96	Case Study of Residential PV Power and Battery Storage with the Danish Flexible Pricing Scheme. Energies, 2019, 12, 799.	3.1	4
97	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
98	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
99	Self-commissioning notch filter for active damping in three phase LCL-filter based grid converters. , 2013, , .		3
100	DC-bias cancellation for phase shift controlled dual active bridge. , 2013, , .		3
101	Firefighter safety for PV systems: Overview of future requirements and protection systems. , 2013, , .		3
102	Characteristic Analysis of the Grid-Connected Impedance-Source Inverter for PV Applications. , 2019, , .		3
103	A Simple Mismatch Mitigating Partial Power Processing Converter for Solar PV Modules. Energies, 2021, 14, 2308.	3.1	3
104	Performance Assessment of Mismatch Mitigation Methodologies Using Field Data in Solar Photovoltaic Systems. Electronics (Switzerland), 2022, 11, 1938.	3.1	3
105	High flexibility and low cost digital implementation for modern PWM strategies. , 2011, , .		2
106	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
107	Comparison between grid side and inverter side current control for parallel interleaved grid connected converters. , 2015, , .		2
108	Application Layer Design for Smart Battery Pack Control with Wi-Fi® Feedback. , 2018, , .		2

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109	Reconfigurable Distributed Power Electronics Technique for Solar PV Systems. Electronics (Switzerland), 2021, 10, 1121.	3.1	2
110	Development of a test platform for controlling parallel converters. , 2014, , .		1
111	Circulating current control for parallel interleaved VSCs connected in whiffletree configuration. , 2016, , .		1
112	Magnetic integration of the harmonic filter inductor for dual-converter fed open-end transformer topology. , 2016, , .		1
113	Theory of superexchange for 3d<sup>n</sup>-ions (1&#x2264;n&#x2264;9) involved in natural and artificial magnets II- derivation of the various exchange energies J<sub>i</sub> vs key molecular integrals. , 2008, , .		0
114	Fault ride-through performance evaluation of an interleaved grid-connected converter employing low switching frequency. , 2016, , .		0
115	Improvement of Ventilation Drive System with Solar Power and a Voltage Level Based Control Structure. , 2018, , .		0
116	Modified Quasi-Z-Source Inverter with Model Predictive Control for Constant Common-Mode Voltage. , 2019, , .		0
117	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
118	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