

Xin Zhang

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Hybrid Input-Seriesâ€“Output-Series Modular DCâ€“DC Converter Constituted by Resonant and Nonresonant Dual Active Bridge Modules. IEEE Transactions on Industrial Electronics, 2022, 69, 1062-1069.	5.2	22
2	Artificial-Intelligence-Based Design for Circuit Parameters of Power Converters. IEEE Transactions on Industrial Electronics, 2022, 69, 11144-11155.	5.2	30
3	Coil Relative Position Transient Issue in Wireless Power Transfer Systems. IEEE Transactions on Industrial Electronics, 2022, 69, 2621-2630.	5.2	8
4	Resistance-Emulating Control Strategy for Three-Phase Voltage Source Rectifiers Under Unbalanced Grids. IEEE Transactions on Industrial Electronics, 2022, 69, 1103-1113.	5.2	12
5	A Comprehensive Study on the Existence and Stability of Equilibria of DC-Distribution Networks With Constant Power Loads. IEEE Transactions on Automatic Control, 2022, 67, 1988-1995.	3.6	16
6	Design of Symmetrical CLLC-Resonant DC Transformer Considering Voltage Transfer Ratio and Cascaded System Stability. IEEE Transactions on Industrial Electronics, 2022, 69, 463-474.	5.2	9
7	A Hybrid Voltage/Current Control Scheme With Low-Communication Burden for Grid-Connected Series-Type Inverters in Decentralized Manner. IEEE Transactions on Power Electronics, 2022, 37, 920-931.	5.4	5
8	Further Results on Newton-Raphson Method in Feasible Power-Flow for DC Distribution Networks. IEEE Transactions on Power Delivery, 2022, 37, 1348-1351.	2.9	17
9	Impedance-Shaping-Based Stability Control of Point-of-Load Converter Integrated With EMI Filter in DC Microgrids. IEEE Access, 2022, 10, 25034-25043.	2.6	2
10	Existence and Stability of Equilibrium of DC Micro-Grid Under Master-Slave Control. IEEE Transactions on Power Systems, 2022, 37, 212-223.	4.6	17
11	General Multi-Frequency Small-Signal Model for Resonant Converters. IEEE Transactions on Power Electronics, 2022, 37, 3892-3912.	5.4	4
12	Improved Model Predictive Control for Single-Phase Grid-Tied Inverter With Virtual Vectors in the Compacted Solution-Space. IEEE Transactions on Industrial Electronics, 2022, 69, 9673-9678.	5.2	8
13	Automatic Triple Phase-Shift Modulation for DAB Converter With Minimized Power Loss. IEEE Transactions on Industry Applications, 2022, 58, 3840-3851.	3.3	23
14	Priority-Driven Self-Optimizing Power Control Scheme for Interlinking Converters of Hybrid AC/DC Microgrid Clusters in Decentralized Manner. IEEE Transactions on Power Electronics, 2022, 37, 5970-5983.	5.4	16
15	A Generic Small-Signal Stability Criterion of DC Distribution Power System: Bus Node Impedance Criterion (BNIC). IEEE Transactions on Power Electronics, 2022, 37, 6116-6131.	5.4	29
16	Feasible Power-Flow Solution Analysis of DC Microgrid Considering Distributed Generations Under MPPT Control. IEEE Transactions on Smart Grid, 2022, 13, 139-148.	6.2	10
17	An Integrated Power Converter-Based Brushless DC Motor Drive System. IEEE Transactions on Power Electronics, 2022, 37, 8322-8332.	5.4	5
18	A Dual Shunt Inductor Compensated IPT System With Nearly Unity Power Factor for Wide Load Range and Misalignment Tolerance. IEEE Transactions on Industrial Electronics, 2022, 69, 10001-10013.	5.2	13

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19	Stability Enhancement via Controller Optimization and Impedance Shaping for Dual Active Bridge-Based Energy Storage Systems. IEEE Transactions on Industrial Electronics, 2021, 68, 5863-5874.	5.2	35
20	Hybrid-PWM-Controlled Current-Fed Bidirectional Series Resonant Converter With Low Current Ripple and Wide Voltage Gain. IEEE Transactions on Industrial Electronics, 2021, 68, 7125-7136.	5.2	12
21	New Three-Phase Current Reconstruction for PMSM Drive With Hybrid Space Vector Pulsewidth Modulation Technique. IEEE Transactions on Power Electronics, 2021, 36, 662-673.	5.4	43
22	A Data-Physical Hybrid-Driven Air Balancing Method for the Ventilation System. IEEE Transactions on Industrial Informatics, 2021, 17, 6583-6593.	7.2	9
23	Multitime Scale Frequency Regulation of a General Resonant DC Transformer in a Hybrid AC/DC Microgrid. IEEE Transactions on Industrial Electronics, 2021, 68, 9641-9651.	5.2	12
24	Small-Signal Modeling for Phase-Shift Controlled Resonant Converters. IEEE Transactions on Industrial Electronics, 2021, 68, 11026-11034.	5.2	7
25	Multi-Objective Design of Output LC Filter for Buck Converter via the Coevolving-AMOSA Algorithm. IEEE Access, 2021, 9, 11884-11894.	2.6	6
26	A Model-Data-Hybrid-Driven Diagnosis Method for Open-Switch Faults in Power Converters. IEEE Transactions on Power Electronics, 2021, 36, 4965-4970.	5.4	49
27	Lyapunov-Based Large-Signal Control of Three-Phase Stand-Alone Inverters With Inherent Dual Control Loops and Load Disturbance Adaptivity. IEEE Transactions on Industrial Electronics, 2021, 68, 8391-8401.	5.2	24
28	Composite-Bisection Predictive Control to Stabilize and Indirectly Regulate Downstream Load Inverters Cascaded with LC Input Filters in the SPS. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, , 1-1.	3.7	4
29	Impedance-Based Stability Analysis Methods for DC Distribution Power System With Multivoltage Levels. IEEE Transactions on Power Electronics, 2021, 36, 9193-9208.	5.4	18
30	Design Methodology for Symmetric CLLC Resonant DC Transformer Considering Voltage Conversion Ratio, System Stability, and Efficiency. IEEE Transactions on Power Electronics, 2021, 36, 10157-10170.	5.4	34
31	Pulsewidth-Modulator-Based Transfer Function Measurement Method for Variable Frequency-Controlled Half- and Full-Bridge Converters. IEEE Transactions on Power Electronics, 2021, 36, 9711-9716.	5.4	1
32	Parameter Design for Symmetrical CLLC-Type DC Transformer Considering Cascaded System Stability and Power Efficiency. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 6219-6231.	3.7	4
33	A Power Flow Transfer Entropy Based AC Fault Detection Method for the MTDC Wind Power Integration System. IEEE Transactions on Industrial Electronics, 2021, 68, 11614-11620.	5.2	13
34	Small-Signal Models of Resonant Converter With Consideration of Different Duty-Cycle Control Schemes. IEEE Transactions on Power Electronics, 2021, 36, 13234-13247.	5.4	6
35	A Novel Air Balancing Method for HVAC Systems by a Full Data-Driven Duct System Model. IEEE Transactions on Industrial Electronics, 2021, 68, 12595-12606.	5.2	4
36	Blockchain for Future Smart Grid: A Comprehensive Survey. IEEE Internet of Things Journal, 2021, 8, 18-43.	5.5	286

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37	Deep Reinforcement Learning Based Input Voltage Sharing Method for Input-Series Output-Parallel Dual Active Bridge Converter in DC Microgrids. , 2021, , .		2
38	Tri-freedom Bisection Algorithm for OSV MPC of Three-phase Inverters to Improve Power Quality. , 2021, , .		0
39	Sequential Offline-Online-Offline Measurement Approach for High-Frequency <i>LCLC</i> Resonant Converters in the TWTA Applications. IEEE Transactions on Industrial Electronics, 2020, 67, 1568-1579.	5.2	9
40	Three-Step Switching Frequency Selection Criteria for the Generalized <i>CLLC</i> -Type DC Transformer in Hybrid AC-DC Microgrid. IEEE Transactions on Industrial Electronics, 2020, 67, 980-991.	5.2	33
41	Imbalance Current Analysis and Its Suppression Methodology for Parallel SiC MOSFETs with Aid of a Differential Mode Choke. IEEE Transactions on Industrial Electronics, 2020, 67, 1508-1519.	5.2	88
42	An Efficiency-Oriented Two-Stage Optimal Design Methodology of High-Frequency <i>LCLC</i> Resonant Converters for Space Travelling-Wave Tube Amplifier Applications. IEEE Transactions on Industrial Electronics, 2020, 67, 1068-1080.	5.2	12
43	Impedance-Oriented Transient Instability Modeling of SiC mosfet Intruded by Measurement Probes. IEEE Transactions on Power Electronics, 2020, 35, 1866-1881.	5.4	20
44	Improvement of Frequency Regulation in VSG-Based AC Microgrid Via Adaptive Virtual Inertia. IEEE Transactions on Power Electronics, 2020, 35, 1589-1602.	5.4	172
45	Simplified Resonant Parameter Design of the Asymmetrical <i>CLLC</i> -Type DC Transformer in the Renewable Energy System via Semi-Artificial Intelligent Optimal Scheme. IEEE Transactions on Power Electronics, 2020, 35, 1548-1562.	5.4	23
46	Stepwise Design Methodology and Heterogeneous Integration Routine of Air-Cooled SiC Inverter for Electric Vehicle. IEEE Transactions on Power Electronics, 2020, 35, 3973-3988.	5.4	40
47	A Distributed Cooperative Control Algorithm for Optimal Power Flow and Voltage Regulation in DC Power System. IEEE Transactions on Power Delivery, 2020, 35, 892-903.	2.9	21
48	Two-Stage Parameter Design Methodology of a Generalized Resonant DC Transformer in Hybrid AC/DC Microgrid With Optimum Active Power Transmission. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 2313-2325.	3.7	16
49	Step-by-Step Threshold Design Methodology of Switching Frequency Regulation for a Generalized Resonant DC-DC Converter. IEEE Transactions on Industrial Electronics, 2020, 67, 10975-10980.	5.2	14
50	Convergence Analysis of Newton-Raphson Method in Feasible Power-Flow for DC Network. IEEE Transactions on Power Systems, 2020, 35, 4100-4103.	4.6	22
51	An Ellipse-Optimized Composite Backstepping Control Strategy for a Point-of-Load Inverter Under Load Disturbance in the Shipboard Power System. IEEE Open Journal of Power Electronics, 2020, 1, 420-430.	4.0	13
52	A Multiport Power Conversion System for the More Electric Aircraft. IEEE Transactions on Transportation Electrification, 2020, 6, 1707-1720.	5.3	43
53	A Dual-objective Modulated Model Predictive Control Scheme for the Point-of-load Inverter in dc Microgrid With Dichotomy Algorithm. , 2020, , .		2
54	Stability-Oriented Resonant Parameter Design for CLLC-Type Resonant Dual Active Bridge Converter with Swarm Intelligence. , 2020, , .		3

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55	An IGBT Open-Circuit Fault Diagnosis Method for Grid-Tied T-Type Three-Level Inverters. , 2020, , .		6
56	A Step-Up Nonisolated Modular Multilevel DCâ€“DC Converter With Self-Voltage Balancing and Soft Switching. IEEE Transactions on Power Electronics, 2020, 35, 13017-13030.	5.4	24
57	Active Motor Rotor Temperature Management Based on One-Node Thermal Network Model Predictive Control. IEEE Transactions on Power Electronics, 2020, 35, 11213-11221.	5.4	12
58	An Adaptive Dual-Loop Lyapunov-Based Control Scheme for a Single-Phase UPS Inverter. IEEE Transactions on Power Electronics, 2020, 35, 8886-8891.	5.4	32
59	Combined Sliding-Mode Control for the IFDBC Interfaced DC Microgrids With Power Electronic Loads. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 3396-3410.	3.7	10
60	Accommodation of Clean Energy: Challenges and Practices in China Southern Region. IEEE Open Journal of Power Electronics, 2020, 1, 198-209.	4.0	7
61	Energy dissipation of MMCâ€“HVDC based onshore wind power integration system with FBâ€“DBS and DCCB. IET Renewable Power Generation, 2020, 14, 222-230.	1.7	15
62	Feasible Power-Flow Solution Analysis of DC Microgrids Under Droop Control. IEEE Transactions on Smart Grid, 2020, 11, 2771-2781.	6.2	23
63	Optimization Design and Control of Single-Stage Single-Phase PV Inverters for MPPT Improvement. IEEE Transactions on Power Electronics, 2020, 35, 13000-13016.	5.4	47
64	Output-Series Modular DCâ€“DC Converter With Self-Voltage Balancing for Integrating Variable Energy Sources. IEEE Transactions on Power Electronics, 2020, 35, 11321-11327.	5.4	22
65	Comprehensive Coordinated Frequency Control of Symmetrical CLLC-DC Transformer in Hybrid AC/DC Microgrids. IEEE Transactions on Power Electronics, 2020, 35, 10374-10384.	5.4	39
66	Adaptive Active Disturbance Rejection Control of DAB Based on PSO. , 2020, , .		7
67	A Simple ANN-Based Diagnosis Method for Open-Switch Faults in Power Converters. , 2020, , .		2
68	Swarm Intelligence Aided Parameter Design for the Symmetrical CLLC-Type DAB Converter with Robust Voltage Conversion Gain. , 2020, , .		1
69	Design of LC Filter for Boost Converter with the Considerations of Efficiency and Power Density. , 2020, , .		5
70	Transient Load Sharing between Grid-forming Generators in Islanded Microgrid. , 2020, , .		0
71	Virtual Impedance Regulator for the Three-Phase Inverter Stand-Alone Distributed Generation System. , 2020, , .		2
72	Dichotomy Enhanced Model Predictive Control for a Three-phase Voltage Source Inverter with an LC Output Filter. , 2020, , .		0

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73	Two-Objective-Oriented Resonant Parameter Design for Symmetrical CLLC Dual Active Bridge Converter with Swarm Intelligence. , 2020, , .		0
74	Analysis and Improvement of Transient Load Sharing between Synchronous Generator and Virtual Synchronous Generator in Islanded Microgrid. , 2020, , .		4
75	Pareto-Frontier-Based Multi-Objective Design of Output LC Filter for High Efficiency, High Reliability, and High Power-Density Buck Converter. , 2020, , .		1
76	Harmonic State-Space Based Small-Signal Impedance Modeling of a Modular Multilevel Converter With Consideration of Internal Harmonic Dynamics. IEEE Transactions on Power Electronics, 2019, 34, 2134-2148.	5.4	208
77	Robust Circuit Parameters Design for the CLLC-Type DC Transformer in the Hybrid AC-DC Microgrid. IEEE Transactions on Industrial Electronics, 2019, 66, 1906-1918.	5.2	102
78	A Maximum Power Loading Factor (MPLF) Control Strategy for Distributed Secondary Frequency Regulation of Islanded Microgrid. IEEE Transactions on Power Electronics, 2019, 34, 2275-2291.	5.4	35
79	Optimal criterion and global/sub-optimal control schemes of decentralized economical dispatch for AC microgrid. International Journal of Electrical Power and Energy Systems, 2019, 104, 38-42.	3.3	30
80	A Modified Lyapunov-Based Control Scheme for a Three-phase UPS with an Optimal Third-order Load Current Observer. , 2019, , .		4
81	A robust air balancing method for dedicated outdoor air system. Energy and Buildings, 2019, 202, 109380.	3.1	17
82	Intelligent Energy Management Algorithms for EV-charging Scheduling with Consideration of Multiple EV Charging Modes. Energies, 2019, 12, 265.	1.6	36
83	A gradient-based adaptive balancing method for dedicated outdoor air system. Building and Environment, 2019, 151, 15-29.	3.0	23
84	Transient Characteristics of Synchronverters Subjected to Asymmetric Faults. IEEE Transactions on Power Delivery, 2019, 34, 1171-1183.	2.9	29
85	Impedance-Sum Stability Criterion for Power Electronic Systems With Two Converters/Sources. IEEE Access, 2019, 7, 21254-21265.	2.6	41
86	Three-Step Switching Frequency Selection Criteria for Symmetrical CLLC-Type DC Transformer in Hybrid AC/DC Microgrid. IEEE Transactions on Power Electronics, 2019, 34, 9379-9385.	5.4	20
87	Secondary Power Sharing Regulation Strategy for a DC Microgrid via Maximum Loading Factor. IEEE Transactions on Power Electronics, 2019, 34, 11856-11867.	5.4	19
88	Layout-Dominated Dynamic Current Imbalance in Multichip Power Module: Mechanism Modeling and Comparative Evaluation. IEEE Transactions on Power Electronics, 2019, 34, 11199-11214.	5.4	53
89	New Zeroing Neural Network Models for Solving Nonstationary Sylvester Equation With Verifications on Mobile Manipulators. IEEE Transactions on Industrial Informatics, 2019, 15, 5011-5022.	7.2	45
90	A Self-Synchronized Decentralized Control for Series-Connected H-Bridge Rectifiers. IEEE Transactions on Power Electronics, 2019, 34, 7136-7142.	5.4	20

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91	An energy-saving oriented air balancing strategy for multi-zone demand-controlled ventilation system. Energy, 2019, 172, 1053-1065.	4.5	27
92	AI Algorithm-Based Two-Stage Optimal Design Methodology of High-Efficiency CLLC Resonant Converters for the Hybrid AC-DC Microgrid Applications. IEEE Transactions on Industrial Electronics, 2019, 66, 9756-9767.	5.2	84
93	Design of LC Filter in Synchronous Buck considering Power Loss and Cost Criteria using Particle Swarm Optimization. , 2019, , .		0
94	Accommodating Discharging Power With Consideration of Both EVs and ESs as Commodity Based on a Two-Level Genetic Algorithm. IEEE Access, 2019, 7, 134804-134814.	2.6	11
95	A Modified Lyapunov-function based Control Scheme for Three-phase UPS with a Load Estimator in Synchronous Rotating Frame. , 2019, , .		0
96	Stabilization of Inverter-Based Distributed Generation System via Virtual Impedance Regulator. , 2019, , .		0
97	An Optimal-Oriented Quasi-Droop Control of Interlinking Converter in Hybrid Microgrid. , 2019, , .		2
98	A Modified Lyapunov-based Control Strategy for a Single-Phase VSI with a Load Estimator. , 2019, , .		2
99	Multi-objective Design of LC Filter for High-efficiency, High-power-density and High-performance Buck Converter. , 2019, , .		6
100	Modeling, air balancing and optimal pressure set-point selection for the ventilation system with minimized energy consumption. Applied Energy, 2019, 236, 574-589.	5.1	33
101	Dynamic task allocation in multi-robot coordination for moving target tracking: A distributed approach. Automatica, 2019, 100, 75-81.	3.0	107
102	Stability-Constraining-Dichotomy-Solution-Based Model Predictive Control to Improve the Stability of Power Conversion System in the MEA. IEEE Transactions on Industrial Electronics, 2019, 66, 5696-5706.	5.2	65
103	Source-Side Series-Virtual-Impedance Control to Improve the Cascaded System Stability and the Dynamic Performance of Its Source Converter. IEEE Transactions on Power Electronics, 2019, 34, 5854-5866.	5.4	99
104	Solid-State Single-Port Series Damping Device for Power Converters in DC Microgrid Systems. IEEE Transactions on Power Electronics, 2019, 34, 192-203.	5.4	12
105	Active Cancellation of Equivalent Grid Impedance for Improving Stability and Injected Power Quality of Grid-Connected Inverter Under Variable Grid Condition. IEEE Transactions on Power Electronics, 2018, 33, 9387-9398.	5.4	50
106	Lyapunov Stability Constraining Solution of the Cascaded Inverter Based on Model Predictive Current Control. , 2018, , .		1
107	CLLC-type DC Transformer in Hybrid AC/DC Microgrid with Maximum Power Transmission Ability and Robust Voltage Conversion Gain. , 2018, , .		2
108	Design of CLLC Resonant Converters for the Hybrid AC/DC Microgrid Applications. , 2018, , .		2

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109	Transmission Power Analysis and Control of the DC Transformer in Hybrid AC/DC Microgrid. , 2018, , .		3
110	Impedance modeling and stability analysis of dual active bridge converter with LC input filter. CES Transactions on Electrical Machines and Systems, 2018, 2, 289-295.	2.7	9
111	Dead-time effect on the CLLC-type DC transformer in hybrid AC/DC microgrid with 50% duty ratio control scheme. , 2018, , .		7
112	A General Decentralized Control Scheme for Medium-/High-Voltage Cascaded STATCOM. IEEE Transactions on Power Systems, 2018, 33, 7296-7300.	4.6	21
113	A Virtual RLC Damper to Stabilize DC/DC Converters Having an LC Input Filter while Improving the Filter Performance. IEEE Transactions on Power Electronics, 2016, , 1-1.	5.4	38
114	Improved Adaptive-Series-Virtual-Impedance Control Incorporating Minimum Ripple Point Tracking for Load Converters in DC Systems. IEEE Transactions on Power Electronics, 2016, , 1-1.	5.4	44
115	Stabilization of Cascaded DC/DC Converters via Adaptive Series-Virtual-Impedance Control of the Load Converter. IEEE Transactions on Power Electronics, 2016, 31, 6057-6063.	5.4	62
116	Stabilization of a Cascaded DC Converter System via Adding a Virtual Adaptive Parallel Impedance to the Input of the Load Converter. IEEE Transactions on Power Electronics, 2016, 31, 1826-1832.	5.4	80
117	Impedance-Based Local Stability Criterion for DC Distributed Power Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 916-925.	3.5	193
118	Improving the Stability of Cascaded DC/DC Converter Systems via Shaping the Input Impedance of the Load Converter With a Parallel or Series Virtual Impedance. IEEE Transactions on Industrial Electronics, 2015, 62, 7499-7512.	5.2	152
119	Adaptive Active Capacitor Converter for Improving Stability of Cascaded DC Power Supply System. IEEE Transactions on Power Electronics, 2013, 28, 1807-1816.	5.4	144