Xiaonan Lu

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2835661/publications.pdf

Version: 2024-02-01

102	6,853	201385	143772
papers	citations	27 h-index	57 g-index

103	103	103	4110
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	DC Microgridsâ€”Part II: A Review of Power Architectures, Applications, and Standardization Issues. IEEE Transactions on Power Electronics, 2016, 31, 3528-3549.	5.4	974
2	An Improved Droop Control Method for DC Microgrids Based on Low Bandwidth Communication With DC Bus Voltage Restoration and Enhanced Current Sharing Accuracy. IEEE Transactions on Power Electronics, 2014, 29, 1800-1812.	5.4	837
3	DC Microgridsâ€“Part I: A Review of Control Strategies and Stabilization Techniques. IEEE Transactions on Power Electronics, 2015, , 1-1.	5.4	827
4	State-of-Charge Balance Using Adaptive Droop Control for Distributed Energy Storage Systems in DC Microgrid Applications. IEEE Transactions on Industrial Electronics, 2014, 61, 2804-2815.	5.2	603
5	Grid-Forming Converters: Control Approaches, Grid-Synchronization, and Future Trendsâ€”A Review. IEEE Open Journal of Industry Applications, 2021, 2, 93-109.	4.8	345
6	Hierarchical Control of Parallel AC-DC Converter Interfaces for Hybrid Microgrids. IEEE Transactions on Smart Grid, 2014, 5, 683-692.	6.2	327
7	Review on Control of DC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, , 1-1.	3.7	289
8	Double-Quadrant State-of-Charge-Based Droop Control Method for Distributed Energy Storage Systems in Autonomous DC Microgrids. IEEE Transactions on Smart Grid, 2015, 6, 147-157.	6.2	282
9	An Improved Distributed Secondary Control Method for DC Microgrids With Enhanced Dynamic Current Sharing Performance. IEEE Transactions on Power Electronics, 2016, 31, 6658-6673.	5.4	282
10	Stability Enhancement Based on Virtual Impedance for DC Microgrids With Constant Power Loads. IEEE Transactions on Smart Grid, 2015, 6, 2770-2783.	6.2	250
11	Networked Microgrids for Grid Resilience, Robustness, and Efficiency: A Review. IEEE Transactions on Smart Grid, 2021, 12, 18-32.	6.2	150
12	Cybersecurity for distributed energy resources and smart inverters. IET Cyber-Physical Systems: Theory and Applications, 2016, 1, 28-39.	1.9	146
13	Virtual-Impedance-Based Fault Current Limiters for Inverter Dominated AC Microgrids. IEEE Transactions on Smart Grid, 2018, 9, 1599-1612.	6.2	117
14	Parallel Operation of Bidirectional Interfacing Converters in a Hybrid AC/DC Microgrid Under Unbalanced Grid Voltage Conditions. IEEE Transactions on Power Electronics, 2017, 32, 1872-1884.	5.4	84
15	Distributed Secondary Control Strategy for Microgrid Operation with Dynamic Boundaries. IEEE Transactions on Smart Grid, 2019, 10, 5269-5282.	6.2	80
16	A Framework for Load Service Restoration Using Dynamic Change in Boundaries of Advanced Microgrids With Synchronous-Machine DGs. IEEE Transactions on Smart Grid, 2018, 9, 3676-3690.	6.2	71
17	SoC-based droop method for distributed energy storage in DC microgrid applications. , 2012, , .		62
18	Uncertainty-Aware Deployment of Mobile Energy Storage Systems for Distribution Grid Resilience. IEEE Transactions on Smart Grid, 2021, 12, 3200-3214.	6.2	61

#	Article	IF	Citations
19	A Distributed Power Control of Series-Connected Module-Integrated Inverters for PV Grid-Tied Applications. IEEE Transactions on Power Electronics, 2018, 33, 7698-7707.	5.4	59
20	Resilience Analysis of DC Microgrids Under Denial of Service Threats. IEEE Transactions on Power Systems, 2019, 34, 3199-3208.	4.6	55
21	Distributed Secondary Voltage Control in Islanded Microgrids With Consideration of Communication Network and Time Delays. IEEE Transactions on Smart Grid, 2020, 11, 3702-3715.	6.2	53
22	Optimization Strategy of Hydrogovernors for Eliminating Ultralow-Frequency Oscillations in Hydrodominant Power Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1086-1094.	3.7	42
23	Dynamic Microgrids With Self-Organized Grid-Forming Inverters in Unbalanced Distribution Feeders. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 1097-1107.	3.7	42
24	Grid-forming converters: an overview of control approaches and future trends. , 2020, , .		42
25	A Game Changer: Electrifying Remote Communities by Using Isolated Microgrids. IEEE Electrification Magazine, 2017, 5, 56-63.	1.8	35
26	A review of the applications of fuel cells in microgrids: opportunities and challenges. BMC Energy, 2019, 1, .	6.3	34
27	SoC-based dynamic power sharing method with AC-bus voltage restoration for microgrid applications. , 2012, , .		31
28	Sustainable and Resilient Distribution Systems With Networked Microgrids [Point of View]. Proceedings of the IEEE, 2020, 108, 238-241.	16.4	31
29	Stability Region of Droop-Controlled Distributed Generation in Autonomous Microgrids. IEEE Transactions on Smart Grid, 2019, 10, 2288-2300.	6.2	30
30	An Improved Active Crosstalk Suppression Method for High-Speed SiC MOSFETs. IEEE Transactions on Industry Applications, 2019, 55, 7736-7744.	3.3	30
31	Hardware Decoupling and Autonomous Control of Series-Resonance-Based Three-Port Converters in DC Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 3901-3914.	3.3	27
32	Resilient Active Power Sharing in Autonomous Microgrids Using Pinning-Consensus-Based Distributed Control. IEEE Transactions on Smart Grid, 2019, 10, 6802-6811.	6.2	26
33	Demand Response and Smart Buildings. ACM Transactions on Cyber-Physical Systems, 2017, 1, 1-25.	1.9	25
34	Dynamic Microgrids in Resilient Distribution Systems With Reconfigurable Cyber-Physical Networks. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5192-5205.	3.7	24
35	A Flexible Operation of Distributed Generation in Distribution Networks With Dynamic Boundaries. IEEE Transactions on Power Systems, 2020, 35, 4127-4130.	4.6	24
36	Virtual impedance based stability improvement for DC microgrids with constant power loads. , 2014, , .		22

#	Article	IF	Citations
37	Control of parallel-connected bidirectional AC-DC converters in stationary frame for microgrid application. , 2011, , .		21
38	Black-Start and Service Restoration in Resilient Distribution Systems With Dynamic Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 3975-3986.	3.7	20
39	Steady-State Analysis of Microgrid Distributed Control Under Denial of Service Attacks. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5311-5325.	3.7	19
40	Accurate Distributed Secondary Control for DC Microgrids Considering Communication Delays: A Surplus Consensus-Based Approach. IEEE Transactions on Smart Grid, 2022, 13, 1709-1719.	6.2	18
41	Resonance propagation of parallel-operated DC-AC converters with LCL filters. , 2012, , .		17
42	A 4 kV/120 A SiC Solid-State DC Circuit Breaker Powered By a Load-Independent IPT System. IEEE Transactions on Industry Applications, 2022, 58, 1115-1125.	3.3	17
43	Frequency Division Based Coordinated Control of Three-Port Converter Interfaced Hybrid Energy Storage Systems in Autonomous DC Microgrids. IEEE Access, 2018, 6, 25389-25398.	2.6	16
44	Functional-Rotation-Based Active Dampers in AC Microgrids With Multiple Parallel Interface Inverters. IEEE Transactions on Industry Applications, 2018, 54, 5206-5215.	3.3	16
45	Neural Lyapunov Control for Power System Transient Stability: A Deep Learning-Based Approach. IEEE Transactions on Power Systems, 2022, 37, 955-966.	4.6	16
46	Analysis and control of input power factor in indirect matrix converter. , 2009, , .		15
47	An MPC-Aided Resilient Operation of Multi-Microgrids With Dynamic Boundaries. IEEE Transactions on Smart Grid, 2021, 12, 2125-2135.	6.2	15
48	Distributed Finite-Time Secondary Frequency Control of Islanded Microgrids With Enhanced Operational Flexibility. IEEE Transactions on Energy Conversion, 2021, 36, 1733-1742.	3.7	15
49	Droop-control-based state-of-charge balancing method for charging and discharging process in autonomous DC microgrids. , 2014, , .		14
50	Region-Based Stability Analysis for Active Dampers in AC Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 7671-7682.	3.3	14
51	Capacitive Couple-Based Transient Current Commutation in Solid-State Circuit Breakers. IEEE Transactions on Power Electronics, 2022, 37, 4973-4978.	5.4	10
52	Region-based Stability Analysis of Resilient Distribution Systems with Hybrid Grid-forming and Grid-following Inverters. , 2020, , .		10
53	Distributed secondary control for dc microgrid applications with enhanced current sharing accuracy. , 2013, , .		9
54	Coupled Cyber and Physical Systems: Embracing Smart Cities with Multistream Data Flow. IEEE Electrification Magazine, 2018, 6, 73-83.	1.8	9

#	Article	IF	Citations
55	Supplementary Feedforward Control of DGs in a Reconfigurable Microgrid for Load Restoration. IEEE Transactions on Smart Grid, 2021, 12, 4641-4654.	6.2	9
56	A series-resonance-based three-port converter with unified autonomous control method in DC microgrids. , 2018, , .		8
57	Optimal Design of Grid Interactive Inverters Based on Harmonic State Space Modeling. , 2020, , .		8
58	Topology Analysis and Power Sharing Control of a Two-Stage Three-Port Hybrid Energy Storage Converter for DC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 647-665.	3.7	7
59	Privacy-Preserving Distributed Average Observers in Distribution Systems With Grid-Forming Inverters. IEEE Transactions on Smart Grid, 2021, 12, 5000-5010.	6.2	7
60	Large-Signal Stability Analysis for Inverter-Based Dynamic Microgrids Reconfiguration. IEEE Transactions on Smart Grid, 2023, 14, 836-852.	6.2	7
61	Comparative Small-Signal Stability Analysis of Grid-Forming and Grid-Following Inverters in Low-Inertia Power Systems. , 2021, , .		7
62	Resiliency Augmented Hybrid AC and DC Distribution Systems With Inverter-Dominated Dynamic Microgrids. IEEE Transactions on Smart Grid, 2022, 13, 4088-4101.	6.2	7
63	A Distributed State-of-Charge Balancing Control Scheme for Three-Port Output-Series Converters in DC Hybrid Energy Storage Systems. IEEE Access, 2019, 7, 157173-157184.	2.6	6
64	Event-Based Distributed Frequency Control in Harsh Communication Conditions. IEEE Transactions on Industrial Informatics, 2022, 18, 3777-3786.	7.2	6
65	High performance hybrid cascaded inverter for renewable energy system. , 2011, , .		5
66	A hardware decoupling method for series-resonance-based isolated three-port DC/DC converters. , 2018, , .		5
67	New Analytical Model of Microgrid Frequency and Voltage Variations Due to Network Reconfiguration. IEEE Transactions on Smart Grid, 2021, 12, 905-908.	6.2	5
68	High efficiency hybrid cascade inverter for photovoltaic generation. , 2009, , .		4
69	Double resonant output filter to eliminating the tradeoff between bandwidth and switching ripple in shunt active power filters. IET Power Electronics, 2016, 9, 846-854.	1.5	4
70	High-Frequency High Step-Up Inductive Power Transfer-Based Capacitor Charger in Active Injection DC Circuit Breakers. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 572-582.	3.0	4
71	Versatile Control Functions of Hybrid Solid-State Transformers in Distribution Systems. , 2021, , .		4
72	Medium Voltage Pulse Power Generator for Accurate Current Interruption. IEEE Transactions on Industrial Electronics, 2023, 70, 3604-3615.	5.2	4

#	Article	IF	Citations
73	Distributed Economic Dispatch for Microgrids Tracking Ramp Power Commands. IEEE Transactions on Smart Grid, 2023, 14, 94-111.	6.2	4
74	Distributed Average Observation in Inverter Dominated Dynamic Microgrids. , 2020, , .		3
75	Small-Signal Stability Analysis of Low-Inertia Power Grids with Inverter-Based Resources and Synchronous Condensers. , 2022, , .		3
76	A grid-connected hybrid cascaded H-bridge inverter. , 2011, , .		2
77	A smooth switch method for battery energy storage systems between Vf mode and PQ mode by utilizing electromagnetic relay. , 2016, , .		2
78	Dynamic Microgrids with Voltage Unbalance Mitigation Using Distributed Secondary Control. , 2018, , .		2
79	Region Based Stability Analysis of Active Dampers in AC Microgrids with Multiple Parallel Interface Inverters. , 2019, , .		2
80	Reconfigurable and Dynamic Distribution Systems Enabled Using Self-Sustainable Minimal-Microgrids with Region Based Stability Guarantees. , 2019, , .		2
81	Fully Distributed Fixed-Time Optimal Dispatch for Islanded DC Microgrids. , 2020, , .		2
82	Fully Distributed Controller for Economic Load Sharing of DC Microgrid Clusters. , 2020, , .		2
83	DC Microgrids Under Denial of Service Attacks: Feasibility and Stability Issues. , 2020, , .		2
84	Holistic Small-Signal Modeling and AI-Assisted Region-Based Stability Analysis of Autonomous AC and DC Microgrids. , 2020, , .		2
85	MOV-RCD Snubber Design for Medium-Voltage SiC-Module Based Solid-State DC Circuit Breaker. , 2021, , .		2
86	Machine Learning Enabled Design Automation and Multi-Objective Optimization for Electric Transportation Power Systems. IEEE Transactions on Transportation Electrification, 2022, 8, 1467-1481.	5.3	2
87	Photovoltaic (PV) System Levelized Cost of Energy (LCOE) Evaluation with Grid Support Function Valuation and Service Lifetime Estimation. , 2021, , .		2
88	Machine Learning Enabled Fast Multi-Objective Optimization for Electrified Aviation Power System Design. , 2020, , .		2
89	Model Reduction for Inverter-Dominated Networked Microgrids with Grid-Forming Inverters. , 2021, , .		2
90	Dynamic Modeling and Model Predictive Control of Hybrid Solid-State Transformers. , 2022, , .		2

#	Article	IF	Citations
91	A 4kV/100A DC Solid-State Circuit Breaker with Soft Turn-off Operation. , 2022, , .		2
92	Leader Selection in Robust Pinning-based Distributed Control for Islanded Microgrids. , 2019, , .		1
93	Secondary Control for DC Microgrids with Optimal Sparse Feedback. , 2019, , .		1
94	Power system operation with power electronic inverterâ€“dominated microgrids. , 2021, , 259-274.		1
95	Interaction analysis of vector- and droop-controlled VSCs in parallel. , 2019, , .		0
96	A Framwork of Hierarchical Stability Region Analysis Approach for Networked Microgrids. , 2019, , .		0
97	AI-Aided Region-Based Active Stabilization in Autonomous DC Microgrids. , 2021, , .		0
98	An effective fault management scheme and comprehensive double lineâ€frequency ripple propagation analysis for MVDC networks. IET Generation, Transmission and Distribution, 0, , .	1.4	0
99	Inverter-Dominated Networked Microgrids with Marine Energy Resources and Energy Storage Systems for Coastal Community Resiliency Enhancement. , 2021, , .		0
100	Situation-aware Power Electronics in Resilient Distribution Systems with Reconfigurable Cyber-Physical Networks. , 2020, , .		0
101	Region-based Stability Analysis on DC MGs with Consensus-Based Secondary Control and Communication Delay. , 2021, , .		0
102	Communication-Resilient Microgrid Distributed Frequency Control with an Event-Triggered Mechanism. , 2021, , .		0