Zhixin Miao

List of Publications by Year
in descending order

91 papers	3,045 citations	218677 26 h-index	197818 49 g-index
91 all docs	91 docs citations	91 times ranked	2166 citing authors

#	Article	IF	Citations
1	Wind farms in weak grids stability enhancement: SynCon or STATCOM?. Electric Power Systems Research, 2022, 202, 107623.	3.6	4
2	Data-Driven Dynamic Modeling in Power Systems: A Fresh Look on Inverter-Based Resource Modeling. IEEE Power and Energy Magazine, 2022, 20, 64-76.	1.6	21
3	The cause of sub-cycle overvoltage: Capacitive characteristics of solar PVs. Electric Power Systems Research, 2022, 209, 108039.	3.6	0
4	Subcycle Overvoltage Dynamics in Solar PVs. IEEE Transactions on Power Delivery, 2021, 36, 1847-1858.	4.3	12
5	Comparison of Synchronous Condenser and STATCOM for Wind Farms in Weak Grids. , 2021, , .		3
6	Linear Time-Periodic Modeling of Single-Phase Elementary Phase-Locked-Loop. , 2021, , .		0
7	CHIL Testbed of Consensus Control-Based Battery Energy Storage Systems. , 2021, , .		0
8	Modeling and Control of Grid-following Single-Phase Voltage-Sourced Converter. , 2021, , .		1
9	Time-Domain Measurement-Based DQ-Frame Admittance Model Identification for Inverter-Based Resources. IEEE Transactions on Power Systems, 2021, 36, 2211-2221.	6.5	21
10	Mixed integer programming formulation for fault identification based on MicroPMUs. International Transactions on Electrical Energy Systems, 2021, 31, e12949.	1.9	1
11	Reduced-Order Analytical Models of Grid-Connected Solar Photovoltaic Systems for Low-Frequency Oscillation Analysis. IEEE Transactions on Sustainable Energy, 2021, 12, 1662-1671.	8.8	21
12	Identifying DQ-Domain Admittance Models of a 2.3-MVA Commercial Grid-Following Inverter via Frequency-Domain and Time-Domain Data. IEEE Transactions on Energy Conversion, 2021, 36, 2463-2472.	5.2	12
13	Root Cause Analysis of AC Overcurrent in July 2020 San Fernando Disturbance. IEEE Transactions on Power Systems, 2021, 36, 4892-4895.	6.5	3
14	Analytical model building for Type-3 wind farm subsynchronous oscillation analysis. Electric Power Systems Research, 2021, 201, 107566.	3.6	7
15	Stability analysis of two types of g <scp>ridâ€forming</scp> converters for weak grids. International Transactions on Electrical Energy Systems, 2021, 31, e13136.	1.9	6
16	Stability enhancement module for <scp>gridâ€following</scp> converters: Hardware implementation and validation. International Transactions on Electrical Energy Systems, 2021, 31, e13115.	1.9	0
17	Stability Analysis of VSC Systems Using 3Ã—3 Admittance Measurements. , 2021, , .		2
18	Practical Start-Up Process of Multiple Grid-Tied Voltage-Sourced Inverters in Laboratory. , 2021, , .		2

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19	Measured Admittance Model for Dynamic Simulation of Inverter-Based Resources Using Numerical Laplace Transform. , 2021, , .		0
20	Hardware Demonstration of Weak Grid Oscillations in Grid-Following Converters. , 2021, , .		5
21	Small-Signal Stability Analysis of Type-4 Wind in Series-Compensated Networks. IEEE Transactions on Energy Conversion, 2020, 35, 529-538.	5.2	38
22	Wind in Weak Grids: Low-Frequency Oscillations, Subsynchronous Oscillations, and Torsional Interactions. IEEE Transactions on Power Systems, 2020, 35, 109-118.	6.5	129
23	Replicating Real-World Wind Farm SSR Events. IEEE Transactions on Power Delivery, 2020, 35, 339-348.	4.3	57
24	A sparse convex AC OPF solver and convex iteration implementation based on 3-node cycles. Electric Power Systems Research, 2020, 180, 106169.	3.6	7
25	A tutorial on dataâ€driven eigenvalue identification: Prony analysis, matrix pencil, and eigensystem realization algorithm. International Transactions on Electrical Energy Systems, 2020, 30, e12283.	1.9	40
26	Admittance-Based Stability Analysis: Bode Plots, Nyquist Diagrams or Eigenvalue Analysis?. IEEE Transactions on Power Systems, 2020, 35, 3312-3315.	6.5	83
27	New auxiliary variable-based ADMM for nonconvex AC OPF. Electric Power Systems Research, 2019, 174, 105867.	3.6	3
28	Operation of Parallel Grid-Supporting PVs. , 2019, , .		1
29	Stability Control for Wind in Weak Grids. IEEE Transactions on Sustainable Energy, 2019, 10, 2094-2103.	8.8	61
30	Least Squares Estimation Based SDP Cuts for SOCP Relaxation of AC OPF. IEEE Transactions on Automatic Control, 2018, 63, 241-248.	5.7	24
31	Control of a Three-Phase Hybrid Converter for a PV Charging Station. IEEE Transactions on Energy Conversion, 2018, 33, 1002-1014.	5.2	34
32	A Novel Multi-Agent Decision Making Architecture Based on Dualâ€™s Dual Problem Formulation. IEEE Transactions on Smart Grid, 2018, 9, 1150-1160.	9.0	10
33	Consensus Control for Energy Storage Systems. IEEE Transactions on Smart Grid, 2018, 9, 3009-3017.	9.0	65
34	An Explanation of Oscillations Due to Wind Power Plants Weak Grid Interconnection. IEEE Transactions on Sustainable Energy, 2018, 9, 488-490.	8.8	76
35	Impedance-model-based MIMO analysis of power synchronization control. Electric Power Systems Research, 2018, 154, 341-351.	3.6	21
36	MIP-Based Fault Location Identification Using MicroPMUs. , 2018, , .		2

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37	Power Grid Partitioning: Static and Dynamic Approaches. , 2018, , .		1
38	Performance of Branch-Current Based Distribution System State Estimation. , 2018, , .		4
39	Labs for EGN 3375 Electromechanical Energy Systems at University of South Florida. , 2018, , .		0
40	Real-Time Simulation of Electric Vehicle Battery Charging Systems. , 2018, , .		6
41	Wind in Weak Grids: 4ÂHz or 30ÂHz Oscillations?. IEEE Transactions on Power Systems, 2018, 33, 5803-5804.	6.5	77
42	Achieving Economic Operation and Secondary Frequency Regulation Simultaneously Through Local Feedback Control. IEEE Transactions on Power Systems, 2017, 32, 85-93.	6.5	11
43	ADMM for nonconvex AC optimal power flow. , 2017, , .		5
44	Design robust cascade control structure for voltage source converters. , 2017, , .		2
45	Battery identification based on real-world data. , 2017, , .		2
46	Nonlinear least-square estimation (LSE)-based parameter identification of a synchronous generator. , 2017, , .		3
47	Deriving ARX models for synchronous generators. , 2016, , .		4
48	Cyber attacks, detection and protection in smart grid state estimation. , 2016, , .		10
49	Consensus ADMM and Proximal ADMM for economic dispatch and AC OPF with SOCP relaxation. , 2016, , .		35
50	Benders Decomposition for stochastic programming-based PV/Battery/HVAC planning. , 2016, , .		4
51	Achieving Economic Operation and Secondary Frequency Regulation Simultaneously Through Feedback Control. IEEE Transactions on Power Systems, 2016, 31, 3324-3325.	6.5	11
52	Real-time simulation and hardware-in-the-loop tests of a battery system. , 2015, , .		9
53	Identification of synchronous generator model with frequency control using unscented Kalman filter. Electric Power Systems Research, 2015, 126, 45-55.	3.6	42
54	Minimizing DC system loss in multi-terminal HVDC systems through adaptive droop control. Electric Power Systems Research, 2015, 126, 78-86.	3.6	40

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55	Real-time digital simulation-based modeling of a single-phase single-stage PV system. Electric Power Systems Research, 2015, 123, 85-91.	3.6	19
56	Common mode voltage reduction schemes for voltage source converters in an autonomous microgrid. , 2015, , .		2
57	Capacitor siting using benders decomposition. , 2015, , .		0
58	Unbalance and harmonic mitigation using battery inverters. , 2015, , .		7
59	Dynamic Phasor-Based Modeling of Unbalanced Radial Distribution Systems. IEEE Transactions on Power Systems, 2015, 30, 3102-3109.	6.5	46
60	DC Impedance-Model-Based Resonance Analysis of a VSCâ€“HVDC System. IEEE Transactions on Power Delivery, 2015, 30, 1221-1230.	4.3	102
61	Distributed DC Optimal Power Flow for radial networks through partial Primal Dual algorithm. , 2015, , .		12
62	Integrated control and switching strategy for a grid-connected modular multilevel converter. , 2015, , .		5
63	Blackstart of an induction motor in an autonomous microgrid. , 2015, , .		7
64	Fast model predictive control algorithms for fast-switching modular multilevel converters. Electric Power Systems Research, 2015, 129, 105-113.	3.6	19
65	Impedance Model-Based SSR Analysis for TCSC Compensated Type-3 Wind Energy Delivery Systems. IEEE Transactions on Sustainable Energy, 2015, 6, 179-187.	8.8	92
66	A one-step model predictive control for modular multilevel converters. , 2014, , .		10
67	An SOC-Based Battery Management System for Microgrids. IEEE Transactions on Smart Grid, 2014, 5, 966-973.	9.0	132
68	Multi-agent control of community and utility using Lagrangian relaxation based dual decomposition. Electric Power Systems Research, 2014, 110, 45-54.	3.6	18
69	Stochastic optimization for power system configuration with renewable energy in remote areas. Annals of Operations Research, 2013, 210, 411-432.	4.1	45
70	Modeling of Z-source converter for renewable energy integration. , 2013, , .		0
71	Impact of Unbalance on Electrical and Torsional Resonances in Power Electronic Interfaced Wind Energy Systems. IEEE Transactions on Power Systems, 2013, 28, 3105-3113.	6.5	10
72	Application of Dynamic State and Parameter Estimation Techniques on Real-World Data. IEEE Transactions on Smart Grid, 2013, 4, 1133-1141.	9.0	80

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73	Realizing space vector modulation in MATLAB/Simulink and PSCAD. , 2013, , .		6
74	Least squares based estimation of synchronous generator states and parameters with phasor measurement units. , 2012, , .		24
75	Coordinated control of a solar and battery system in a microgrid. , 2012, , .		8
76	Impedance-Model-Based SSR Analysis for Type 3 Wind Generator and Series-Compensated Network. IEEE Transactions on Energy Conversion, 2012, 27, 984-991.	5.2	268
77	Fast Power Routing Through HVDC. IEEE Transactions on Power Delivery, 2012, 27, 1432-1441.	4.3	26
78	Modeling and small signal analysis of a PMSG-based wind generator With sensorless maximum power extraction. , 2012, , .		3
79	Mitigating SSR Using DFIG-Based Wind Generation. IEEE Transactions on Sustainable Energy, 2012, 3, 349-358.	8.8	220
80	Nyquist-Stability-Criterion-Based SSR Explanation for Type-3 Wind Generators. IEEE Transactions on Energy Conversion, 2012, 27, 807-809.	5.2	107
81	Modeling and simulation of multi-terminal HVDC for wind power delivery. , 2012, , .		7
82	Investigation of Microgrids With Both Inverter Interfaced and Direct AC-Connected Distributed Energy Resources. IEEE Transactions on Power Delivery, 2011, 26, 1634-1642.	4.3	110
83	AC or DC power modulation for DFIG wind generation with HVDC delivery to improve interarea oscillation damping. , 2011, , .		4
84	Control of a back-to-back VSC system from grid-connection to islanded mode in microgrids. , 2011, , .		4
85	Modal Analysis of a DFIG-Based Wind Farm Interfaced With a Series Compensated Network. IEEE Transactions on Energy Conversion, 2011, 26, 1010-1020.	5.2	202
86	A novel control scheme for DFIG-based wind energy systems under unbalanced grid conditions. Electric Power Systems Research, 2011, 81, 254-262.	3.6	26
87	Reactive power modulation for inter-area oscillation damping of DFIG-based wind generation. , 2010, , .		5
88	Impact of unbalanced grid conditions on PV systems. , 2010, , .		11
89	Wind Farms With HVdc Delivery in Inertial Response and Primary Frequency Control. IEEE Transactions on Energy Conversion, 2010, 25, 1171-1178.	5.2	119
90	Control of DFIG-Based Wind Generation to Improve Interarea Oscillation Damping. IEEE Transactions on Energy Conversion, 2009, 24, 415-422.	5.2	191

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91	Wind Farms With HVDC Delivery in Load Frequency Control. IEEE Transactions on Power Systems, 2009, 24, 1894-1895.	6.5	60