

Yingchen Zhang

List of Publications by Year in descending order

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91
papers

3,503
citations

257450

24
h-index

214800

47
g-index

97
all docs

97
docs citations

97
times ranked

3248
citing authors

#	ARTICLE	IF	CITATIONS
1	Achieving a 100% Renewable Grid: Operating Electric Power Systems with Extremely High Levels of Variable Renewable Energy. IEEE Power and Energy Magazine, 2017, 15, 61-73.	1.6	846
2	Wide-Area Frequency Monitoring Network (FNET) Architecture and Applications. IEEE Transactions on Smart Grid, 2010, 1, 159-167.	9.0	376
3	Investigating the Impacts of Wind Generation Participation in Interconnection Frequency Response. IEEE Transactions on Sustainable Energy, 2015, 6, 1004-1012.	8.8	199
4	Coordinated Control Strategy of a Battery Energy Storage System to Support a Wind Power Plant Providing Multi-Timescale Frequency Ancillary Services. IEEE Transactions on Sustainable Energy, 2017, 8, 1140-1153.	8.8	188
5	A Short-Term and High-Resolution Distribution System Load Forecasting Approach Using Support Vector Regression With Hybrid Parameters Optimization. IEEE Transactions on Smart Grid, 2018, 9, 3341-3350.	9.0	176
6	Deep Reinforcement Learning Based Volt-VAR Optimization in Smart Distribution Systems. IEEE Transactions on Smart Grid, 2021, 12, 361-371.	9.0	122
7	The challenges of achieving a 100% renewable electricity system in the United States. Joule, 2021, 5, 1331-1352.	24.0	99
8	Angle Instability Detection in Power Systems With High-Wind Penetration Using Synchrophasor Measurements. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2013, 1, 306-314.	5.4	78
9	Power system inertia estimation: Review of methods and the impacts of converter-interfaced generations. International Journal of Electrical Power and Energy Systems, 2022, 134, 107362.	5.5	74
10	Frequency Response Assessment and Enhancement of the U.S. Power Grids Toward Extra-High Photovoltaic Generation Penetrations—An Industry Perspective. IEEE Transactions on Power Systems, 2018, 33, 3438-3449.	6.5	73
11	A Novel Event Detection Method Using PMU Data With High Precision. IEEE Transactions on Power Systems, 2019, 34, 454-466.	6.5	66
12	A Data-Driven Game-Theoretic Approach for Behind-the-Meter PV Generation Disaggregation. IEEE Transactions on Power Systems, 2020, 35, 3133-3144.	6.5	66
13	Matrix Completion for Low-Observability Voltage Estimation. IEEE Transactions on Smart Grid, 2020, 11, 2520-2530.	9.0	49
14	Joint Estimation of Behind-the-Meter Solar Generation in a Community. IEEE Transactions on Sustainable Energy, 2021, 12, 682-694.	8.8	46
15	Spatial-Temporal Synchrophasor Data Characterization and Analytics in Smart Grid Fault Detection, Identification, and Impact Causal Analysis. IEEE Transactions on Smart Grid, 2016, 7, 2525-2536.	9.0	43
16	Comparative Assessment of Tactics to Improve Primary Frequency Response Without Curtailing Solar Output in High Photovoltaic Interconnection Grids. IEEE Transactions on Sustainable Energy, 2019, 10, 718-728.	8.8	43
17	Synchrophasor-Based Auxiliary Controller to Enhance the Voltage Stability of a Distribution System With High Renewable Energy Penetration. IEEE Transactions on Smart Grid, 2015, 6, 2107-2115.	9.0	41
18	Decentralized wind uncertainty management: Alternating direction method of multipliers based distributionally-robust chance constrained optimal power flow. Applied Energy, 2019, 239, 938-947.	10.1	40

#	ARTICLE	IF	CITATIONS
19	Computational fluid dynamics simulation study of active power control in wind plants. , 2016, , .		38
20	Grid-Level Application of Electrical Energy Storage: Example Use Cases in the United States and China. IEEE Power and Energy Magazine, 2017, 15, 51-58.	1.6	37
21	Leveraging Standards to Create an Open Platform for the Development of Advanced Distribution Applications. IEEE Access, 2018, 6, 37361-37370.	4.2	36
22	Power-traffic coordinated operation for bi-peak shaving and bi-ramp smoothing " A hierarchical data-driven approach. Applied Energy, 2018, 229, 756-766.	10.1	33
23	A Physics-based Smart Persistence model for Intra-hour forecasting of solar radiation (PSPI) using GHI measurements and a cloud retrieval technique. Solar Energy, 2019, 177, 494-500.	6.1	31
24	Cyber-enabled grids: Shaping future energy systems. Advances in Applied Energy, 2021, 1, 100003.	13.2	30
25	Nonlinear Virtual Inertia Control of WTs for Enhancing Primary Frequency Response and Suppressing Drivetrain Torsional Oscillations. IEEE Transactions on Power Systems, 2021, 36, 4102-4113.	6.5	30
26	A Review on Artificial Intelligence for Grid Stability Assessment. , 2020, , .		28
27	Real-Time Identifiability of Power Distribution Network Topologies With Limited Monitoring. , 2020, 4, 325-330.		27
28	Parallel dispatch: a new paradigm of electrical power system dispatch. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 311-319.	13.1	23
29	Estimation of Behind-the-Meter Solar Generation by Integrating Physical with Statistical Models. , 2019, , .		23
30	Robust Deep Gaussian Process-Based Probabilistic Electrical Load Forecasting Against Anomalous Events. IEEE Transactions on Industrial Informatics, 2022, 18, 1142-1153.	11.3	23
31	Phase angle-based power system inter-area oscillation detection and modal analysis. European Transactions on Electrical Power, 2011, 21, 1629-1639.	1.0	22
32	Optimal Energy Dispatch of Distributed PVs for the Next Generation of Distribution Management Systems. IEEE Open Access Journal of Power and Energy, 2020, 7, 287-295.	3.4	22
33	Three-phase AC optimal power flow based distribution locational marginal price. , 2017, , .		21
34	Pioneer Design of Non-Contact Synchronized Measurement Devices Using Electric and Magnetic Field Sensors. IEEE Transactions on Smart Grid, 2018, 9, 5622-5630.	9.0	21
35	Multi-Timescale Three-Phase Unbalanced Distribution System Operation With Variable Renewable Generations. IEEE Transactions on Smart Grid, 2019, 10, 4497-4507.	9.0	21
36	Consumption Behavior Analytics-Aided Energy Forecasting and Dispatch. IEEE Intelligent Systems, 2017, 32, 59-63.	4.0	20

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37	Solar Irradiance Capturing in Cloudy Sky Days—A Convolutional Neural Network Based Image Regression Approach. IEEE Access, 2020, 8, 22235-22248.	4.2	20
38	Generalized Graph Laplacian Based Anomaly Detection for Spatiotemporal MicroPMU Data. IEEE Transactions on Power Systems, 2019, 34, 3960-3963.	6.5	19
39	Big Data-Based Approach to Detect, Locate, and Enhance the Stability of an Unplanned Microgrid Islanding. Journal of Energy Engineering - ASCE, 2017, 143, .	1.9	17
40	Robust Matrix Completion State Estimation in Distribution Systems. , 2019, , .		17
41	Zonal Inertia Constrained Generator Dispatch Considering Load Frequency Relief. IEEE Transactions on Power Systems, 2020, 35, 3065-3077.	6.5	17
42	Robust PCA-deep belief network surrogate model for distribution system topology identification with DERs. International Journal of Electrical Power and Energy Systems, 2021, 125, 106441.	5.5	17
43	A Data-Driven Global Sensitivity Analysis Framework for Three-Phase Distribution System With PVs. IEEE Transactions on Power Systems, 2021, 36, 4809-4819.	6.5	17
44	Short-term distribution system state forecast based on optimal synchrophasor sensor placement and extreme learning machine. , 2016, , .		16
45	Optimal Renewable Resource Allocation and Load Scheduling of Resilient Communities. Energies, 2020, 13, 5683.	3.1	16
46	Knowledge discovery for smart grid operation, control, and situation awareness — a big data visualization platform. , 2016, , .		15
47	Social energy: mining energy from the society. IEEE/CAA Journal of Automatica Sinica, 2017, 4, 466-482.	13.1	15
48	Developing a Reduced 240-Bus WECC Dynamic Model for Frequency Response Study of High Renewable Integration. , 2020, , .		15
49	Statistical scheduling of economic dispatch and energy reserves of hybrid power systems with high renewable energy penetration. , 2014, , .		12
50	Robust Medium-Voltage Distribution System State Estimation using Multi-Source Data. , 2020, , .		12
51	On Analytical Construction of Observable Functions in Extended Dynamic Mode Decomposition for Nonlinear Estimation and Prediction. , 2021, 5, 1868-1873.		12
52	Decentralized data-driven estimation of generator rotor speed and inertia constant based on adaptive unscented Kalman filter. International Journal of Electrical Power and Energy Systems, 2022, 137, 107853.	5.5	12
53	Machine Learning-Based Prediction of Distribution Network Voltage and Sensor Allocation. , 2020, , .		11
54	Distributed Frequency Divider for Power System Bus Frequency Online Estimation Considering Virtual Inertia From DFIGs. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 161-171.	3.6	10

#	ARTICLE	IF	CITATIONS
55	Spatial-temporal characterization of synchrophasor measurement systems — A big data approach for smart grid system situational awareness. , 2014, , .		9
56	Hardware-in-the-Loop Evaluation of an Advanced Distributed Energy Resource Management Algorithm. , 2021, , .		9
57	Synchrophasor based auxiliary controller to enhance power system transient voltage stability in a high penetration renewable energy scenario. , 2014, , .		7
58	Physics-Informed Sparse Gaussian Process for Probabilistic Stability Analysis of Large-Scale Power System With Dynamic PVs and Loads. IEEE Transactions on Power Systems, 2023, 38, 2868-2879.	6.5	7
59	Short-term state forecasting-based optimal voltage regulation in distribution systems. , 2017, , .		6
60	Machine Learning-Based PV Reserve Determination Strategy for Frequency Control on the WECC System. , 2020, , .		6
61	Distribution locational real-time pricing based smart building control and management. , 2016, , .		5
62	A Hybrid Framework Combining Model-Based and Data-Driven Methods for Hierarchical Decentralized Robust Dynamic State Estimation. , 2019, , .		5
63	Matrix Completion Using Alternating Minimization for Distribution System State Estimation. , 2020, , .		5
64	Joint real-time energy and demand-response management using a hybrid coalitional-noncooperative game. , 2015, , .		4
65	Locational marginal pricing in the campus power system at the power distribution level. , 2016, , .		4
66	Iteration-Based Linearized Distribution-Level Locational Marginal Price for Three-Phase Unbalanced Distribution Systems. IEEE Transactions on Smart Grid, 2021, 12, 4886-4896.	9.0	4
67	A Generalized Copula-Polynomial Chaos Expansion for Probabilistic Power Flow Considering Nonlinear Correlations of PV Injections. , 2021, , .		4
68	Measurement placement in electric power transmission and distribution grids: Review of concepts, methods, and research needs. IET Generation, Transmission and Distribution, 2022, 16, 805-838.	2.5	4
69	Coordinated optimization of distributed energy resources and smart loads in distribution systems. , 2016, , .		3
70	Load forecasting based distribution system network reconfiguration â€” A distributed data-driven approach. , 2017, , .		3
71	A Transparent Translation from Legacy System Model into Common Information Model. , 2018, , .		3
72	Equivalent Test Bed in PSCAD and PSLF for Studying Advanced Power Systems Controller Performance. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
73	Bayesian Structural Time Series for Behind-the-Meter Photovoltaic Disaggregation. , 2020, , .		3
74	Improving the Accuracy of Clustering Electric Utility Net Load Data using Dynamic Time Warping. , 2020, , .		3
75	Chance-constrained day-ahead hourly scheduling in distribution system operation. , 2017, , .		2
76	Coordinative Voltage Control Strategy with Multiple Resources for Distribution Systems of High PV Penetration. , 2018, , .		2
77	Analyzing the effects of cyberattacks on distribution system state estimation. , 2021, , .		2
78	Deep Learning-Based Adaptive Remedial Action Scheme with Security Margin for Renewable-Dominated Power Grids. Energies, 2021, 14, 6563.	3.1	2
79	A Double-Signal Retail Pricing Scheme for Acquiring Operational Flexibility from Batteries. IEEE Transactions on Sustainable Energy, 2021, , 1-1.	8.8	2
80	Performance Evaluation of an Advanced Distributed Energy Resource Management Algorithm. , 2021, , .		2
81	Data-Driven Probabilistic Voltage Risk Assessment of MiniWECC System With Uncertain PVs and Wind Generations Using Realistic Data. IEEE Transactions on Power Systems, 2022, 37, 4121-4124.	6.5	2
82	A Fast and Accurate Transient Stability Assessment Method Based on Deep Learning: WECC Case Study. , 2022, , .		2
83	Security-oriented and load-balancing wireless data routing game in the integration of advanced metering infrastructure network in smart grid. , 2016, , .		1
84	Investigating the impact of wind turbines on distribution system stability. , 2016, , .		1
85	Composite socio-technical systems: A method for social energy systems. , 2017, , .		1
86	Online Static Load Model Estimation in Distribution Systems. , 2019, , .		1
87	Extended Frequency Divider for Bus Frequency Estimation Considering Virtual Inertia from DFIGs. , 2021, , .		1
88	Offering of Variable Resources in Regulation Markets With Performance Targets: An Analysis. IEEE Transactions on Sustainable Energy, 2022, 13, 1620-1630.	8.8	1
89	Pioneer Design of Non-contact Synchronized Measurement Devices Using Electric and Magnetic Field Sensors. , 2019, , .		0
90	Safeguarding the Grid: Diverse Resources for Resilience [In My View]. IEEE Power and Energy Magazine, 2020, 18, 90-92.	1.6	0

#	ARTICLE	IF	CITATIONS
91	Estimating spatial distribution impacts of rooftops solar PV on dynamic hosting capacity evaluation for a real distribution feeder. , 2021, , .		0