

# 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	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
2	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
3	Robust Deep Gaussian Process-Based Probabilistic Electrical Load Forecasting Against Anomalous Events. IEEE Transactions on Industrial Informatics, 2022, 18, 1142-1153.	11.3	23
4	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
5	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
6	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
7	Offering of Variable Resources in Regulation Markets With Performance Targets: An Analysis. IEEE Transactions on Sustainable Energy, 2022, 13, 1620-1630.	8.8	1
8	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
9	A Fast and Accurate Transient Stability Assessment Method Based on Deep Learning: WECC Case Study. , 2022, , .		2
10	Joint Estimation of Behind-the-Meter Solar Generation in a Community. IEEE Transactions on Sustainable Energy, 2021, 12, 682-694.	8.8	46
11	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
12	Cyber-enabled grids: Shaping future energy systems. Advances in Applied Energy, 2021, 1, 100003.	13.2	30
13	Deep Reinforcement Learning Based Volt-VAR Optimization in Smart Distribution Systems. IEEE Transactions on Smart Grid, 2021, 12, 361-371.	9.0	122
14	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
15	Hardware-in-the-Loop Evaluation of an Advanced Distributed Energy Resource Management Algorithm. , 2021, , .		9
16	Analyzing the effects of cyberattacks on distribution system state estimation. , 2021, , .		2
17	A Generalized Copula-Polynomial Chaos Expansion for Probabilistic Power Flow Considering Nonlinear Correlations of PV Injections. , 2021, , .		4
18	Estimating spatial distribution impacts of rooftops solar PV on dynamic hosting capacity evaluation for a real distribution feeder. , 2021, , .		0

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19	The challenges of achieving a 100% renewable electricity system in the United States. <i>Joule</i> , 2021, 5, 1331-1352.	24.0	99
20	A Data-Driven Global Sensitivity Analysis Framework for Three-Phase Distribution System With PVs. <i>IEEE Transactions on Power Systems</i> , 2021, 36, 4809-4819.	6.5	17
21	Nonlinear Virtual Inertia Control of WTCs for Enhancing Primary Frequency Response and Suppressing Drivetrain Torsional Oscillations. <i>IEEE Transactions on Power Systems</i> , 2021, 36, 4102-4113.	6.5	30
22	On Analytical Construction of Observable Functions in Extended Dynamic Mode Decomposition for Nonlinear Estimation and Prediction. , 2021, 5, 1868-1873.		12
23	Extended Frequency Divider for Bus Frequency Estimation Considering Virtual Inertia from DFIGs. , 2021, , .		1
24	Deep Learning-Based Adaptive Remedial Action Scheme with Security Margin for Renewable-Dominated Power Grids. <i>Energies</i> , 2021, 14, 6563.	3.1	2
25	A Double-Signal Retail Pricing Scheme for Acquiring Operational Flexibility from Batteries. <i>IEEE Transactions on Sustainable Energy</i> , 2021, , 1-1.	8.8	2
26	Performance Evaluation of an Advanced Distributed Energy Resource Management Algorithm. , 2021, , .		2
27	Real-Time Identifiability of Power Distribution Network Topologies With Limited Monitoring. , 2020, 4, 325-330.		27
28	Matrix Completion for Low-Observability Voltage Estimation. <i>IEEE Transactions on Smart Grid</i> , 2020, 11, 2520-2530.	9.0	49
29	Zonal Inertia Constrained Generator Dispatch Considering Load Frequency Relief. <i>IEEE Transactions on Power Systems</i> , 2020, 35, 3065-3077.	6.5	17
30	Safeguarding the Grid: Diverse Resources for Resilience [In My View]. <i>IEEE Power and Energy Magazine</i> , 2020, 18, 90-92.	1.6	0
31	Optimal Energy Dispatch of Distributed PVs for the Next Generation of Distribution Management Systems. <i>IEEE Open Access Journal of Power and Energy</i> , 2020, 7, 287-295.	3.4	22
32	Optimal Renewable Resource Allocation and Load Scheduling of Resilient Communities. <i>Energies</i> , 2020, 13, 5683.	3.1	16
33	Robust Medium-Voltage Distribution System State Estimation using Multi-Source Data. , 2020, , .		12
34	Bayesian Structural Time Series for Behind-the-Meter Photovoltaic Disaggregation. , 2020, , .		3
35	A Data-Driven Game-Theoretic Approach for Behind-the-Meter PV Generation Disaggregation. <i>IEEE Transactions on Power Systems</i> , 2020, 35, 3133-3144.	6.5	66
36	Machine Learning-Based PV Reserve Determination Strategy for Frequency Control on the WECC System. , 2020, , .		6

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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	Machine Learning-Based Prediction of Distribution Network Voltage and Sensor Allocation. , 2020, , .		11
39	Developing a Reduced 240-Bus WECC Dynamic Model for Frequency Response Study of High Renewable Integration. , 2020, , .		15
40	Improving the Accuracy of Clustering Electric Utility Net Load Data using Dynamic Time Warping. , 2020, , .		3
41	Matrix Completion Using Alternating Minimization for Distribution System State Estimation. , 2020, , .		5
42	A Review on Artificial Intelligence for Grid Stability Assessment. , 2020, , .		28
43	Multi-Timescale Three-Phase Unbalanced Distribution System Operation With Variable Renewable Generations. IEEE Transactions on Smart Grid, 2019, 10, 4497-4507.	9.0	21
44	A Novel Event Detection Method Using PMU Data With High Precision. IEEE Transactions on Power Systems, 2019, 34, 454-466.	6.5	66
45	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
46	Generalized Graph Laplacian Based Anomaly Detection for Spatiotemporal MicroPMU Data. IEEE Transactions on Power Systems, 2019, 34, 3960-3963.	6.5	19
47	Equivalent Test Bed in PSCAD and PSLF for Studying Advanced Power Systems Controller Performance. , 2019, , .		3
48	Online Static Load Model Estimation in Distribution Systems. , 2019, , .		1
49	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
50	Robust Matrix Completion State Estimation in Distribution Systems. , 2019, , .		17
51	Pioneer Design of Non-contact Synchronized Measurement Devices Using Electric and Magnetic Field Sensors. , 2019, , .		0
52	A Hybrid Framework Combining Model-Based and Data-Driven Methods for Hierarchical Decentralized Robust Dynamic State Estimation. , 2019, , .		5
53	Estimation of Behind-the-Meter Solar Generation by Integrating Physical with Statistical Models. , 2019, , .		23
54	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

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55	Parallel dispatch: a new paradigm of electrical power system dispatch. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 311-319.	13.1	23
56	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
57	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
58	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
59	Coordinative Voltage Control Strategy with Multiple Resources for Distribution Systems of High PV Penetration. , 2018, , .		2
60	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
61	A Transparent Translation from Legacy System Model into Common Information Model. , 2018, , .		3
62	Leveraging Standards to Create an Open Platform for the Development of Advanced Distribution Applications. IEEE Access, 2018, 6, 37361-37370.	4.2	36
63	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
64	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
65	Consumption Behavior Analytics-Aided Energy Forecasting and Dispatch. IEEE Intelligent Systems, 2017, 32, 59-63.	4.0	20
66	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
67	Social energy: mining energy from the society. IEEE/CAA Journal of Automatica Sinica, 2017, 4, 466-482.	13.1	15
68	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
69	Three-phase AC optimal power flow based distribution locational marginal price. , 2017, , .		21
70	Chance-constrained day-ahead hourly scheduling in distribution system operation. , 2017, , .		2
71	Short-term state forecasting-based optimal voltage regulation in distribution systems. , 2017, , .		6
72	Load forecasting based distribution system network reconfiguration — A distributed data-driven approach. , 2017, , .		3

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73	Composite socio-technical systems: A method for social energy systems. , 2017, , .		1
74	Locational marginal pricing in the campus power system at the power distribution level. , 2016, , .		4
75	Security-oriented and load-balancing wireless data routing game in the integration of advanced metering infrastructure network in smart grid. , 2016, , .		1
76	Distribution locational real-time pricing based smart building control and management. , 2016, , .		5
77	Investigating the impact of wind turbines on distribution system stability. , 2016, , .		1
78	Short-term distribution system state forecast based on optimal synchrophasor sensor placement and extreme learning machine. , 2016, , .		16
79	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
80	Knowledge discovery for smart grid operation, control, and situation awareness " a big data visualization platform. , 2016, , .		15
81	Coordinated optimization of distributed energy resources and smart loads in distribution systems. , 2016, , .		3
82	Computational fluid dynamics simulation study of active power control in wind plants. , 2016, , .		38
83	Joint real-time energy and demand-response management using a hybrid coalitional-noncooperative game. , 2015, , .		4
84	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
85	Investigating the Impacts of Wind Generation Participation in Interconnection Frequency Response. IEEE Transactions on Sustainable Energy, 2015, 6, 1004-1012.	8.8	199
86	Spatial-temporal characterization of synchrophasor measurement systems " A big data approach for smart grid system situational awareness. , 2014, , .		9
87	Statistical scheduling of economic dispatch and energy reserves of hybrid power systems with high renewable energy penetration. , 2014, , .		12
88	Synchrophasor based auxiliary controller to enhance power system transient voltage stability in a high penetration renewable energy scenario. , 2014, , .		7
89	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
90	Phase angle-based power system inter-area oscillation detection and modal analysis. European Transactions on Electrical Power, 2011, 21, 1629-1639.	1.0	22

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91	Wide-Area Frequency Monitoring Network (FNET) Architecture and Applications. IEEE Transactions on Smart Grid, 2010, 1, 159-167.	9.0	376