Payman Dehghanian

List of Publications by Year
in descending order

135 papers	3,399 citations	147566 31 h-index	182168 51 g-index
135 all docs	135 docs citations	135 times ranked	2245 citing authors

#	Article	IF	Citations
1	Uncertainty Cost of Stochastic Producers: Metrics and Impacts on Power Grid Flexibility. IEEE Transactions on Engineering Management, 2022, 69, 708-719.	2.4	11
2	A linearized transmission expansion planning model under N â^' 1 criterion for enhancing gridâ€scale system flexibility via compressed air energy storage integration. IET Generation, Transmission and Distribution, 2022, 16, 208-218.	1.4	10
3	Voltage and energy control in distribution systems in the presence of flexible loads considering coordinated charging of electric vehicles. Energy, 2022, 239, 121880.	4.5	25
4	Enhancing Transient Stability of Distribution Networks With Massive Proliferation of Converter-Interfaced Distributed Generators. IEEE Systems Journal, 2022, 16, 1313-1324.	2.9	0
5	On Mitigation of Sub-Synchronous Control Interactions in Hybrid Generation Resources. IEEE Transactions on Industrial Informatics, 2022, 18, 4372-4382.	7.2	3
6	Distributed Intelligence for Online Situational Awareness in Power Grids. IEEE Transactions on Power Systems, 2022, 37, 2499-2515.	4.6	4
7	Iterative Machine Learning-Aided Framework Bridges Between Fatigue and Creep Damages in Solder Interconnections. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2022, 12, 349-358.	1.4	17
8	A Bi-Level Framework for Expansion Planning in Active Power Distribution Networks. IEEE Transactions on Power Systems, 2022, 37, 2639-2654.	4.6	18
9	Resilient Operation of Electric Power Distribution Grids Under Progressive Wildfires. IEEE Transactions on Industry Applications, 2022, 58, 1632-1643.	3.3	12
10	A Non-Isolated High Step-Up DC-DC Converter Using Voltage Lift Technique: Analysis, Design, and Implementation. IEEE Access, 2022, 10, 6338-6347.	2.6	39
11	Powering Through Wildfires: An Integrated Solution for Enhanced Safety and Resilience in Power Grids. IEEE Transactions on Industry Applications, 2022, 58, 4192-4202.	3.3	20
12	Optimal Operation of Integrated Waterâ€“Power Systems Under Contingencies. IEEE Transactions on Industry Applications, 2022, 58, 4350-4358.	3.3	3
13	Two-stage optimization of a virtual power plant incorporating with demand response and energy complementation. Energy Reports, 2022, 8, 7374-7385.	2.5	16
14	Modeling and Optimizing Recovery Strategies for Power Distribution System Resilience. IEEE Systems Journal, 2021, 15, 4725-4734.	2.9	24
15	Artificial Intelligence-Based Cyberâ€“Physical Events Classification for Islanding Detection in Power Inverters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5282-5293.	3.7	15
16	Enhancing electricity market flexibility by deploying ancillary services for flexible ramping product procurement. Electric Power Systems Research, 2021, 191, 106878.	2.1	8
17	An online method for MILP coâ€planning model of largeâ€scale transmission expansion planning and energy storage systems considering Nâ€1 criterion. IET Generation, Transmission and Distribution, 2021, 15, 664-677.	1.4	9
18	An FBWM-TOPSIS Approach to Identify Critical Feeders for Reliability Centered Maintenance in Power Distribution Systems. IEEE Systems Journal, 2021, 15, 3893-3901.	2.9	10

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19	Reliability Modeling of Multistate Degraded Power Electronic Converters With Simultaneous Exposure to Dependent Competing Failure Processes. IEEE Access, 2021, 9, 67096-67108.	2.6	10
20	Reliability Assessment of Conventional Isolated PWM DC-DC Converters. IEEE Access, 2021, 9, 46191-46200.	2.6	21
21	Decision-Making Tree Analysis for Industrial Load Classification in Demand Response Programs. IEEE Transactions on Industry Applications, 2021, 57, 26-35.	3.3	14
22	Mobilityâ€Asâ€Aâ€Service for Resilience Delivery in Power Distribution Systems. Production and Operations Management, 2021, 30, 2492-2521.	2.1	11
23	Monthly Electricity Consumption Forecasting: A Step-Reduction Strategy and Autoencoder Neural Network. IEEE Industry Applications Magazine, 2021, 27, 90-102.	0.3	5
24	Optimal integration of interconnected water and electricity networks. IET Generation, Transmission and Distribution, 2021, 15, 2033-2043.	1.4	6
25	Artificial Intelligence for Real-Time Topology Identification in Power Distribution Systems. , 2021, , .		2
26	Proof of humanity: A tax-aware society-centric consensus algorithm for Blockchains. Peer-to-Peer Networking and Applications, 2021, 14, 3634-3646.	2.6	6
27	Robust Model Predictive Control of DC-DC Floating Interleaved Boost Converter With Multiple Uncertainties. IEEE Transactions on Energy Conversion, 2021, 36, 1403-1412.	3.7	15
28	Uncertainty-Aware Deployment of Mobile Energy Storage Systems for Distribution Grid Resilience. IEEE Transactions on Smart Grid, 2021, 12, 3200-3214.	6.2	61
29	Sky Image Prediction Model Based on Convolutional Auto-Encoder for Minutely Solar PV Power Forecasting. IEEE Transactions on Industry Applications, 2021, 57, 3272-3281.	3.3	36
30	Operation and Design Consideration of an Ultrahigh Step-Up DCâ€“DC Converter Featuring High Power Density. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 6113-6123.	3.7	22
31	Examining community solar programs to understand accessibility and investment: Evidence from the U.S.. Energy Policy, 2021, 159, 112600.	4.2	5
32	Big Data and Deep Learning Analytics for Robust PV Power Forecast in Smart Grids. Green Energy and Technology, 2021, , 529-570.	0.4	0
33	Planning for resilience in power distribution networks: A multiâ€objective decision support. IET Smart Grid, 2021, 4, 45-60.	1.5	3
34	Thermal analysis of nonâ€isolated conventional PWMâ€based DCâ€“DC converters with reliability consideration. IET Power Electronics, 2021, 14, 337-351.	1.5	5
35	Greedy Clustering-based Monthly Electricity Consumption Forecasting Model. , 2021, , .		2
36	Coordination Framework for Integrated Operation of Water-Power Systems under Contingencies. , 2021, , .		3

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37	Resilience Enhancement of Electric Power Distribution Grids against Wildfires. , 2021, , .		6
38	An Energy Management System for Joint Operation of Small-Scale Wind Turbines and Electric Thermal Storage in Isolated Microgrids. , 2021, , .		6
39	Dynamic Uncertainty Set Characterization for Bulk Power Grid Flexibility Assessment. IEEE Systems Journal, 2020, 14, 718-728.	2.9	19
40	Energy Storage Planning for Enhanced Resilience of Power Distribution Networks Against Earthquakes. IEEE Transactions on Sustainable Energy, 2020, 11, 795-806.	5.9	144
41	Enhancing Power Grid Resilience Through an IEC61850-Based EV-Assisted Load Restoration. IEEE Transactions on Industrial Informatics, 2020, 16, 1799-1810.	7.2	41
42	Chance-Constrained Energy Management System for Power Grids With High Proliferation of Renewables and Electric Vehicles. IEEE Transactions on Smart Grid, 2020, 11, 2324-2336.	6.2	49
43	Comprehensive Analytics for Reliability Evaluation of Conventional Isolated Multiswitch PWM DCâ€“DC Converters. IEEE Transactions on Power Electronics, 2020, 35, 5254-5266.	5.4	26
44	A Machine Learning Approach to Detection of Geomagnetically Induced Currents in Power Grids. IEEE Transactions on Industry Applications, 2020, 56, 1098-1106.	3.3	22
45	Analysis and Reliability Evaluation of a High Step-Up Soft Switching Pushâ€“Pull DCâ€“DC Converter. IEEE Transactions on Reliability, 2020, 69, 1376-1386.	3.5	33
46	Power Grid Online Surveillance Through PMU-Embedded Convolutional Neural Networks. IEEE Transactions on Industry Applications, 2020, 56, 1146-1155.	3.3	31
47	Seismic-Resilient Bulk Power Grids: Hazard Characterization, Modeling, and Mitigation. IEEE Transactions on Engineering Management, 2020, 67, 614-630.	2.4	19
48	Aggregated Electric Vehicle Load Modeling in Large-Scale Electric Power Systems. IEEE Transactions on Industry Applications, 2020, 56, 5796-5810.	3.3	34
49	Swift Disaster Recovery for Resilient Power Grids: Integration of DERs with Mobile Power Sources. , 2020, , .		2
50	Auto-encoder Neural Network-Based Monthly Electricity Consumption Forecasting Method Using Hourly Data. , 2020, , .		7
51	On the Use of Artificial Intelligence for High Impedance Fault Detection and Electrical Safety. IEEE Transactions on Industry Applications, 2020, 56, 7208-7216.	3.3	49
52	Optimal Power Flow Models With Probabilistic Guarantees: A Boolean Approach. IEEE Transactions on Power Systems, 2020, 35, 4932-4935.	4.6	7
53	Correlation-driven machine learning for accelerated reliability assessment of solder joints in electronics. Scientific Reports, 2020, 10, 14821.	1.6	47
54	Multivariate Uncertainty Characterization for Resilience Planning in Electric Power Systems. , 2020, , .		0

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55	Electric Power Grids Under High-Absenteeism Pandemics: History, Context, Response, and Opportunities. IEEE Access, 2020, 8, 215727-215747.	2.6	10
56	Enhanced sensitivityâ€based decentralised framework for realâ€time transient stability assessment in bulk power grids with renewable energy resources. IET Generation, Transmission and Distribution, 2020, 14, 665-674.	1.4	6
57	Smart Householdsâ€™ Aggregated Capacity Forecasting for Load Aggregators Under Incentive-Based Demand Response Programs. IEEE Transactions on Industry Applications, 2020, 56, 1086-1097.	3.3	147
58	Seismic-Resilient Electric Power Distribution Systems: Harnessing the Mobility of Power Sources. IEEE Transactions on Industry Applications, 2020, 56, 2304-2313.	3.3	56
59	An enhanced sub-cycle statistical algorithm for inrush and fault currents classification in differential protection schemes. International Journal of Electrical Power and Energy Systems, 2020, 119, 105939.	3.3	19
60	Real- Time Detection of Critical Generators in Power Systems: A Deep Learning HCP Approach. , 2020, , .		8
61	Advanced bidding strategy for participation of energy storage systems in joint energy and flexible ramping product market. IET Generation, Transmission and Distribution, 2020, 14, 5202-5210.	1.4	22
62	Electric Power Grid Resilience to Cyber Adversaries: State of the Art. IEEE Access, 2020, 8, 87592-87608.	2.6	56
63	Joint Operation Optimization of the Interdependent Water and Electricity Networks. , 2020, , .		4
64	Toward Resilient Solar-Integrated Distribution Grids: Harnessing the Mobility of Power Sources. , 2020, , .		3
65	Convolutional Auto-encoder Based Sky Image Prediction Model for Minutely Solar PV Power Forecasting. , 2020, , .		1
66	A mathematical framework for reliability-centered maintenance in microgrids. International Transactions on Electrical Energy Systems, 2019, 29, e2691.	1.2	13
67	On Electrical Safety in Academic Laboratories. IEEE Transactions on Industry Applications, 2019, 55, 5613-5620.	3.3	8
68	Harnessing Ramp Capability of Spinning Reserve Services for Enhanced Power Grid Flexibility. IEEE Transactions on Industry Applications, 2019, 55, 7103-7112.	3.3	42
69	A Novel Multi-Resolution Wavelet Transform for Online Power Grid Waveform Classification. , 2019, , .		6
70	Advanced control solutions for enhanced resilience of modern power-electronic-interfaced distribution systems. Journal of Modern Power Systems and Clean Energy, 2019, 7, 716-730.	3.3	25
71	Power Grid Optimal Topology Control Considering Correlations of System Uncertainties. , 2019, , .		6
72	Electrical Safety Considerations in Large-Scale Electric Vehicle Charging Stations. IEEE Transactions on Industry Applications, 2019, 55, 6603-6612.	3.3	126

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73	Electrical Safety of Academic Laboratories. , 2019, , .		2
74	Resilience-Assured Protective Control of DC/AC Inverters Under Unbalanced and Fault Scenarios. , 2019, , .		4
75	Power Grid Optimal Topology Control Considering Correlations of System Uncertainties. IEEE Transactions on Industry Applications, 2019, 55, 5594-5604.	3.3	20
76	A Mixed-Integer Distributionally Robust Chance-Constrained Model for Optimal Topology Control in Power Grids with Uncertain Renewables. , 2019, , .		14
77	Stochastic robust optimization for smart grid considering various arbitrage opportunities. Electric Power Systems Research, 2019, 174, 105847.	2.1	14
78	New Protection Schemes in Smarter Power Grids With Higher Penetration of Renewable Energy Systems. , 2019, , 317-342.		12
79	PMU Multilevel End-to-End Testing to Assess Synchrophasor Measurements During Faults. IEEE Power and Energy Technology Systems Journal, 2019, 6, 71-80.	3.5	10
80	Broadcast Gossip Algorithms for Distributed Peer-to-Peer Control in AC Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 2241-2251.	3.3	72
81	Power Grid Resilience to Electromagnetic Pulse (EMP) Disturbances: A Literature Review. , 2019, , .		13
82	Smart Households' Available Aggregated Capacity Day-ahead Forecast Model for Load Aggregators under Incentive-based Demand Response Program. , 2019, , .		7
83	A Machine Learning Approach to Detection of Geomagnetically Induced Currents in Power Grids. , 2019, , .		7
84	A Data-Driven Algorithm for Online Power Grid Topology Change Identification with PMUs. , 2019, , .		7
85	Distributed Wind Power Resources for Enhanced Power Grid Resilience. , 2019, , .		11
86	Power Grid Online Surveillance through PMU-Embedded Convolutional Neural Networks. , 2019, , .		10
87	Enhancing Seismic Resilience of Electric Power Distribution Systems with Mobile Power Sources. , 2019, , .		17
88	Adaptive Operation Strategies for Electric Vehicle Charging Stations. , 2019, , .		4
89	Real-Time Life-Cycle Assessment of High-Voltage Circuit Breakers for Maintenance Using Online Condition Monitoring Data. IEEE Transactions on Industry Applications, 2019, 55, 1135-1146.	3.3	26
90	Optimal Allocation of PV Generation and Battery Storage for Enhanced Resilience. IEEE Transactions on Smart Grid, 2019, 10, 535-545.	6.2	149

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91	Predictive Risk Analytics for Weather-Resilient Operation of Electric Power Systems. IEEE Transactions on Sustainable Energy, 2019, 10, 3-15.	5.9	62
92	A New Multiattribute Decision Making Support Tool for Identifying Critical Components in Power Transmission Systems. IEEE Systems Journal, 2018, 12, 316-327.	2.9	28
93	Long-Term Maintenance Scheduling and Budgeting in Electricity Distribution Systems Equipped With Automatic Switches. IEEE Transactions on Industrial Informatics, 2018, 14, 1909-1919.	7.2	37
94	Maintaining Electric System Safety Through An Enhanced Network Resilience. IEEE Transactions on Industry Applications, 2018, 54, 4927-4937.	3.3	87
95	Electric Vehicles Contributions to Voltage Improvement and Loss Reduction in Microgrids. , 2018, , .		7
96	A Synchrophasor-Based Decision Tree Approach for Identification of Most Coherent Generating Units. , 2018, , .		8
97	Reduction of Output Power Pulsations for Electric Vehicles by Changing Distances between Transmitter Coils. , 2018, , .		7
98	A Game-Theoretic Loss Allocation Approach in Power Distribution Systems with High Penetration of Distributed Generations. Mathematics, 2018, 6, 158.	1.1	8
99	New reward and penalty scheme for electric distribution utilities employing loadâ€based reliability indices. IET Generation, Transmission and Distribution, 2018, 12, 3647-3654.	1.4	25
100	Real-time life-cycle assessment of circuit breakers for maintenance using online condition monitoring data. , 2018, , .		2
101	Predicting Spatiotemporal Impacts of Weather on Power Systems Using Big Data Science. Studies in Big Data, 2017, , 265-299.	0.8	8
102	Application of Game Theory in Reliability-Centered Maintenance of Electric Power Systems. IEEE Transactions on Industry Applications, 2017, 53, 936-946.	3.3	39
103	Quantifying power system resiliency improvement using network reconfiguration. , 2017, , .		36
104	Probabilistic assessment of PMU integrity for planning of periodic maintenance and testing. , 2016, , .		16
105	Spatial-temporal solar power forecast through use of Gaussian Conditional Random Fields. , 2016, , .		10
106	Analysis of PMU algorithm errors during fault transients and out-of-step disturbances. , 2016, , .		17
107	Identification of critical generating units for maintenance: a game theory approach. IET Generation, Transmission and Distribution, 2016, 10, 2942-2952.	1.4	16
108	Probabilistic impact of transmission line switching on power system operating states. , 2016, , .		7

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109	Practical multiâ€area biâ€objective environmental economic dispatch equipped with a hybrid gradient search method and improved Jaya algorithm. IET Generation, Transmission and Distribution, 2016, 10, 3580-3596.	1.4	48
110	Impact of the errors in the PMU response on synchrophasor-based fault location algorithms. , 2016, , .		8
111	Identification of critical components in power systems: A game theory application. , 2016, , .		9
112	Identifying critical components of combined cycle power plants for implementation of reliability-centered maintenance. CSEE Journal of Power and Energy Systems, 2016, 2, 87-97.	1.7	28
113	Reliability modeling and availability analysis of combined cycle power plants. International Journal of Electrical Power and Energy Systems, 2016, 79, 108-119.	3.3	66
114	Risk Assessment of a Transmission Line Insulation Breakdown Due to Lightning and Severe Weather. , 2016, , .		16
115	Probabilistic Decision Making for the Bulk Power System Optimal Topology Control. IEEE Transactions on Smart Grid, 2016, 7, 2071-2081.	6.2	36
116	Identifying critical components for reliability centred maintenance management of deregulated power systems. IET Generation, Transmission and Distribution, 2015, 9, 828-837.	1.4	37
117	Impact assessment of transmission line switching on system reliability performance. , 2015, , .		11
118	Flexible implementation of power system corrective topology control. Electric Power Systems Research, 2015, 128, 79-89.	2.1	35
119	Optimized Probabilistic PHEVs Demand Management in the Context of Energy Hubs. IEEE Transactions on Power Delivery, 2015, 30, 996-1006.	2.9	91
120	Circuit breaker operational health assessment via condition monitoring data. , 2014, , .		14
121	A practical application of the Delphi method in maintenance-targeted resource allocation of distribution utilities. , 2014, , .		10
122	Multiagent Genetic Algorithm: An Online Probabilistic View on Economic Dispatch of Energy Hubs Constrained by Wind Availability. IEEE Transactions on Sustainable Energy, 2014, 5, 699-708.	5.9	168
123	Security-based circuit breaker maintenance management. , 2013, , .		15
124	Cost/benefit analysis for circuit breaker maintenance planning and scheduling. , 2013, , .		11
125	PHEVs centralized/decentralized charging control mechanisms: Requirements and impacts. , 2013, , .		16
126	Optimal siting of DG units in power systems from a probabilistic multi-objective optimization perspective. International Journal of Electrical Power and Energy Systems, 2013, 51, 14-26.	3.3	72

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127	A Comprehensive Scheme for Reliability Centered Maintenance in Power Distribution Systemsâ€”Part I: Methodology. IEEE Transactions on Power Delivery, 2013, 28, 761-770.	2.9	107
128	A Comprehensive Scheme for Reliability-Centered Maintenance in Power Distribution Systemsâ€”Part II: Numerical Analysis. IEEE Transactions on Power Delivery, 2013, 28, 771-778.	2.9	57
129	Assessing circuit breaker life cycle using condition-based data. , 2013, , .		6
130	The impact of dispersed PV generation on ramp rate requirements. , 2012, , .		1
131	Critical Component Identification in Reliability Centered Asset Management of Power Distribution Systems Via Fuzzy AHP. IEEE Systems Journal, 2012, 6, 593-602.	2.9	139
132	Optimal RTU placement in power distribution systems using a novel method based on analytical hierarchical process (AHP). , 2011, , .		4
133	A probabilistic approach for remote terminal unit placement in power distribution systems. , 2011, , .		1
134	Incorporating experts knowledge in RTU placement procedure using fuzzy sets theory-a practical approach. , 2011, , .		3
135	Priceâ€based unit commitment with decisionâ€dependent uncertainty in hourly demand. IET Smart Grid, 0, , .	1.5	0