

# Payman Dehghanian

## List of Publications by Year in descending order

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135  
papers

3,399  
citations

147566  
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182168  
51  
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all docs

135  
docs citations

135  
times ranked

2245  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Optimal Allocation of PV Generation and Battery Storage for Enhanced Resilience. IEEE Transactions on Smart Grid, 2019, 10, 535-545.	6.2	149
3	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
4	Energy Storage Planning for Enhanced Resilience of Power Distribution Networks Against Earthquakes. IEEE Transactions on Sustainable Energy, 2020, 11, 795-806.	5.9	144
5	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
6	Electrical Safety Considerations in Large-Scale Electric Vehicle Charging Stations. IEEE Transactions on Industry Applications, 2019, 55, 6603-6612.	3.3	126
7	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
8	Optimized Probabilistic PHEVs Demand Management in the Context of Energy Hubs. IEEE Transactions on Power Delivery, 2015, 30, 996-1006.	2.9	91
9	Maintaining Electric System Safety Through An Enhanced Network Resilience. IEEE Transactions on Industry Applications, 2018, 54, 4927-4937.	3.3	87
10	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
11	Broadcast Gossip Algorithms for Distributed Peer-to-Peer Control in AC Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 2241-2251.	3.3	72
12	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
13	Predictive Risk Analytics for Weather-Resilient Operation of Electric Power Systems. IEEE Transactions on Sustainable Energy, 2019, 10, 3-15.	5.9	62
14	Uncertainty-Aware Deployment of Mobile Energy Storage Systems for Distribution Grid Resilience. IEEE Transactions on Smart Grid, 2021, 12, 3200-3214.	6.2	61
15	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
16	Seismic-Resilient Electric Power Distribution Systems: Harnessing the Mobility of Power Sources. IEEE Transactions on Industry Applications, 2020, 56, 2304-2313.	3.3	56
17	Electric Power Grid Resilience to Cyber Adversaries: State of the Art. IEEE Access, 2020, 8, 87592-87608.	2.6	56
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	Practical multi-area bi-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
21	Correlation-driven machine learning for accelerated reliability assessment of solder joints in electronics. Scientific Reports, 2020, 10, 14821.	1.6	47
22	Harnessing Ramp Capability of Spinning Reserve Services for Enhanced Power Grid Flexibility. IEEE Transactions on Industry Applications, 2019, 55, 7103-7112.	3.3	42
23	Enhancing Power Grid Resilience Through an IEC61850-Based EV-Assisted Load Restoration. IEEE Transactions on Industrial Informatics, 2020, 16, 1799-1810.	7.2	41
24	Application of Game Theory in Reliability-Centered Maintenance of Electric Power Systems. IEEE Transactions on Industry Applications, 2017, 53, 936-946.	3.3	39
25	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
26	Identifying critical components for reliability centred maintenance management of deregulated power systems. IET Generation, Transmission and Distribution, 2015, 9, 828-837.	1.4	37
27	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
28	Probabilistic Decision Making for the Bulk Power System Optimal Topology Control. IEEE Transactions on Smart Grid, 2016, 7, 2071-2081.	6.2	36
29	Quantifying power system resiliency improvement using network reconfiguration. , 2017, , .		36
30	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
31	Flexible implementation of power system corrective topology control. Electric Power Systems Research, 2015, 128, 79-89.	2.1	35
32	Aggregated Electric Vehicle Load Modeling in Large-Scale Electric Power Systems. IEEE Transactions on Industry Applications, 2020, 56, 5796-5810.	3.3	34
33	Analysis and Reliability Evaluation of a High Step-Up Soft Switching Push-Pull DC-DC Converter. IEEE Transactions on Reliability, 2020, 69, 1376-1386.	3.5	33
34	Power Grid Online Surveillance Through PMU-Embedded Convolutional Neural Networks. IEEE Transactions on Industry Applications, 2020, 56, 1146-1155.	3.3	31
35	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
36	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

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37	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
38	Comprehensive Analytics for Reliability Evaluation of Conventional Isolated Multiswitch PWM DC-DC Converters. IEEE Transactions on Power Electronics, 2020, 35, 5254-5266.	5.4	26
39	New reward and penalty scheme for electric distribution utilities employing load-based reliability indices. IET Generation, Transmission and Distribution, 2018, 12, 3647-3654.	1.4	25
40	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
41	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
42	Modeling and Optimizing Recovery Strategies for Power Distribution System Resilience. IEEE Systems Journal, 2021, 15, 4725-4734.	2.9	24
43	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
44	Operation and Design Consideration of an Ultrahigh Step-Up DC-DC Converter Featuring High Power Density. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 6113-6123.	3.7	22
45	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
46	Reliability Assessment of Conventional Isolated PWM DC-DC Converters. IEEE Access, 2021, 9, 46191-46200.	2.6	21
47	Power Grid Optimal Topology Control Considering Correlations of System Uncertainties. IEEE Transactions on Industry Applications, 2019, 55, 5594-5604.	3.3	20
48	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
49	Dynamic Uncertainty Set Characterization for Bulk Power Grid Flexibility Assessment. IEEE Systems Journal, 2020, 14, 718-728.	2.9	19
50	Seismic-Resilient Bulk Power Grids: Hazard Characterization, Modeling, and Mitigation. IEEE Transactions on Engineering Management, 2020, 67, 614-630.	2.4	19
51	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
52	A Bi-Level Framework for Expansion Planning in Active Power Distribution Networks. IEEE Transactions on Power Systems, 2022, 37, 2639-2654.	4.6	18
53	Analysis of PMU algorithm errors during fault transients and out-of-step disturbances. , 2016, , .		17
54	Enhancing Seismic Resilience of Electric Power Distribution Systems with Mobile Power Sources. , 2019, , .		17

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55	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
56	PHEVs centralized/decentralized charging control mechanisms: Requirements and impacts. , 2013, , .		16
57	Probabilistic assessment of PMU integrity for planning of periodic maintenance and testing. , 2016, , .		16
58	Identification of critical generating units for maintenance: a game theory approach. IET Generation, Transmission and Distribution, 2016, 10, 2942-2952.	1.4	16
59	Risk Assessment of a Transmission Line Insulation Breakdown Due to Lightning and Severe Weather. , 2016, , .		16
60	Two-stage optimization of a virtual power plant incorporating with demand response and energy complementation. Energy Reports, 2022, 8, 7374-7385.	2.5	16
61	Security-based circuit breaker maintenance management. , 2013, , .		15
62	Artificial Intelligence-Based Cyber-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
63	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
64	Circuit breaker operational health assessment via condition monitoring data. , 2014, , .		14
65	A Mixed-Integer Distributionally Robust Chance-Constrained Model for Optimal Topology Control in Power Grids with Uncertain Renewables. , 2019, , .		14
66	Stochastic robust optimization for smart grid considering various arbitrage opportunities. Electric Power Systems Research, 2019, 174, 105847.	2.1	14
67	Decision-Making Tree Analysis for Industrial Load Classification in Demand Response Programs. IEEE Transactions on Industry Applications, 2021, 57, 26-35.	3.3	14
68	A mathematical framework for reliability-centered maintenance in microgrids. International Transactions on Electrical Energy Systems, 2019, 29, e2691.	1.2	13
69	Power Grid Resilience to Electromagnetic Pulse (EMP) Disturbances: A Literature Review. , 2019, , .		13
70	New Protection Schemes in Smarter Power Grids With Higher Penetration of Renewable Energy Systems. , 2019, , 317-342.		12
71	Resilient Operation of Electric Power Distribution Grids Under Progressive Wildfires. IEEE Transactions on Industry Applications, 2022, 58, 1632-1643.	3.3	12
72	Cost/benefit analysis for circuit breaker maintenance planning and scheduling. , 2013, , .		11

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73	Impact assessment of transmission line switching on system reliability performance. , 2015, , .		11
74	Distributed Wind Power Resources for Enhanced Power Grid Resilience. , 2019, , .		11
75	Uncertainty Cost of Stochastic Producers: Metrics and Impacts on Power Grid Flexibility. IEEE Transactions on Engineering Management, 2022, 69, 708-719.	2.4	11
76	Mobility-As-A-Service for Resilience Delivery in Power Distribution Systems. Production and Operations Management, 2021, 30, 2492-2521.	2.1	11
77	A practical application of the Delphi method in maintenance-targeted resource allocation of distribution utilities. , 2014, , .		10
78	Spatial-temporal solar power forecast through use of Gaussian Conditional Random Fields. , 2016, , .		10
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	Power Grid Online Surveillance through PMU-Embedded Convolutional Neural Networks. , 2019, , .		10
81	Electric Power Grids Under High-Absenteeism Pandemics: History, Context, Response, and Opportunities. IEEE Access, 2020, 8, 215727-215747.	2.6	10
82	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
83	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
84	A linearized transmission expansion planning model under $\lambda^1$ criterion for enhancing grid-scale system flexibility via compressed air energy storage integration. IET Generation, Transmission and Distribution, 2022, 16, 208-218.	1.4	10
85	Identification of critical components in power systems: A game theory application. , 2016, , .		9
86	An online method for MILP co-optimization model of large-scale transmission expansion planning and energy storage systems considering $\lambda^1$ criterion. IET Generation, Transmission and Distribution, 2021, 15, 664-677.	1.4	9
87	Impact of the errors in the PMU response on synchrophasor-based fault location algorithms. , 2016, , .		8
88	Predicting Spatiotemporal Impacts of Weather on Power Systems Using Big Data Science. Studies in Big Data, 2017, , 265-299.	0.8	8
89	A Synchrophasor-Based Decision Tree Approach for Identification of Most Coherent Generating Units. , 2018, , .		8
90	A Game-Theoretic Loss Allocation Approach in Power Distribution Systems with High Penetration of Distributed Generations. Mathematics, 2018, 6, 158.	1.1	8

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91	On Electrical Safety in Academic Laboratories. IEEE Transactions on Industry Applications, 2019, 55, 5613-5620.	3.3	8
92	Real-Time Detection of Critical Generators in Power Systems: A Deep Learning HCP Approach. , 2020, , .		8
93	Enhancing electricity market flexibility by deploying ancillary services for flexible ramping product procurement. Electric Power Systems Research, 2021, 191, 106878.	2.1	8
94	Probabilistic impact of transmission line switching on power system operating states. , 2016, , .		7
95	Electric Vehicles Contributions to Voltage Improvement and Loss Reduction in Microgrids. , 2018, , .		7
96	Reduction of Output Power Pulsations for Electric Vehicles by Changing Distances between Transmitter Coils. , 2018, , .		7
97	Smart Households' Available Aggregated Capacity Day-ahead Forecast Model for Load Aggregators under Incentive-based Demand Response Program. , 2019, , .		7
98	A Machine Learning Approach to Detection of Geomagnetically Induced Currents in Power Grids. , 2019, , .		7
99	A Data-Driven Algorithm for Online Power Grid Topology Change Identification with PMUs. , 2019, , .		7
100	Auto-encoder Neural Network-Based Monthly Electricity Consumption Forecasting Method Using Hourly Data. , 2020, , .		7
101	Optimal Power Flow Models With Probabilistic Guarantees: A Boolean Approach. IEEE Transactions on Power Systems, 2020, 35, 4932-4935.	4.6	7
102	Assessing circuit breaker life cycle using condition-based data. , 2013, , .		6
103	A Novel Multi-Resolution Wavelet Transform for Online Power Grid Waveform Classification. , 2019, , .		6
104	Power Grid Optimal Topology Control Considering Correlations of System Uncertainties. , 2019, , .		6
105	Enhanced sensitivity-based decentralised framework for real-time transient stability assessment in bulk power grids with renewable energy resources. IET Generation, Transmission and Distribution, 2020, 14, 665-674.	1.4	6
106	Optimal integration of interconnected water and electricity networks. IET Generation, Transmission and Distribution, 2021, 15, 2033-2043.	1.4	6
107	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
108	Resilience Enhancement of Electric Power Distribution Grids against Wildfires. , 2021, , .		6

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109	An Energy Management System for Joint Operation of Small-Scale Wind Turbines and Electric Thermal Storage in Isolated Microgrids. , 2021, , .		6
110	Monthly Electricity Consumption Forecasting: A Step-Reduction Strategy and Autoencoder Neural Network. IEEE Industry Applications Magazine, 2021, 27, 90-102.	0.3	5
111	Examining community solar programs to understand accessibility and investment: Evidence from the U.S.. Energy Policy, 2021, 159, 112600.	4.2	5
112	Thermal analysis of non-isolated conventional PWM-based DC-DC converters with reliability consideration. IET Power Electronics, 2021, 14, 337-351.	1.5	5
113	Optimal RTU placement in power distribution systems using a novel method based on analytical hierarchical process (AHP). , 2011, , .		4
114	Resilience-Assured Protective Control of DC/AC Inverters Under Unbalanced and Fault Scenarios. , 2019, , .		4
115	Adaptive Operation Strategies for Electric Vehicle Charging Stations. , 2019, , .		4
116	Joint Operation Optimization of the Interdependent Water and Electricity Networks. , 2020, , .		4
117	Distributed Intelligence for Online Situational Awareness in Power Grids. IEEE Transactions on Power Systems, 2022, 37, 2499-2515.	4.6	4
118	Incorporating experts knowledge in RTU placement procedure using fuzzy sets theory-a practical approach. , 2011, , .		3
119	Planning for resilience in power distribution networks: A multi-objective decision support. IET Smart Grid, 2021, 4, 45-60.	1.5	3
120	On Mitigation of Sub-Synchronous Control Interactions in Hybrid Generation Resources. IEEE Transactions on Industrial Informatics, 2022, 18, 4372-4382.	7.2	3
121	Toward Resilient Solar-Integrated Distribution Grids: Harnessing the Mobility of Power Sources. , 2020, , .		3
122	Coordination Framework for Integrated Operation of Water-Power Systems under Contingencies. , 2021, , .		3
123	Optimal Operation of Integrated Water-Power Systems Under Contingencies. IEEE Transactions on Industry Applications, 2022, 58, 4350-4358.	3.3	3
124	Real-time life-cycle assessment of circuit breakers for maintenance using online condition monitoring data. , 2018, , .		2
125	Electrical Safety of Academic Laboratories. , 2019, , .		2
126	Swift Disaster Recovery for Resilient Power Grids: Integration of DERs with Mobile Power Sources. , 2020, , .		2



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127	Artificial Intelligence for Real-Time Topology Identification in Power Distribution Systems. , 2021, , .		2
128	Greedy Clustering-based Monthly Electricity Consumption Forecasting Model. , 2021, , .		2
129	A probabilistic approach for remote terminal unit placement in power distribution systems. , 2011, , .		1
130	The impact of dispersed PV generation on ramp rate requirements. , 2012, , .		1
131	Convolutional Auto-encoder Based Sky Image Prediction Model for Minutely Solar PV Power Forecasting. , 2020, , .		1
132	Multivariate Uncertainty Characterization for Resilience Planning in Electric Power Systems. , 2020, , .		0
133	Price-based unit commitment with decision-dependent uncertainty in hourly demand. IET Smart Grid, 0, , .	1.5	0
134	Big Data and Deep Learning Analytics for Robust PV Power Forecast in Smart Grids. Green Energy and Technology, 2021, , 529-570.	0.4	0
135	Enhancing Transient Stability of Distribution Networks With Massive Proliferation of Converter-Interfaced Distributed Generators. IEEE Systems Journal, 2022, 16, 1313-1324.	2.9	0