

Timothy M Hansen

List of Publications by Year in descending order

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57
papers

1,143
citations

623188

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docs citations

57
times ranked

1146
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiarea Inertia Estimation Using Convolutional Neural Networks and Federated Learning. IEEE Systems Journal, 2022, 16, 6401-6412.	2.9	13
2	A Fast and Scalable Transmission Switching Algorithm for Boosting Resilience of Electric Grids Impacted by Extreme Weather Events. IEEE Access, 2022, 10, 57893-57901.	2.6	3
3	Optimization-Based Fast-Frequency Estimation and Control of Low-Inertia Microgrids. IEEE Transactions on Energy Conversion, 2021, 36, 1459-1468.	3.7	18
4	Review of Methods to Accelerate Electromagnetic Transient Simulation of Power Systems. IEEE Access, 2021, 9, 89714-89731.	2.6	25
5	Real-Time Estimation of Microgrid Inertia and Damping Constant. IEEE Access, 2021, 9, 114523-114534.	2.6	13
6	Review of Dynamic and Transient Modeling of Power Electronic Converters for Converter Dominated Power Systems. IEEE Access, 2021, 9, 82094-82117.	2.6	29
7	A data-driven approach to estimate emissions for market-based power system test cases. IET Smart Grid, 2021, 4, 429-444.	1.5	0
8	Evaluation of Probing Signals for Implementing Moving Horizon Inertia Estimation in Microgrids. , 2021, , .		6
9	Convolutional Neural Network-based Inertia Estimation using Local Frequency Measurements. , 2021, , .		7
10	An aggregator-based resource allocation in the smart grid using an artificial neural network and sliding time window optimization. IET Smart Grid, 2021, 4, 612-622.	1.5	4
11	A Computationally Improved Heuristic Algorithm for Transmission Switching Using Line Flow Thresholds for Load Shed Reduction. , 2021, , .		5
12	The LSBmax algorithm for boosting resilience of electric grids post (N ²) contingencies. Journal of Engineering, 2021, 2021, 807-816.	0.6	3
13	A Real-World Test Distribution System With Appliance-Level Load Data for Demand Response and Transactive Energy Studies. IEEE Access, 2021, 9, 149506-149519.	2.6	4
14	Computationally Efficient Partitioned Modeling of Inverter Dynamics with Grid Support Functions. , 2021, , .		1
15	Model Development of Diesel Generator using Volts/Hertz Limiter and Comparing Governor Models for Remote Islanded Microgrids. , 2021, , .		1
16	Quantifying the Impact of Solar Photovoltaic and Energy Storage Assets on the Performance of a Residential Energy Aggregator. IEEE Transactions on Sustainable Energy, 2020, 11, 405-414.	5.9	27
17	A Hierarchical Control Framework With a Novel Bidding Scheme for Residential Community Energy Optimization. IEEE Transactions on Smart Grid, 2020, 11, 710-719.	6.2	21
18	Techno-Economic Analysis of PV Inverter Controllers for Preventing Overvoltage in LV Grids. , 2020, , .		4

#	ARTICLE	IF	CITATIONS
19	Inertia Estimation in Power Systems using Energy Storage and System Identification Techniques. , 2020, , .		3
20	Synthetic residential load models for smart city energy management simulations. IET Smart Grid, 2020, 3, 342-354.	1.5	9
21	Modeling Hydro Power System Frequency Dynamics for Virtual Inertia Emulation. , 2019, , .		1
22	A Framework for Large-Scale Incentive-Based Residential Demand Response using Aggregators. , 2019, , .		2
23	Model Predictive Frequency Control of Low Inertia Microgrids. , 2019, , .		22
24	Impact of Residential Load Models for Overvoltage Prevention Studies in PV-Rich LV Grids. , 2019, , .		4
25	An Application of Machine Learning for a Smart Grid Resource Allocation Problem. , 2019, , .		6
26	Parallel Implementation of AC Optimal Power Flow and Time Constrained Optimal Power Flow using High Performance Computing. , 2019, , .		3
27	Energy Storage Systems in Emerging Electricity Markets: Frequency Regulation and Resiliency. , 2019, , .		3
28	Sustainability Metrics for Inverter-based Voltage Regulation Methods in PV-rich Low Voltage Grids. , 2019, , .		1
29	A Multi-Stage Price Forecasting Model for Day-Ahead Electricity Markets. Forecasting, 2019, 1, 26-46.	1.6	28
30	A Partially Observable Markov Decision Process Approach to Residential Home Energy Management. IEEE Transactions on Smart Grid, 2018, 9, 1271-1281.	6.2	56
31	Benefits of a Demand Response Exchange Participating in Existing Bulk-Power Markets. Energies, 2018, 11, 3361.	1.6	19
32	Incentive-based Residential Energy Optimization Considering Comfort and Voltage Impacts. , 2018, , .		2
33	Market-based generator cost functions for power system test cases. IET Cyber-Physical Systems: Theory and Applications, 2018, 3, 194-205.	1.9	13
34	Advances in data center energy optimization [panel discussion]. , 2018, , .		0
35	Efficiency and Reliability Analyses of AC and 380 V DC Distribution in Data Centers. IEEE Access, 2018, 6, 63305-63315.	2.6	42
36	Frequency Response in Grids with High Penetration of Renewable Energy Sources. , 2018, , .		12

#	ARTICLE	IF	CITATIONS
37	Comparative Analysis of Current Control Techniques to Support Virtual Inertia Applications. Applied Sciences (Switzerland), 2018, 8, 2695.	1.3	19
38	Classification of generators participating in the bulk-power market. , 2017, , .		4
39	IGMS: An Integrated ISO-to-Appliance Scale Grid Modeling System. IEEE Transactions on Smart Grid, 2017, 8, 1525-1534.	6.2	44
40	Adaptive droop-based active power curtailment method for overvoltage prevention in low voltage distribution network. , 2017, , .		4
41	Metrics-Based Assessment of Sustainability in Demand Response. , 2017, , .		6
42	Virtual Inertia: Current Trends and Future Directions. Applied Sciences (Switzerland), 2017, 7, 654.	1.3	410
43	VPSfAV: A computational tool to aid the teaching of protection systems. , 2017, , .		0
44	Classifying day-ahead electricity markets using pattern recognition for demand response. , 2016, , .		1
45	Cascading failures and transient stability experiment analysis in power grid security. , 2016, , .		9
46	Energy storage system operation: Case studies in deterministic and stochastic environments. , 2016, , .		7
47	Reliability analysis of 380V DC distribution in data centers. , 2016, , .		13
48	Current control techniques for applications in virtual synchronous machines. , 2016, , .		4
49	Energy management of remote microgrids considering battery lifetime. Electricity Journal, 2016, 29, 1-10.	1.3	69
50	Spatial-temporal stochasticity of electric vehicles in an integrated traffic and power system. , 2016, , .		5
51	Distribution feeder impacts of electric vehicles charging in an integrated traffic and power network. , 2016, , .		3
52	Economic analysis of a data center virtual power plant participating in demand response. , 2016, , .		7
53	Efficiency analysis of AC coupled and DC coupled microgrids considering load profile variations. , 2016, , .		9
54	Enabling Smart Grid Cosimulation Studies: Rapid Design and Development of the Technologies and Controls. IEEE Electrification Magazine, 2016, 4, 25-32.	1.8	7

#	ARTICLE	IF	CITATIONS
55	Bus.py: A GridLAB-D communication interface for Smart distribution Grid simulations. , 2015, , .		17
56	A Load Scheduling Algorithm for the Smart Home Using Customer Preferences and Real Time Residential Prices. IFAC-PapersOnLine, 2015, 48, 126-131.	0.5	6
57	Heuristic Optimization for an Aggregator-Based Resource Allocation in the Smart Grid. IEEE Transactions on Smart Grid, 2015, 6, 1785-1794.	6.2	89