

Steven H Low

List of Publications by Year in descending order

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126
papers

12,993
citations

109264

35
h-index

123376

61
g-index

126
all docs

126
docs citations

126
times ranked

6703
citing authors

#	ARTICLE	IF	CITATIONS
1	Layering as Optimization Decomposition: A Mathematical Theory of Network Architectures. Proceedings of the IEEE, 2007, 95, 255-312.	16.4	1,065
2	Branch Flow Model: Relaxations and Convexificationâ€™Part I. IEEE Transactions on Power Systems, 2013, 28, 2554-2564.	4.6	966
3	Zero Duality Gap in Optimal Power Flow Problem. IEEE Transactions on Power Systems, 2012, 27, 92-107.	4.6	917
4	A Survey of Distributed Optimization and Control Algorithms for Electric Power Systems. IEEE Transactions on Smart Grid, 2017, 8, 2941-2962.	6.2	786
5	Optimal decentralized protocol for electric vehicle charging. IEEE Transactions on Power Systems, 2013, 28, 940-951.	4.6	772
6	Convex Relaxation of Optimal Power Flowâ€™Part I: Formulations and Equivalence. IEEE Transactions on Control of Network Systems, 2014, 1, 15-27.	2.4	731
7	Optimal demand response based on utility maximization in power networks. , 2011, , .		658
8	FAST TCP: Motivation, Architecture, Algorithms, Performance. IEEE/ACM Transactions on Networking, 2006, 14, 1246-1259.	2.6	643
9	Convex Relaxation of Optimal Power Flowâ€™Part II: Exactness. IEEE Transactions on Control of Network Systems, 2014, 1, 177-189.	2.4	404
10	Exact Convex Relaxation of Optimal Power Flow in Radial Networks. IEEE Transactions on Automatic Control, 2015, 60, 72-87.	3.6	369
11	Design and Stability of Load-Side Primary Frequency Control in Power Systems. IEEE Transactions on Automatic Control, 2014, 59, 1177-1189.	3.6	367
12	Convex relaxations and linear approximation for optimal power flow in multiphase radial networks. , 2014, , .		257
13	Optimal inverter VAR control in distribution systems with high PV penetration. , 2012, , .		237
14	Inverter VAR control for distribution systems with renewables. , 2011, , .		222
15	Two Market Models for Demand Response in Power Networks. , 2010, , .		220
16	Branch Flow Model: Relaxations and Convexificationâ€™Part II. IEEE Transactions on Power Systems, 2013, 28, 2565-2572.	4.6	195
17	ACN-Data. , 2019, , .		169
18	Equilibrium and dynamics of local voltage control in distribution systems. , 2013, , .		167

#	ARTICLE	IF	CITATIONS
19	Real-Time Optimal Power Flow. IEEE Transactions on Smart Grid, 2017, 8, 2963-2973.	6.2	150
20	Distributed Optimal Power Flow Algorithm for Radial Networks, I: Balanced Single Phase Case. IEEE Transactions on Smart Grid, 2018, 9, 111-121.	6.2	141
21	Optimal decentralized protocol for electric vehicle charging. , 2011, , .		138
22	Optimal Load-Side Control for Frequency Regulation in Smart Grids. IEEE Transactions on Automatic Control, 2017, 62, 6294-6309.	3.6	137
23	A simple optimal power flow model with energy storage. , 2010, , .		129
24	Optimal Power Flow in Stand-Alone DC Microgrids. IEEE Transactions on Power Systems, 2018, 33, 5496-5506.	4.6	115
25	Exact convex relaxation of OPF for radial networks using branch flow model. , 2012, , .		112
26	An Online Gradient Algorithm for Optimal Power Flow on Radial Networks. IEEE Journal on Selected Areas in Communications, 2016, 34, 625-638.	9.7	109
27	Optimal Power Flow in Direct Current Networks. IEEE Transactions on Power Systems, 2014, 29, 2892-2904.	4.6	108
28	Optimal Load Control via Frequency Measurement and Neighborhood Area Communication. IEEE Transactions on Power Systems, 2013, 28, 3576-3587.	4.6	107
29	Equivalent Relaxations of Optimal Power Flow. IEEE Transactions on Automatic Control, 2015, 60, 729-742.	3.6	103
30	Optimal charging of plug-in hybrid electric vehicles in smart grids. , 2011, , .		101
31	Application-Oriented Flow Control: Fundamentals, Algorithms and Fairness. IEEE/ACM Transactions on Networking, 2006, 14, 1282-1291.	2.6	100
32	Optimization Based Rate Control for Multicast with Network Coding. , 2007, , .		96
33	Reinforcement Learning for Selective Key Applications in Power Systems: Recent Advances and Future Challenges. IEEE Transactions on Smart Grid, 2022, 13, 2935-2958.	6.2	87
34	Optimal Charging Schedule for a Battery Switching Station Serving Electric Buses. IEEE Transactions on Power Systems, 2016, 31, 3473-3483.	4.6	86
35	On Identification of Distribution Grids. IEEE Transactions on Control of Network Systems, 2019, 6, 950-960.	2.4	80
36	Real-time deferrable load control. , 2013, , .		76

#	ARTICLE	IF	CITATIONS
37	Feeder Reconfiguration in Distribution Networks Based on Convex Relaxation of OPF. IEEE Transactions on Power Systems, 2015, 30, 1793-1804.	4.6	73
38	Equilibrium of Heterogeneous Congestion Control: Existence and Uniqueness. IEEE/ACM Transactions on Networking, 2007, 15, 824-837.	2.6	69
39	A Mathematical Framework for Designing a Low-Loss, Low-Delay Internet. Networks and Spatial Economics, 2004, 4, 75-101.	0.7	66
40	Demand Response With Capacity Constrained Supply Function Bidding. IEEE Transactions on Power Systems, 2016, 31, 1377-1394.	4.6	64
41	The Role of Convexity in Saddle-Point Dynamics: Lyapunov Function and Robustness. IEEE Transactions on Automatic Control, 2018, 63, 2449-2464.	3.6	60
42	Adaptive Charging Networks: A Framework for Smart Electric Vehicle Charging. IEEE Transactions on Smart Grid, 2021, 12, 4339-4350.	6.2	60
43	Scheduling of EV Battery Swapping—Part I: Centralized Solution. IEEE Transactions on Control of Network Systems, 2018, 5, 1887-1897.	2.4	57
44	On the exactness of convex relaxation for optimal power flow in tree networks. , 2012, , .		55
45	Deadline differentiated pricing of deferrable electric power service. , 2012, , .		54
46	An Energy Sharing Game With Generalized Demand Bidding: Model and Properties. IEEE Transactions on Smart Grid, 2020, 11, 2055-2066.	6.2	54
47	Branch flow model: Relaxations and convexification. , 2012, , .		53
48	Unified Distributed Control of Stand-Alone DC Microgrids. IEEE Transactions on Smart Grid, 2019, 10, 1013-1024.	6.2	51
49	Distributed Frequency Control With Operational Constraints, Part I: Per-Node Power Balance. IEEE Transactions on Smart Grid, 2019, 10, 40-52.	6.2	50
50	Reverse and Forward Engineering of Local Voltage Control in Distribution Networks. IEEE Transactions on Automatic Control, 2021, 66, 1116-1128.	3.6	47
51	A unified framework for frequency control and congestion management. , 2016, , .		41
52	Convexification of optimal power flow problem. , 2010, , .		40
53	Real-time demand response with uncertain renewable energy in smart grid. , 2011, , .		40
54	Distributed Frequency Control With Operational Constraints, Part II: Network Power Balance. IEEE Transactions on Smart Grid, 2019, 10, 53-64.	6.2	40

#	ARTICLE	IF	CITATIONS
55	Contention control: A game-theoretic approach. , 2007, , .		37
56	Event detection and localization in distribution grids with phasor measurement units. , 2017, , .		36
57	Pricing EV charging service with demand charge. Electric Power Systems Research, 2020, 189, 106694.	2.1	34
58	Optimal decentralized primary frequency control in power networks. , 2014, , .		33
59	Scheduling of EV Battery Swapping“Part II: Distributed Solutions. IEEE Transactions on Control of Network Systems, 2018, 5, 1920-1930.	2.4	33
60	Equivalence of branch flow and bus injection models. , 2012, , .		29
61	Classification of electric vehicle charging time series with selective clustering. Electric Power Systems Research, 2020, 189, 106695.	2.1	28
62	Distributed Optimal Frequency Control Considering a Nonlinear Network-Preserving Model. IEEE Transactions on Power Systems, 2019, 34, 76-86.	4.6	27
63	DeepOPF-V: Solving AC-OPF Problems Efficiently. IEEE Transactions on Power Systems, 2022, 37, 800-803.	4.6	26
64	Swing dynamics as primal-dual algorithm for optimal load control. , 2012, , .		25
65	Convex relaxation of optimal power flow: A tutorial. , 2013, , .		25
66	Demand response in radial distribution networks: Distributed algorithm. , 2012, , .		24
67	An optimization-based demand response in radial distribution networks. , 2012, , .		24
68	Distributed algorithm for optimal power flow on an unbalanced radial network. , 2015, , .		22
69	Frequency-based load control in power systems. , 2012, , .		21
70	Smoothed Least-laxity-first Algorithm for EV Charging. , 2017, , .		21
71	Approaching Prosumer Social Optimum via Energy Sharing With Proof of Convergence. IEEE Transactions on Smart Grid, 2021, 12, 2484-2495.	6.2	21
72	Adaptive charging network for electric vehicles. , 2016, , .		19

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73	Monotonicity properties and spectral characterization of power redistribution in cascading failures. , 2017, , .		19
74	Demand Response Optimization for Smart Home Scheduling Using Genetic Algorithm. , 2013, , .		18
75	Online Station Assignment for Electric Vehicle Battery Swapping. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 3256-3267.	4.7	18
76	Distributed load-side control: Coping with variation of renewable generations. Automatica, 2019, 109, 108556.	3.0	17
77	Optimal Strategies for Efficient Peer-to-Peer File Sharing. , 2007, , .		15
78	Opportunistic Source Coding for Data Gathering in Wireless Sensor Networks. , 2007, , .		15
79	Combating Bufferbloat in Multi-Bottleneck Networks: Theory and Algorithms. IEEE/ACM Transactions on Networking, 2021, 29, 1477-1493.	2.6	14
80	ACN-Sim: An Open-Source Simulator for Data-Driven Electric Vehicle Charging Research. IEEE Transactions on Smart Grid, 2021, 12, 5113-5123.	6.2	13
81	Equilibrium of Heterogeneous Congestion Control Protocols. , 2006, , .		11
82	Differential Privacy of Aggregated DC Optimal Power Flow Data. , 2019, , .		11
83	Safety-Critical Control Synthesis for Network Systems With Control Barrier Functions and Assume-Guarantee Contracts. IEEE Transactions on Control of Network Systems, 2021, 8, 487-499.	2.4	11
84	Line Failure Localization of Power Networks Part I: Non-Cut Outages. IEEE Transactions on Power Systems, 2021, 36, 4140-4151.	4.6	11
85	Real-time recommendation algorithm of battery swapping stations for electric taxis. , 2016, , .		10
86	Layering As Optimization Decomposition: Current Status and Open Issues. , 2006, , .		9
87	Relationship between power loss and network topology in power systems. , 2010, , .		9
88	Optimal online adaptive electric vehicle charging. , 2017, , .		9
89	Failure Localization in Power Systems via Tree Partitions. , 2018, , .		9
90	ACN-Sim. , 2019, , .		9

#	ARTICLE	IF	CITATIONS
91	Sufficient Conditions for Exact Semi-definite Relaxation of Optimal Power Flow in Unbalanced Multiphase Radial Networks. , 2019, , .		9
92	On the Implementation of OPF-Based Setpoints for Active Distribution Networks. IEEE Transactions on Smart Grid, 2021, 12, 2929-2940.	6.2	9
93	Smoothed Least-Laxity-First Algorithm for Electric Vehicle Charging: Online Decision and Performance Analysis With Resource Augmentation. IEEE Transactions on Smart Grid, 2022, 13, 2209-2217.	6.2	9
94	Packet Loss Burstiness: Measurements and Implications for Distributed Applications. , 2007, , .		8
95	Utility Functionals Associated With Available Congestion Control Algorithms. , 2010, , .		8
96	Optimal branch exchange for feeder reconfiguration in distribution networks. , 2013, , .		8
97	Distributed algorithm for time-varying optimal power flow. , 2017, , .		8
98	A Note on Branch Flow Models With Line Shunts. IEEE Transactions on Power Systems, 2021, 36, 537-540.	4.6	8
99	Real-time Flexibility Feedback for Closed-loop Aggregator and System Operator Coordination. , 2020, , .		8
100	Compositional Set Invariance in Network Systems with Assume-Guarantee Contracts. , 2019, , .		8
101	Fast load control with stochastic frequency measurement. , 2012, , .		7
102	Optimal power flow in tree networks. , 2013, , .		7
103	Decentralized optimal frequency control of interconnected power systems with transient constraints. , 2016, , .		7
104	Disaggregation for Networked Power Systems. , 2018, , .		7
105	Battery Swapping Assignment for Electric Vehicles. Performance Evaluation Review, 2017, 45, 85-87.	0.4	6
106	Spectral characterization of controllability and observability for frequency regulation dynamics. , 2017, , .		6
107	Learning-Based Predictive Control via Real-Time Aggregate Flexibility. IEEE Transactions on Smart Grid, 2021, 12, 4897-4913.	6.2	6
108	Exactness of OPF Relaxation on Three-Phase Radial Networks With Delta Connections. IEEE Transactions on Smart Grid, 2021, 12, 3232-3241.	6.2	6

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109	Line Failure Localization of Power Networks Part II: Cut Set Outages. IEEE Transactions on Power Systems, 2021, 36, 4152-4160.	4.6	6
110	Research Tools for Smart Electric Vehicle Charging: An introduction to the adaptive charging network research portal. IEEE Electrification Magazine, 2021, 9, 29-36.	1.8	6
111	Branch flow model: Relaxations and convexification. , 2014, , .		5
112	An integrated approach for failure mitigation & localization in power systems. Electric Power Systems Research, 2021, 190, 106613.	2.1	5
113	Optimal placement of energy storage in distribution networks. , 2016, , .		4
114	Combating Bufferbloat in Multi-Bottleneck Networks: Equilibrium, Stability, and Algorithms. , 2018, , .		4
115	Pricing link by time. Performance Evaluation Review, 2014, 42, 421-433.	0.4	4
116	Effect of buffers on stability of Internet congestion controllers. , 2011, , .		3
117	Information Aggregation for Constrained Online Control. Proceedings of the ACM on Measurement and Analysis of Computing Systems, 2021, 5, 1-35.	1.4	3
118	The role of strong convexity-concavity in the convergence and robustness of the saddle-point dynamics. , 2016, , .		2
119	Distributed Frequency Control with Operational Constraints, Part II: Network Power Balance. , 2018, , .		2
120	Privacy-Preserving Energy Scheduling for Smart Grid With Renewables. IEEE Access, 2020, 8, 132320-132329.	2.6	2
121	Running Primal-Dual Gradient Method for Time-Varying Nonconvex Problems. SIAM Journal on Control and Optimization, 2022, 60, 1970-1990.	1.1	2
122	The Optimal Power Flow Operator: Theory and Computation. IEEE Transactions on Control of Network Systems, 2021, 8, 1010-1022.	2.4	1
123	A Sufficient Condition for Local Optima to be Globally Optimal. , 2020, , .		1
124	Worst-Case Sensitivity of DC Optimal Power Flow Problems. , 2020, , .		1
125	Congestion control algorithms from optimal control perspective. , 2009, , .		0
126	Mitigating Cascading Failures via Local Responses. , 2020, , .		0