

Daniel K Molzahn

List of Publications by Year in descending order

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56
papers

2,268
citations

489802

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28
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57
all docs

57
docs citations

57
times ranked

2008
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimal Power Flow in DC Networks With Robust Feasibility and Stability Guarantees. IEEE Transactions on Control of Network Systems, 2022, 9, 904-916.	2.4	4
2	On the Impacts of Different Consistency Constraint Formulations for Distributed Optimal Power Flow. , 2022, , .		2
3	Efficient creation of datasets for data-driven power system applications. Electric Power Systems Research, 2021, 190, 106614.	2.1	19
4	Tightening QC Relaxations of AC Optimal Power Flow Problems via Complex Per Unit Normalization. IEEE Transactions on Power Systems, 2021, 36, 281-291.	4.6	10
5	DC Optimal Power Flow With Joint Chance Constraints. IEEE Transactions on Power Systems, 2021, 36, 147-158.	4.6	35
6	The Effects of Social Distancing on Electricity Demand Considering Temperature Dependency. Energies, 2021, 14, 473.	1.6	15
7	Robust AC Optimal Power Flow With Robust Convex Restriction. IEEE Transactions on Power Systems, 2021, 36, 4953-4966.	4.6	18
8	Distributed Multi-Period DCOPTF via an Auxiliary Principle Problem Algorithm. , 2021, , .		2
9	Reactive Power Planning using Security-Constrained AC Optimal Power Flow and Sensitivity Analyses. , 2021, , .		0
10	Analysis of Fast Decoupled Power Flow via Multiple Axis Rotations. , 2021, , .		0
11	Assessing the Accuracy of Balanced Power System Models in the Presence of Voltage Unbalance. , 2021, , .		0
12	Identifying Redundant Constraints for AC OPF: The Challenges of Local Solutions, Relaxation Tightness, and Approximation Inaccuracy. , 2021, , .		1
13	Verifying Global Optimality of Candidate Solutions to Polynomial Optimization Problems using a Determinant Relaxation Hierarchy. , 2021, , .		1
14	Feasible Path Identification in Optimal Power Flow With Sequential Convex Restriction. IEEE Transactions on Power Systems, 2020, 35, 3648-3659.	4.6	15
15	Inexact convex relaxations for AC optimal power flow: Towards AC feasibility. Electric Power Systems Research, 2020, 187, 106480.	2.1	25
16	Study of Active Line Flow Constraints in DC Optimal Power Flow Problems. , 2020, , .		3
17	Detection and Characterization of Intrusions to Network Parameter Data in Electric Power Systems. IEEE Transactions on Smart Grid, 2019, 10, 3919-3928.	6.2	18
18	Transient Stability Analysis of Power Systems via Occupation Measures. , 2019, , .		8

#	ARTICLE	IF	CITATIONS
19	A method for quickly bounding the optimal objective value of an OPF problem using a semidefinite relaxation and a local solution. <i>Electric Power Systems Research</i> , 2019, 177, 105954.	2.1	5
20	An Optimal Power-Flow Approach to Improve Power System Voltage Stability Using Demand Response. <i>IEEE Transactions on Control of Network Systems</i> , 2019, 6, 1015-1025.	2.4	56
21	A Survey of Relaxations and Approximations of the Power Flow Equations. <i>Foundations and Trends in Electric Energy Systems</i> , 2019, 4, 1-221.	2.5	86
22	Implied Constraint Satisfaction in Power System optimization: The Impacts of Load Variations. , 2019, , .		21
23	On The Relationships Among Different Voltage Unbalance Definitions. , 2019, , .		7
24	Grid-Aware versus Grid-Agnostic Distribution System Control: A Method for Certifying Engineering Constraint Satisfaction. , 2019, , .		17
25	Lasserre Hierarchy for Large Scale Polynomial Optimization in Real and Complex Variables. <i>SIAM Journal on Optimization</i> , 2018, 28, 1017-1048.	1.2	33
26	Identifying Redundant Flow Limits on Parallel Lines. <i>IEEE Transactions on Power Systems</i> , 2018, 33, 3210-3212.	4.6	7
27	A Deterministic Method to Identify Multiple Local Extrema for the AC Optimal Power Flow Problem. <i>IEEE Transactions on Power Systems</i> , 2018, 33, 654-668.	4.6	21
28	Comparison of Various Trilinear Monomial Envelopes for Convex Relaxations of Optimal Power Flow Problems. , 2018, , .		5
29	Improving QC Relaxations of OPF Problems via Voltage Magnitude Difference Constraints and Envelopes for Trilinear Monomials. , 2018, , .		2
30	Towards an AC Optimal Power Flow Algorithm with Robust Feasibility Guarantees. , 2018, , .		14
31	Identifying and Characterizing Non-Convexities in Feasible Spaces of Optimal Power Flow Problems. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2018, 65, 672-676.	2.2	16
32	Empirical Investigation of Non-Convexities in Optimal Power Flow Problems. , 2018, , .		10
33	A Laplacian-Based Approach for Finding Near Globally Optimal Solutions to OPF Problems. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 305-315.	4.6	31
34	Incorporating Squirrel-Cage Induction Machine Models in Convex Relaxations of OPF Problems. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 4972-4974.	4.6	3
35	Computing the Feasible Spaces of Optimal Power Flow Problems. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 4752-4763.	4.6	43
36	Solving Multiperiod OPF Problems Using an AC-QP Algorithm Initialized With an SOCP Relaxation. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 3538-3548.	4.6	34

#	ARTICLE	IF	CITATIONS
37	Using demand response to improve power system voltage stability margins. , 2017, , .		10
38	A Survey of Distributed Optimization and Control Algorithms for Electric Power Systems. IEEE Transactions on Smart Grid, 2017, 8, 2941-2962.	6.2	786
39	The impact of load models in an algorithm for improving voltage stability via demand response. , 2017, , .		5
40	Convex Relaxations of Optimal Power Flow Problems: An Illustrative Example. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 650-660.	3.5	46
41	Error bounds on the DC power flow approximation: A convex relaxation approach. , 2016, , .		29
42	Recent advances in computational methods for the power flow equations. , 2016, , .		38
43	Moment relaxations of optimal power flow problems: Beyond the convex hull. , 2016, , .		3
44	Solution of optimal power flow problems using moment relaxations augmented with objective function penalization. , 2015, , .		16
45	Mixed SDP/SOCP moment relaxations of the optimal power flow problem. , 2015, , .		13
46	Semidefinite relaxations of equivalent optimal power flow problems: An illustrative example. , 2015, , .		9
47	Sparsity-Exploiting Moment-Based Relaxations of the Optimal Power Flow Problem. IEEE Transactions on Power Systems, 2015, 30, 3168-3180.	4.6	116
48	A Sufficient Condition for Global Optimality of Solutions to the Optimal Power Flow Problem. IEEE Transactions on Power Systems, 2014, 29, 978-979.	4.6	47
49	Approximate Representation of ZIP Loads in a Semidefinite Relaxation of the OPF Problem. IEEE Transactions on Power Systems, 2014, 29, 1864-1865.	4.6	29
50	Sufficient conditions for power flow insolvability considering reactive power limited generators with applications to voltage stability margins. , 2013, , .		19
51	Counterexample to a Continuation-Based Algorithm for Finding All Power Flow Solutions. IEEE Transactions on Power Systems, 2013, 28, 564-565.	4.6	29
52	Implementation of a Large-Scale Optimal Power Flow Solver Based on Semidefinite Programming. IEEE Transactions on Power Systems, 2013, 28, 3987-3998.	4.6	216
53	Initializing Dynamic Power System Simulations Using Eigenvalue Formulations of the Induction Machine and Power Flow Models. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 690-702.	3.5	8
54	Power system structure and confidentiality preserving transformation of Optimal Power Flow problem. , 2013, , .		9

#	ARTICLE	IF	CITATIONS
55	Examining the limits of the application of semidefinite programming to power flow problems. , 2011, , .		160
56	An eigenvalue formulation for determining initial conditions of induction machines in dynamic power system simulations. , 2010, , .		1