Johanna L Mathieu

List of Publications by Citations

95 papers	**1,944** citations	**23** h-index	**41** g-index
114 ext. papers	**2,482** ext. citations	**5.3** avg, IF	**5.51** L-index

#	Paper	IF	Citations
95	. *IEEE Transactions on Power Systems*, **2013**, 28, 430-440	7	339
94	Quantifying Changes in Building Electricity Use, With Application to Demand Response. *IEEE Transactions on Smart Grid*, **2011**, 2, 507-518	10.7	184
93	. *IEEE Transactions on Power Systems*, **2015**, 30, 763-772	7	130
92	. *IEEE Transactions on Power Systems*, **2016**, 1-1	7	74
91	State Estimation and Control of Heterogeneous Thermostatically Controlled Loads for Load Following **2012**,		68
90	Scheduling distributed energy storage units to provide multiple services under forecast error. *International Journal of Electrical Power and Energy Systems*, **2015**, 72, 48-57	5.1	55
89	Variability in automated responses of commercial buildings and industrial facilities to dynamic electricity prices. *Energy and Buildings*, **2011**, 43, 3322-3330	7	50
88	Modeling options for demand side participation of thermostatically controlled loads **2013**,		49
87	Modeling and Optimal Operation of Distributed Battery Storage in Low Voltage Grids. *IEEE Transactions on Power Systems*, **2017**, 32, 4340-4350	7	47
86	Emissions impacts of using energy storage for power system reserves. *Applied Energy*, **2016**, 168, 444-456	10.7	45
85	**2011**,		41
84	Uncertainty in the flexibility of aggregations of demand response resources **2013**,		39
83	Resource and revenue potential of California residential load participation in ancillary services. *Energy Policy*, **2015**, 80, 76-87	7.2	37
82	Chance Constrained Reserve Scheduling Using Uncertain Controllable Loads Part I: Formulation and Scenario-Based Analysis. *IEEE Transactions on Smart Grid*, **2019**, 10, 1608-1617	10.7	37
81	Ancillary Services Through Demand Scheduling and Control of Commercial Buildings. *IEEE Transactions on Power Systems*, **2017**, 32, 186-197	7	31
80	**2013**,		31
79	Stochastic Optimal Power Flow with Uncertain Reserves from Demand Response **2014**,		29

78	. *IEEE Transactions on Power Systems*, **2014**, 29, 1287-1295	7	29
77	Comparing Centralized and Decentralized Contract Design Enabling Direct Load Control for Reserves. *IEEE Transactions on Power Systems*, **2016**, 31, 2044-2054	7	27
76	Maximizing the potential of energy storage to provide fast frequency control **2013**,		27
75	Ambiguous risk constraints with moment and unimodality information. *Mathematical Programming*, **2019**, 173, 151-192	2.1	26
74	Modeling, identification, and optimal control of batteries for power system applications **2014**,		24
73	Policy and market barriers to energy storage providing multiple services. *Electricity Journal*, **2017**, 30, 50-56	2.6	23
72	Energy arbitrage with thermostatically controlled loads **2013**,		23
71	Modeling, Analysis, and Control of Demand Response Resources		23
70	Scheduling distributed energy storage units to provide multiple services **2014**,		19
69	Explaining inefficiencies in commercial buildings providing power system ancillary services. *Energy and Buildings*, **2017**, 152, 216-226	7	17
68	. *IEEE Transactions on Control of Network Systems*, **2019**, 6, 1223-1234	4	16
67	Real-Time Energy Disaggregation of a Distribution Feeder's Demand Using Online Learning. *IEEE Transactions on Power Systems*, **2018**, 33, 4730-4740	7	16
66	Use-Phase Drives Lithium-Ion Battery Life Cycle Environmental Impacts When Used for Frequency Regulation. *Environmental Science & Technology*, **2018**, 52, 10163-10174	10.3	16
65	**2015**,		16
64	. *IEEE Transactions on Smart Grid*, **2019**, 10, 1618-1625	10.7	15
63	An Optimal Power-Flow Approach to Improve Power System Voltage Stability Using Demand Response. *IEEE Transactions on Control of Network Systems*, **2019**, 6, 1015-1025	4	13
62	Control of thermostatic loads using moving horizon estimation of individual load states **2014**,		13
61	Arsenic remediation of drinking water using iron-oxide coated coal bottom ash. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*, **2010**, 45, 1446-60	2.3	13

60	Distributionally robust risk-constrained optimal power flow using moment and unimodality information **2016**,		13
59	Managing Communication Delays and Model Error in Demand Response for Frequency Regulation. *IEEE Transactions on Power Systems*, **2018**, 33, 1299-1308	7	12
58	Adaptive demand response: Online learning of restless and controlled bandits **2014**,		11
57	Characterizing the Response of Commercial and Industrial Facilities to Dynamic Pricing Signals From the Utility **2010**,		11
56	Price and capacity competition in balancing markets with energy storage. *Energy Systems*, **2017**, 8, 169-197	2.7	10
55	Separating Feeder Demand Into Components Using Substation, Feeder, and Smart Meter Measurements. *IEEE Transactions on Smart Grid*, **2020**, 11, 3280-3290	10.7	10
54	Applying Networked Estimation and Control Algorithms to Address Communication Bandwidth Limitations and Latencies in Demand Response **2015**,		10
53	**2015**,		10
52	. *IEEE Transactions on Power Systems*, **2019**, 34, 1569-1578	7	10
51	Decentralized contract design for demand response **2013**,		9
50	Demand response with moving horizon estimation of individual thermostatic load states from aggregate power measurements **2014**,		9
49	Adaptive state estimation and control of thermostatic loads for real-time energy balancing **2016**,		8
48	How Baseline Model Implementation Choices Affect Demand Response Assessments. *Journal of Solar Energy Engineering, Transactions of the ASME*, **2015**, 137,	2.3	8
47	Ancillary services to the grid from commercial buildings through demand scheduling and control **2015**,		8
46	Data-driven optimization approaches for optimal power flow with uncertain reserves from load control **2015**,		7
45	**2014**,		7
44	A unified analysis of security-constrained OPF formulations considering uncertainty, risk, and controllability in single and multi-area systems **2013**,		7
43	Mitigating Voltage Unbalance Using Distributed Solar Photovoltaic Inverters. *IEEE Transactions on Power Systems*, **2021**, 36, 2642-2651	7	7

42	Do commercial buildings become less efficient when they provide grid ancillary services?. *Energy Efficiency*, **2020**, 13, 487-501	3	7
41	A Comparison of Robust and Probabilistic Reliability for Systems with Renewables and Responsive Demand **2016**,		6
40	Residential Demand Response program design: Engineering and economic perspectives **2013**,		6
39	Stochastic Dual Dynamic Programming to schedule energy storage units providing multiple services **2015**,		6
38	. *Proceedings of the IEEE*, **2020**, 108, 1640-1655	14.3	6
37	Distributionally Robust Chance Constrained Optimal Power Flow Assuming Log-Concave Distributions **2018**,		6
36	Uncertainty in Demand Response Identification, Estimation, and Learning **2015**, 56-70		5
35	Inferring the behavior of distributed energy resources with online learning **2015**,		5
34	Understanding the Effect of Baseline Modeling Implementation Choices on Analysis of Demand Response Performance **2012**,		5
33	Water distribution networks as flexible loads: A chance-constrained programming approach. *Electric Power Systems Research*, **2020**, 188, 106570	3.5	5
32	Hybrid Stochastic-Deterministic Multiperiod DC Optimal Power Flow. *IEEE Transactions on Power Systems*, **2017**, 32, 3934-3945	7	4
31	Reducing the computational effort of stochastic multi-period DC optimal power flow with storage **2016**,		4
30	Enabling renewable resource integration: The balance between robustness and flexibility **2015**,		4
29	Using demand response to improve power system voltage stability margins **2017**,		4
28	Two-stage distributionally robust optimal power flow with flexible loads **2017**,		4
27	Transformation of a Mismatched Nonlinear Dynamic System into Strict Feedback Form. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2011**, 133,	1.6	4
26	**2012**,		4
25	Coordination between an Aggregator and Distribution Operator to Achieve Network-Aware Load Control **2019**,		4

24	The impact of load models in an algorithm for improving voltage stability via demand response **2017**,		3
23	A Method for Ensuring a Load Aggregator's Power Deviations Are Safe for Distribution Networks. *Electric Power Systems Research*, **2020**, 189, 106781	3.5	3
22	Improving Power System Voltage Stability by Using Demand Response to Maximize the Distance to the Closest Saddle-Node Bifurcation **2018**,		3
21	Strategies for Network-Safe Load Control With a Third-Party Aggregator and a Distribution Operator. *IEEE Transactions on Power Systems*, **2021**, 36, 3329-3339	7	3
20	**2015**,		2
19	Impact of Market Timing on the Profit of a Risk-Averse Load Aggregator. *IEEE Transactions on Power Systems*, **2020**, 35, 3970-3980	7	2
18	Planning and control of Electric Vehicles using dynamic energy capacity models **2013**,		2
17	**2013**,		2
16	Understanding the Effect of Baseline Modeling Implementation Choices on Analysis of Demand Response Performance **2013**,		2
15	Age and perceived benefits are associated with willingness to participate in an electric load control program		2
14	Overcoming the practical challenges of applying steinmetz circuit design to mitigate voltage unbalance using distributed solar PV. *Electric Power Systems Research*, **2020**, 188, 106563	3.5	2
13	Chance-constrained water pumping managing power distribution network constraints **2019**,		2
12	Applying Steinmetz Circuit Design to Mitigate Voltage Unbalance Using Distributed Solar PV **2019**,		2
11	The Flexibility of Thermostatically Controlled Loads as a Function of Price Notice Time **2018**,		2
10	**2018**,		2
9	A linear approach to manage input delays while supplying frequency regulation using residential loads **2017**,		1
8	Disaggregating Load by Type from Distribution System Measurements in Real Time. *The IMA Volumes in Mathematics and Its Applications*, **2018**, 413-437	0.5	1
7	Effects of load control for real-time energy balancing on distribution network constraints **2017**,		1

6	Performance Limits of Thermostatically Controlled Loads under Probabilistic Switching. *IFAC-PapersOnLine*, **2017**, 50, 8873-8880	0.7	1
5	An experimental study of energy consumption in buildings providing ancillary services **2017**,		1
4	Impact of uncertainty from load-based reserves and renewables on dispatch costs and emissions **2016**,		1
3	**2016**,		1
2	**2019**,		1
1	Baseline estimation of commercial building HVAC fan power using tensor completion. *Electric Power Systems Research*, **2020**, 189, 106624	3.5	0