Irma Chacn

List of Publications by Year in Descending Order

108 papers	3,952 citations	32 h-index	61 g-index
125 ext. papers	5,060 ext. citations	5.6 avg, IF	6.06 L-index

#	Paper	IF	Citations
108	Model-Free Voltage Calculations for PV-Rich LV Networks: Smart Meter Data and Deep Neural Networks **2021**,		1
107	Multi-year planning of LV networks with EVs accounting for customers, emissions and techno-economics aspects: A practical and scalable approach. *IET Generation, Transmission and Distribution*, **2021**, 15, 468-479	2.5	1
106	Quantifying the effects of medium voltage/low voltage distribution network constraints and distributed energy resource reactive power capabilities on aggregators. *IET Generation, Transmission and Distribution*, **2021**, 15, 2019-2032	2.5	2
105	. *IEEE Transactions on Smart Grid*, **2021**, 12, 2929-2940	10.7	2
104	Grid and Market Services From the Edge: Using Operating Envelopes to Unlock Network-Aware Bottom-Up Flexibility. *IEEE Power and Energy Magazine*, **2021**, 19, 52-62	2.4	7
103	Asset Congestion and Voltage Management in Large-Scale MV-LV Networks With Solar PV. *IEEE Transactions on Power Systems*, **2021**, 36, 4018-4027	7	3
102	Ensuring Distribution Network Integrity Using Dynamic Operating Limits for Prosumers. *IEEE Transactions on Smart Grid*, **2021**, 12, 3877-3888	10.7	6
101	. *IEEE Transactions on Smart Grid*, **2020**, 11, 4502-4512	10.7	19
100	CVR and Loss Optimization Through Active Voltage Management: A Trade-off Analysis. *IEEE Transactions on Power Delivery*, **2020**, 1-1	4.3	5
99	Operating Envelopes for Prosumers in LV Networks: A Weighted Proportional Fairness Approach **2020**,		3
98	On the Inadequacy of the CVR Factor for Active Schemes. *IEEE Transactions on Power Delivery*, **2020**, 35, 1592-1595	4.3	1
97	Bottom-up modeling of residential batteries and their effect on system-level generation cost. *Electric Power Systems Research*, **2020**, 189, 106711	3.5	3
96	A Review on TSO-DSO Coordination Models and Solution Techniques. *Electric Power Systems Research*, **2020**, 189, 106659	3.5	33
95	Assessing the effects of DER on voltages using a smart meter-driven three-phase LV feeder model. *Electric Power Systems Research*, **2020**, 189, 106705	3.5	5
94	Regional-scale allocation of fast charging stations: travel times and distribution system reinforcements. *IET Generation, Transmission and Distribution*, **2020**, 14, 4225-4233	2.5	6
93	Integrated MV-LV network modelling for DER studies. *CIRED - Open Access Proceedings Journal*, **2020**, 2020, 274-277	0.1	0
92	Smart meter-driven estimation of PV hosting capacity. *CIRED - Open Access Proceedings Journal*, **2020**, 2020, 128-131	0.1	0

91	On the Limitations of Volt-var Control in PV-Rich Residential LV Networks: A UK Case Study **2019**,		4
90	Impacts of Price-led Operation of Residential Storage on Distribution Networks: An Australian Case Study **2019**,		2
89	Adaptive Asset Congestion Management in PV-Rich LV Networks **2019**,		1
88	OPF-Based CVR Operation in PV-Rich MV LV Distribution Networks. *IEEE Transactions on Power Systems*, **2019**, 34, 2778-2789	7	24
87	Electric Vehicles in Latin America: Slowly but Surely Toward a Clean Transport. *IEEE Electrification Magazine*, **2019**, 7, 22-32	2.6	5
86	Robust Recovery of Missing Data in Electricity Distribution Systems. *IEEE Transactions on Smart Grid* , **2019**, 10, 4057-4067	10.7	16
85	Defining Customer Export Limits in PV-Rich Low Voltage Networks. *IEEE Transactions on Power Systems*, **2019**, 34, 87-97	7	17
84	Advanced control of OLTC-enabled LV networks with PV systems and EVs. *IET Generation, Transmission and Distribution*, **2019**, 13, 2967-2975	2.5	10
83	Implementable Three-Phase OPF Formulations for MV-LV Distribution Networks: MILP and MIQCP **2019**,		9
82	Customer-Led Operation of Residential Storage for the Provision of Energy Services **2019**,		4
81	. *IEEE Transactions on Power Systems*, **2019**, 34, 2378-2389	7	23
80	Analytic Considerations and Design Basis for the IEEE Distribution Test Feeders. *IEEE Transactions on Power Systems*, **2018**, 33, 3181-3188	7	180
79	AC OPF for Smart Distribution Networks: An Efficient and Robust Quadratic Approach. *IEEE Transactions on Smart Grid*, **2018**, 9, 4613-4623	10.7	40
78	Voltage-Led Load Management in Whole Distribution Networks. *IEEE Transactions on Power Systems*, **2018**, 33, 1544-1554	7	19
77	. *IEEE Transactions on Power Systems*, **2018**, 33, 1566-1576	7	45
76	A Voltage Control Scheme for Generation-Dominated Networks to Maximize Power Export. *IEEE Transactions on Power Systems*, **2018**, 33, 7321-7323	7	2
75	Limitations of Residential Storage in PV-Rich Distribution Networks: An Australian Case Study **2018**,		10
74	. *IEEE Power and Energy Magazine*, **2018**, 16, 64-76	2.4	34

73	**2018**,		11
72	Unlocking CVR Benefits Using Active Voltage Control in LV Networks **2018**,		1
71	. *IEEE Transactions on Power Systems*, **2017**, 32, 4278-4288	7	21
70	Geo-Information Is Power: Using Geographical Information Systems to Assess Rooftop Photovoltaics in Costa Rica. *IEEE Power and Energy Magazine*, **2017**, 15, 48-56	2.4	12
69	Unlocking New Sources of Flexibility: CLASS: The World's Largest Voltage-Led Load-Management Project. *IEEE Power and Energy Magazine*, **2017**, 15, 52-63	2.4	13
68	HPC-Based Probabilistic Analysis of LV Networks With EVs: Impacts and Control. *IEEE Transactions on Smart Grid*, **2017**, 8, 1479-1487	10.7	26
67	Voltage Control in PV-Rich LV Networks Without Remote Monitoring. *IEEE Transactions on Power Systems*, **2017**, 32, 1224-1236	7	34
66	Probabilistic Impact Assessment of Low Carbon Technologies in LV Distribution Systems. *IEEE Transactions on Power Systems*, **2016**, 31, 2192-2203	7	143
65	Optimal Sizing and Control of Energy Storage in Wind Power-Rich Distribution Networks. *IEEE Transactions on Power Systems*, **2016**, 31, 2004-2013	7	71
64	Representative Residential LV Feeders: A Case Study for the North West of England. *IEEE Transactions on Power Systems*, **2016**, 31, 348-360	7	35
63	An Improved Three-Phase AMB Distribution System State Estimator. *IEEE Transactions on Power Systems*, **2016**, 1-1	7	15
62	Recovering missing data via matrix completion in electricity distribution systems **2016**,		11
61	Voltage Control of PV-Rich LV Networks: OLTC-Fitted Transformer and Capacitor Banks. *IEEE Transactions on Power Systems*, **2016**, 31, 4016-4025	7	79
60	Control of EV Charging Points for Thermal and Voltage Management of LV Networks. *IEEE Transactions on Power Systems*, **2016**, 31, 3028-3039	7	76
59	CVR assessment in UK residential LV networks considering customer types **2016**,		1
58	Co-simulator of power and communication networks using OpenDSS and OMNeT++ **2016**,		6
57	Data analytics in smart distribution networks: Applications and challenges **2016**,		4
56	Embracing an Adaptable, Flexible Posture: Ensuring That Future European Distribution Networks Are Ready for More Active Roles. *IEEE Power and Energy Magazine*, **2016**, 14, 16-28	2.4	28

55	Controlling electric vehicle charging points for congestion management of UK LV networks **2015**,		9
54	Increasing the PV hosting capacity of LV networks: OLTC-fitted transformers vs. reinforcements **2015**,		21
53	Initial assessment of voltage-led demand response from UK residential loads **2015**,		10
52	Performance of OLTC-based control strategies for LV networks with photovoltaics **2015**,		8
51	Assessing the Potential of Network Reconfiguration to Improve Distributed Generation Hosting Capacity in Active Distribution Systems. *IEEE Transactions on Power Systems*, **2015**, 30, 346-356	7	192
50	Advanced Network Management Systems: A Risk-Based AC OPF Approach. *IEEE Transactions on Power Systems*, **2015**, 30, 409-418	7	46
49	EHP in low voltage networks: Understanding the effects of heat emitters and room temperatures **2015**,		2
48	Assessing the statistical consistency of the AMB State Estimator in distribution systems **2015**,		2
47	On the effects of monitoring and control settings on voltage control in PV-rich LV networks **2015**,		8
46	Assessing the effects of load models on MV network losses **2015**,		2
45	On the integrated PV hosting capacity of MV and LV distribution networks **2015**,		10
44	A statistical analysis of EV charging behavior in the UK **2015**,		35
43	Voltage control in LV networks: An initial investigation **2014**,		20
42	Assessing the benefits of meshed operation of LV feeders with low carbon technologies **2014**,		7
41	Evaluating and planning flexibility in sustainable power systems **2013**,		30
40	Estimating the load response to voltage changes at UK primary substations **2013**,		11
39	. *IEEE Transactions on Power Systems*, **2013**, 28, 1493-1502	7	236
38	Evaluating and Planning Flexibility in Sustainable Power Systems. *IEEE Transactions on Sustainable Energy*, **2013**, 4, 200-209	8.2	172

37	Monte Carlo-based assessment of PV impacts on real UK low voltage networks **2013**,		29
36	Assessing the benefits of PV var absorption on the hosting capacity of LV feeders **2013**,		8
35	Distribution network management system: An AC OPF approach **2013**,		1
34	Smart Decentralized Control of DG for Voltage and Thermal Constraint Management. *IEEE Transactions on Power Systems*, **2012**, 27, 1637-1645	7	98
33	Flexibility from the demand side **2012**,		9
32	Learning from residential load data: Impacts on LV network planning and operation **2012**,		7
31	Evaluating the profitability of flexibility **2012**,		3
30	Hybrid controller of energy storage and renewable DG for congestion management **2012**,		1
29	Low-carbon LV networks: Challenges for planning and operation **2012**,		11
28	Exploring the use of flexibility indices in low carbon power systems **2012**,		6
27	Assessing the contribution of demand side management to power system flexibility **2011**,		19
26	Enhanced Utilization of Voltage Control Resources With Distributed Generation. *IEEE Transactions on Power Systems*, **2011**, 26, 252-260	7	139
25	Minimizing the Reactive Support for Distributed Generation: Enhanced Passive Operation and Smart Distribution Networks. *IEEE Transactions on Power Systems*, **2011**, 26, 2134-2142	7	62
24	Operational windows for decentralized control of renewable DG: Techno-economic trade-offs **2011** ,		1
23	Minimizing Energy Losses: Optimal Accommodation and Smart Operation of Renewable Distributed Generation. *IEEE Transactions on Power Systems*, **2011**, 26, 198-205	7	265
22	. *IEEE Transactions on Power Systems*, **2011**, 26, 897-904	7	37
21	**2011**,		20
20	Minimizing energy losses: Optimal accommodation and smart operation of renewable distributed generation **2011**,		5

19	Angle constraint active management of distribution networks with wind power **2010**,		9
18	Network Distributed Generation Capacity Analysis Using OPF With Voltage Step Constraints. *IEEE Transactions on Power Systems*, **2010**, 25, 296-304	7	113
17	. *IEEE Transactions on Power Systems*, **2010**, 25, 575-583	7	45
16	Integrating distributed generation using decentralised voltage regulation **2010**,		40
15	Demonstrating the capacity benefits of dynamic ratings in smarter distribution networks **2010**,		11
14	Distribution network capacity assessment: Variable DG and active networks **2010**,		7
13	DG Impact on Investment Deferral: Network Planning and Security of Supply. *IEEE Transactions on Power Systems*, **2010**, 25, 1134-1141	7	68
12	Distribution Network Capacity Assessment: Variable DG and Active Networks. *IEEE Transactions on Power Systems*, **2010**, 25, 87-95	7	246
11	Using AC Optimal Power Flow for DG planning and optimisation **2010**,		11
10	Life cycle assessment of the transmission network in Great Britain. *Energy Policy*, **2010**, 38, 3622-3631	7.2	60
9	Distributed generation and security of supply: Assessing the investment deferral **2009**,		4
8	Assessing the strategic benefits of distributed generation ownership for DNOs. *IET Generation, Transmission and Distribution*, **2009**, 3, 225-236	2.5	70
7	Time-Series-Based Maximization of Distributed Wind Power Generation Integration. *IEEE Transactions on Energy Conversion*, **2008**, 23, 968-974	5.4	84
6	Evaluating Distributed Time-Varying Generation Through a Multiobjective Index. *IEEE Transactions on Power Delivery*, **2008**, 23, 1132-1138	4.3	103
5	Minimal Cross-Subsidies Approach for Loss Allocation in Distribution Networks with Open Access. *IEEE Power Engineering Society General Meeting*, **2007**,		1
4	Evaluating distributed generation impacts with a multiobjective index. *IEEE Transactions on Power Delivery*, **2006**, 21, 1452-1458	4.3	222
3	Fault analysis in four-wire distribution networks. *IET Generation, Transmission and Distribution*, **2005**, 152, 977		22
2	Power flow in distribution networks with earth return. *International Journal of Electrical Power and Energy Systems*, **2004**, 26, 373-380	5.1	14

1 Power flow in four-wire distribution networks-general approach. *IEEE Transactions on Power Systems*, **2003**, 18, 1283-1290 7 142