

# Santiago Grijalva

## List of Publications by Year in descending order

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Version: 2024-02-01

114  
papers

2,156  
citations

361413

20  
h-index

434195

31  
g-index

116  
all docs

116  
docs citations

116  
times ranked

2130  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling for Residential Electricity Optimization in Dynamic Pricing Environments. IEEE Transactions on Smart Grid, 2012, 3, 2224-2231.	9.0	166
2	A review of reinforcement learning for autonomous building energy management. Computers and Electrical Engineering, 2019, 78, 300-312.	4.8	163
3	Proactive Management of Microgrids for Resiliency Enhancement: An Adaptive Robust Approach. IEEE Transactions on Sustainable Energy, 2019, 10, 470-480.	8.8	129
4	Increased Wind Revenue and System Security by Trading Wind Power in Energy and Regulation Reserve Markets. IEEE Transactions on Sustainable Energy, 2011, 2, 340-347.	8.8	117
5	Prosumer-based smart grid architecture enables a flat, sustainable electricity industry. , 2011, , .		112
6	Leveraging AMI Data for Distribution System Model Calibration and Situational Awareness. IEEE Transactions on Smart Grid, 2015, 6, 2050-2059.	9.0	89
7	Large-scale decentralized unit commitment. International Journal of Electrical Power and Energy Systems, 2015, 73, 97-106.	5.5	82
8	A Data-Driven Approach for Detection and Estimation of Residential PV Installations. IEEE Transactions on Smart Grid, 2016, 7, 2477-2485.	9.0	81
9	Oscillation Energy Analysis of Inter-Area Low-Frequency Oscillations in Power Systems. IEEE Transactions on Power Systems, 2016, 31, 1195-1203.	6.5	73
10	Distribution System Model Calibration With Big Data From AMI and PV Inverters. IEEE Transactions on Smart Grid, 2016, 7, 2497-2506.	9.0	65
11	Realizing smart grid benefits requires energy optimization algorithms at residential level. , 2011, , .		58
12	A Structure-Preserving Model and Sufficient Condition for Frequency Synchronization of Lossless Droop Inverter-Based AC Networks. IEEE Transactions on Power Systems, 2013, 28, 4310-4319.	6.5	56
13	Big data analytics for future electricity grids. Electric Power Systems Research, 2020, 189, 106788.	3.6	54
14	Distributed Frequency Control of Prosumer-Based Electric Energy Systems. IEEE Transactions on Power Systems, 2014, 29, 2934-2942.	6.5	48
15	Handling bad or missing smart meter data through advanced data imputation. , 2016, , .		46
16	A deep neural network approach for behind-the-meter residential PV size, tilt and azimuth estimation. Solar Energy, 2020, 196, 260-269.	6.1	42
17	Distribution system low-voltage circuit topology estimation using smart metering data. , 2016, , .		40
18	Prosumer-based control architecture for the future electricity grid. , 2011, , .		36

#	ARTICLE	IF	CITATIONS
19	Large-Scale Integration of Wind Generation Including Network Temporal Security Analysis. IEEE Transactions on Energy Conversion, 2007, 22, 181-188.	5.2	35
20	Dynamic Secrets and Secret Keys Based Scheme for Securing Last Mile Smart Grid Wireless Communication. IEEE Transactions on Industrial Informatics, 2017, 13, 1482-1491.	11.3	35
21	Game-Theoretic Formulation of Power Dispatch With Guaranteed Convergence and Prioritized BestResponse. IEEE Transactions on Sustainable Energy, 2015, 6, 51-59.	8.8	33
22	Locational dependence of PV hosting capacity correlated with feeder load. , 2014, , .		32
23	Reduction of distribution feeders for simplified PV impact studies. , 2013, , .		30
24	Flexible Security-Constrained Optimal Power Flow. IEEE Transactions on Power Systems, 2015, 30, 1195-1202.	6.5	24
25	Fast Quasi-Static Time-Series (QSTS) for yearlong PV impact studies using vector quantization. Solar Energy, 2018, 159, 538-547.	6.1	24
26	PV interconnection risk analysis through distribution system impact signatures and feeder zones. , 2014, , .		23
27	A rolling-horizon unit commitment framework with flexible periodicity. International Journal of Electrical Power and Energy Systems, 2017, 90, 280-291.	5.5	21
28	Efficient Signature Scheme for Delivering Authentic Control Commands in the Smart Grid. IEEE Transactions on Smart Grid, 2018, 9, 4323-4334.	9.0	21
29	Increasing distribution system model accuracy with extensive deployment of smart meters. , 2014, , .		19
30	Irregularity Detection in Output Power of Distributed Energy Resources Using PMU Data Analytics in Smart Grids. IEEE Transactions on Industrial Informatics, 2019, 15, 2222-2232.	11.3	19
31	A time-variant load model based on smart meter data mining. , 2014, , .		16
32	Impact Evaluation of Malicious Control Commands in Cyber-Physical Smart Grids. IEEE Transactions on Sustainable Computing, 2021, 6, 208-220.	3.1	16
33	An Economic Model for Distributed Energy Prosumers. , 2013, , .		14
34	Decentralized Total Transfer Capability Evaluation Using Domain Decomposition Methods. IEEE Transactions on Power Systems, 2016, 31, 3349-3357.	6.5	14
35	Model Predictive Control Based AC Line Overload Alleviation by Using Multi-Terminal DC Grids. IEEE Transactions on Power Systems, 2020, 35, 177-187.	6.5	14
36	Communication-Failure-Resilient Distributed Frequency Control in Smart Grids: Part I: Architecture and Distributed Algorithms. IEEE Transactions on Power Systems, 2020, 35, 1317-1326.	6.5	14

#	ARTICLE	IF	CITATIONS
37	Implementation of home energy management system with optimal load scheduling based on real-time electricity pricing models. , 2017, , .		13
38	Towards a Distributed, Service-Oriented Control Infrastructure for Smart Grid. , 2011, , .		11
39	Thermal energy storage for air conditioning as an enabler of residential demand response. , 2014, , .		8
40	A Fast Quasi-Static Time Series (QSTS) Simulation Method for PV Impact Studies Using Voltage Sensitivities of Controllable Elements. , 2017, , .		8
41	Practical Data-Driven Methods to Improve the Accuracy and Detail of Hosting Capacity Analysis. , 2018, , .		8
42	The Value of Real-Time Energy Arbitrage with Energy Storage Systems. , 2018, , .		8
43	Bad Data Injection Attack Propagation in Cyber-Physical Power Delivery Systems. , 2018, , .		8
44	Estimation of PV Location in Distribution Systems based on Voltage Sensitivities. , 2021, , .		8
45	Solar PV Inverter Reactive Power Disaggregation and Control Setting Estimation. IEEE Transactions on Power Systems, 2022, 37, 4773-4784.	6.5	8
46	Future Grid Business Model Innovation: Distributed Energy Resources Services Platform for Renewable Energy Integration. , 2015, , .		7
47	Secondary circuit model creation and validation with AMI and transformer measurements. , 2016, , .		7
48	Secure and privacy-preserving concentration of metering data in AMI networks. , 2017, , .		7
49	Analysis of multiple revenue streams for privately-owned energy storage systems. , 2018, , .		7
50	Electric Vehicle Smart Charging to Maximize Renewable Energy Usage in a Single Residence. , 2021, , .		7
51	Home energy manager: A consumer-oriented interactive tool to optimize energy use. , 2011, , .		6
52	Using distribution LMP and time-of-delivery pricing to promote optimal placement and increased profitability of residential PV systems. , 2014, , .		6
53	Modeling and optimal scheduling of integrated thermal and electrical energy microgrid. , 2016, , .		6
54	Enhanced Frequency Response Based on Multiagent Distributed Power Agreement. IEEE Transactions on Industry Applications, 2018, 54, 1746-1755.	4.9	6

#	ARTICLE	IF	CITATIONS
55	The expected revenue of energy storage from energy arbitrage service based on the statistics of realistic market data. , 2018, , .		6
56	Efficient distributed OPF for decentralized power system operations and electricity markets. , 2012, , .		5
57	Power flow router sensitivities for post-contingency corrective control. , 2013, , .		5
58	Secondary circuit model generation using limited PV measurements and parameter estimation. , 2016, , .		5
59	Optimal scheduling of large-scale price-maker energy storage. , 2016, , .		5
60	Securing restricted publisher-subscriber communications in smart grid substations. , 2018, , .		5
61	An "On The Fly" Framework for Efficiently Generating Synthetic Big Data Sets. , 2019, , .		5
62	Building HVAC Control via Neural Networks and Natural Evolution Strategies. , 2021, , .		5
63	Neighborhood electric vehicle charging scheduling using particle swarm optimization. , 2014, , .		4
64	Scalability of the Vector Quantization Approach for Fast QSTS Simulation. , 2017, , .		4
65	Communication-Failure-Resilient Distributed Frequency Control in Smart Grids: Part II: Algorithmic Implementation and System Simulations. IEEE Transactions on Power Systems, 2020, 35, 3192-3202.	6.5	4
66	Power Factor Estimation of Distributed Energy Resources Using Voltage Magnitude Measurements. Journal of Modern Power Systems and Clean Energy, 2021, 9, 859-869.	5.4	4
67	Recovering Power Factor Control Settings of Solar PV Inverters from Net Load Data. , 2021, , .		4
68	Fast decomposition-based state estimation using automatic graph partitioning and ADMM. , 2016, , .		3
69	Behind-the-Meter Energy Storage: Economic Assessment and System Impacts in Georgia. , 2019, , .		3
70	A Rapid Quasi-Static Time Series Method for Evaluating Current-Related Distributed PV Impacts including Feeder Loading and Line Losses. , 2019, , .		3
71	Estimation of PV Location based on Voltage Sensitivities in Distribution Systems with Discrete Voltage Regulation Equipment. , 2021, , .		3
72	The Effect of Prosumer Duality on Power Market: Evidence From the Cournot Model. IEEE Transactions on Power Systems, 2023, 38, 692-701.	6.5	3

#	ARTICLE	IF	CITATIONS
73	Penalty Factor-Based Formulation to Support Optimal Energy Scheduling of Distributed Energy Resources in Distribution Systems. , 2022, , .		3
74	PUF-Based Two-Factor Authentication Protocol for Securing the Power Grid Against Insider Threat. , 2022, , .		3
75	Versatile Autonomous Smartgrid Testbed (VAST): A flexible, reconfigurable testbed for research on autonomous control for critical electricity grids. , 2012, , .		2
76	Multi-Dimensional, Multi-Scale Modeling and Algorithms for Integrating Variable Energy Resources in Power Networks. , 2017, , 41-53.		2
77	Geographic Information Systems (GIS) Image Analysis for Prioritizing Power System Restoration. , 2018, , .		2
78	Maximizing the Revenue of Energy Storage Participants in Day-Ahead and Real-Time Markets. , 2018, , .		2
79	Algorithms to Effectively Quantize Scenarios for PV Impact Analysis using QSTS Simulation. , 2018, , .		2
80	Scenario-Selection for Hosting Capacity Analysis of Distribution Feeders with Voltage Regulation Equipment. , 2019, , .		2
81	Grid Cyber-Security Strategy in an Attacker-Defender Model. , 2020, , .		2
82	Distributed Multi-Period DCOPF via an Auxiliary Principle Problem Algorithm. , 2021, , .		2
83	Open-Source Architecture for Multi-Party Update Verification for Data Acquisition Devices. , 2022, , .		2
84	Hardware-Based Randomized Encoding for Sensor Authentication in Power Grid SCADA Systems. , 2022, , .		2
85	RanCompute: Computational Security in Embedded Devices via Random Input and Output Encodings. , 2022, , .		2
86	Computational challenges and analysis under increasingly dynamic and uncertain electric power system conditions. , 2012, , .		1
87	The fundamental value of information and strategy in stochastic management of distributed energy storage. , 2012, , .		1
88	A 7.2 kV experimental setup of a third harmonic hybrid active filter for medium voltage utility applications. , 2013, , .		1
89	Future grid business model innovation: A prosumer-based cost-benefit framework for valuation of Distributed Energy Resources. , 2015, , .		1
90	Energy storage dispatch under different ownership and control models. , 2017, , .		1

#	ARTICLE	IF	CITATIONS
91	Real-time human activity-based energy management system using model predictive control. , 2018, , .		1
92	Resilience analysis of modular controllable transformers. , 2018, , .		1
93	Electrical Grid Smart Cable Detach Mechanism and Emergency Communication Network. , 2019, , .		1
94	N-1 RTU Cyber-Physical Security Assessment Using State Estimation. , 2019, , .		1
95	Smart Home Energy Management System With Optimal Source Selection in a Real-Time Pricing Environment. , 2020, , .		1
96	Detecting Behind-the-Meter PV Installation Using Convolutional Neural Networks. , 2021, , .		1
97	Grid Cyber-Security Strategy in an Attacker-Defender Model. Cryptography, 2021, 5, 12.	2.3	1
98	Communication-Failure-Resilient Distributed Frequency Control in Smart Grids: Part II: Algorithmic Implementation and System Simulations. , 2021, , .		1
99	Sparse Time Series Sampling for Recovery of Behind-the-Meter Inverter Control Models. , 2022, , .		1
100	A Cryptographic Method for Defense Against MiTM Cyber Attack in the Electricity Grid Supply Chain. , 2022, , .		1
101	Integrated risk management for renewable energy investment over life cycle. , 2012, , .		0
102	Potential-game theoretical formulation of optimal power flow problems. , 2012, , .		0
103	Multi-area ATC evaluation based on Kron reduction. , 2013, , .		0
104	The impact of trading wind power in energy-and-reserve market on power system dynamic control. , 2013, , .		0
105	Multi-Dimensional, Multi-Scale Modeling and Algorithms for Integrating Variable Energy Resources in Power Networks. , 2014, , 41-52.		0
106	An investigation of the impact of dispatchable power routers on electricity markets and market participants. , 2014, , .		0
107	Optimal Energy Storage-Grid Coordination for Hospitals: Prototype Development. , 2019, , .		0
108	The Social Cost of Individual Privacy in Aggregated Residential Demand Response. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
109	Elements of Networked Protection Systems for Distribution Networks and Microgrids: A Cyber-Security Perspective. , 2020, , .		0
110	Rail Transit Regenerative Braking Energy Recovery Optimization to Provide Grid Services. , 2021, , .		0
111	Considering Battery Degradation in Energy Storage System Design for Multi-Services Scenarios. , 2020, , .		0
112	Communication-Failure-Resilient Distributed Frequency Control in Smart Grids: Part I: Architecture and Distributed Algorithms. , 2021, , .		0
113	A Charging Strategy for Electric Vehicle Fast Charging Station to Mitigate Distribution Transformer Aging and Reduce Operation Cost. , 2021, , .		0
114	Distributed Control of Aggregated Smart Buildings for Frequency Regulation. , 2021, , .		0