

Mariesa Crow

List of Publications by Year in descending order

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140
papers

6,418
citations

87843

38
h-index

74108

75
g-index

140
all docs

140
docs citations

140
times ranked

5233
citing authors

#	ARTICLE	IF	CITATIONS
1	The Future Renewable Electric Energy Delivery and Management (FREEDM) System: The Energy Internet. Proceedings of the IEEE, 2011, 99, 133-148.	16.4	1,232
2	Battery Energy Storage System (BESS) and Battery Management System (BMS) for Grid-Scale Applications. Proceedings of the IEEE, 2014, 102, 1014-1030.	16.4	468
3	STATCOM control for power system voltage control applications. IEEE Transactions on Power Delivery, 2000, 15, 1311-1317.	2.9	364
4	A Comparison of Diode-Clamped and Cascaded Multilevel Converters for a STATCOM With Energy Storage. IEEE Transactions on Industrial Electronics, 2006, 53, 1512-1521.	5.2	276
5	Integration of a StatCom and battery energy storage. IEEE Transactions on Power Systems, 2001, 16, 254-260.	4.6	197
6	Stochastic Optimization of Renewable-Based Microgrid Operation Incorporating Battery Operating Cost. IEEE Transactions on Power Systems, 2016, 31, 2289-2296.	4.6	168
7	Optimal Sizing of a Vanadium Redox Battery System for Microgrid Systems. IEEE Transactions on Sustainable Energy, 2015, 6, 729-737.	5.9	160
8	Improving Voltage Stability by Reactive Power Reserve Management. IEEE Transactions on Power Systems, 2005, 20, 338-345.	4.6	144
9	The Matrix Pencil for Power System Modal Extraction. IEEE Transactions on Power Systems, 2005, 20, 501-502.	4.6	125
10	Nonlinear Control of FACTS Controllers for Damping Interarea Oscillations in Power Systems. IEEE Transactions on Power Delivery, 2010, 25, 3113-3121.	2.9	119
11	Fault Detection and Mitigation in Multilevel Converter STATCOMs. IEEE Transactions on Industrial Electronics, 2011, 58, 1307-1315.	5.2	117
12	A Reconfigurable FACTS System for University Laboratories. IEEE Transactions on Power Systems, 2004, 19, 120-128.	4.6	109
13	The parallel implementation of the waveform relaxation method for transient stability simulations. IEEE Transactions on Power Systems, 1990, 5, 922-932.	4.6	108
14	Comparison of ultracapacitor electric circuit models. , 2008, , .		103
15	Structure-Preserved Power System Transient Stability Using Stochastic Energy Functions. IEEE Transactions on Power Systems, 2012, 27, 1450-1458.	4.6	102
16	An Improved UPFC Control for Oscillation Damping. IEEE Transactions on Power Systems, 2009, 24, 288-296.	4.6	94
17	Decentralized Dynamic Surface Control of Large-Scale Interconnected Systems in Strict-Feedback Form Using Neural Networks With Asymptotic Stabilization. IEEE Transactions on Neural Networks, 2011, 22, 1709-1722.	4.8	91
18	Pricing and Control in the Next Generation Power Distribution System. IEEE Transactions on Smart Grid, 2012, 3, 907-914.	6.2	90

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19	An Integrated Dynamic Voltage Restorer-Ultracapacitor Design for Improving Power Quality of the Distribution Grid. IEEE Transactions on Sustainable Energy, 2015, 6, 616-624.	5.9	89
20	A fuzzy logic based approach to direct load control. IEEE Transactions on Power Systems, 1996, 11, 708-714.	4.6	83
21	Power System Stabilization Using Adaptive Neural Network-Based Dynamic Surface Control. IEEE Transactions on Power Systems, 2011, 26, 669-680.	4.6	79
22	A Field Validated Model of a Vanadium Redox Flow Battery for Microgrids. IEEE Transactions on Smart Grid, 2014, 5, 1592-1601.	6.2	78
23	A Versatile Probability Model of Photovoltaic Generation Using Pair Copula Construction. IEEE Transactions on Sustainable Energy, 2015, 6, 1337-1345.	5.9	70
24	Online Volt-Var Control for Distribution Systems With Solid-State Transformers. IEEE Transactions on Power Delivery, 2016, 31, 343-350.	2.9	70
25	Electric Vehicle Scheduling Considering Co-optimized Customer and System Objectives. IEEE Transactions on Sustainable Energy, 2018, 9, 410-419.	5.9	66
26	A Novel Approach to Interarea Oscillation Damping by Unified Power Flow Controllers Utilizing Ultracapacitors. IEEE Transactions on Power Systems, 2010, 25, 404-412.	4.6	65
27	Performance Characterization for Photovoltaic-Vanadium Redox Battery Microgrid Systems. IEEE Transactions on Sustainable Energy, 2014, 5, 1379-1388.	5.9	65
28	Power System Voltage Regulation via STATCOM Internal Nonlinear Control. IEEE Transactions on Power Systems, 2011, 26, 1252-1262.	4.6	64
29	Performance Prediction of a Vanadium Redox Battery for Use in Portable, Scalable Microgrids. IEEE Transactions on Smart Grid, 2012, 3, 2109-2116.	6.2	63
30	Cost-Constrained Dynamic Optimal Electric Vehicle Charging. IEEE Transactions on Sustainable Energy, 2017, 8, 716-724.	5.9	63
31	An Ultracapacitor Integrated Power Conditioner for Intermittency Smoothing and Improving Power Quality of Distribution Grid. IEEE Transactions on Sustainable Energy, 2014, 5, 1145-1155.	5.9	56
32	Numerical simulation of Stochastic Differential Algebraic Equations for power system transient stability with random loads. , 2011, , .		53
33	Improving the Dynamic Response of a Flying-Capacitor Three-Level Buck Converter. IEEE Transactions on Power Electronics, 2013, 28, 2356-2365.	5.4	53
34	Heterogeneous Energy Storage Optimization for Microgrids. IEEE Transactions on Smart Grid, 2016, 7, 1453-1461.	6.2	52
35	The multirate method for simulation of power system dynamics. IEEE Transactions on Power Systems, 1994, 9, 1684-1690.	4.6	51
36	Comparison of Matrix Pencil and Prony methods for power system modal analysis of noisy signals. , 2011, , .		50

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37	Zero-Sum Two-Player Game Theoretic Formulation of Affine Nonlinear Discrete-Time Systems Using Neural Networks. IEEE Transactions on Cybernetics, 2013, 43, 1641-1655.	6.2	49
38	The Fokker-Planck Equation for Power System Stability Probability Density Function Evolution. IEEE Transactions on Power Systems, 2013, 28, 2994-3001.	4.6	48
39	An Improved Nonlinear STATCOM Control for Electric Arc Furnace Voltage Flicker Mitigation. IEEE Transactions on Power Delivery, 2009, 24, 2284-2290.	2.9	45
40	Performance Indices for the Dynamic Performance of FACTS and FACTS with Energy Storage. Electric Power Components and Systems, 2004, 33, 299-314.	1.0	44
41	Distributed Power Balancing for the FREEDM System. , 2010, , .		44
42	Stability Design Criteria for Distribution Systems With Solid-State Transformers. IEEE Transactions on Power Delivery, 2014, 29, 0-0.	2.9	44
43	Multi-Objective Dynamic Economic Dispatch with Demand Side Management of Residential Loads and Electric Vehicles. Energies, 2017, 10, 624.	1.6	37
44	An Integrated Active Power Filterâ€“Ultracapacitor Design to Provide Intermittency Smoothing and Reactive Power Support to the Distribution Grid. IEEE Transactions on Sustainable Energy, 2014, 5, 1116-1125.	5.9	33
45	Economic Scheduling of Residential Plug-In (Hybrid) Electric Vehicle (PHEV) Charging. Energies, 2014, 7, 1876-1898.	1.6	31
46	A Variable Partitioning Strategy for the Multirate Method in Power Systems. IEEE Transactions on Power Systems, 2008, 23, 259-266.	4.6	30
47	Decentralized Power Sharing Control for Parallel-Connected Inverters in Islanded Single-Phase Micro-Grids. IEEE Transactions on Smart Grid, 2018, 9, 6721-6730.	6.2	29
48	The Waveform Relaxation method for systems of differential/algebraic equations. Mathematical and Computer Modelling, 1994, 19, 67-84.	2.0	28
49	Novel Dynamic Representation and Control of Power Systems With FACTS Devices. IEEE Transactions on Power Systems, 2010, 25, 1542-1554.	4.6	28
50	Performance evaluation of energy efficient lighting associated with renewable energy applications. Renewable Energy, 2012, 44, 423-430.	4.3	26
51	Robust Current Control of Grid-Tied Inverters for Renewable Energy Integration Under Non-Ideal Grid Conditions. IEEE Transactions on Sustainable Energy, 2020, 11, 477-488.	5.9	26
52	Computational Methods for Electric Power Systems. , 0, , .		26
53	Intelligent Energy Management of the FREEDM System. , 2010, , .		21
54	Optimization in energy and power management for renewable-diesel microgrids using Dynamic Programming algorithm. , 2012, , .		18

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55	An analysis of power system transient stability using stochastic energy functions. International Transactions on Electrical Energy Systems, 2013, 23, 151-165.	1.2	18
56	Flexible method for power network planning using the unascertained number. Electric Power Systems Research, 2004, 68, 41-46.	2.1	17
57	Distributed Generation and Storage Optimal Control With State Estimation. IEEE Transactions on Smart Grid, 2013, 4, 2266-2273.	6.2	17
58	Stability Assessment Extensions for Single-Phase Distribution Solid-State Transformers. IEEE Transactions on Power Delivery, 2015, 30, 1636-1638.	2.9	17
59	Computational Methods for Electric Power Systems. , 0, , .		17
60	Nonlinear parameter estimation of excitation systems. IEEE Transactions on Power Systems, 2000, 15, 1225-1231.	4.6	16
61	Distributed Grid Intelligence for future microgrid with renewable sources and storage. , 2010, , .		15
62	The New Centurions. IEEE Power and Energy Magazine, 2010, 8, 20-26.	1.6	15
63	The Existence of Multiple Equilibria in the UPFC Power Injection Model. IEEE Transactions on Power Systems, 2007, 22, 2280-2282.	4.6	14
64	A novel PLL system based on adaptive resonant filter. , 2008, , .		14
65	Zero-sum two-player game theoretic formulation of affine nonlinear discrete-time systems using neural networks. , 2010, , .		14
66	A Novel Real-Time Approach to Unified Power Flow Controller Validation. IEEE Transactions on Power Systems, 2010, 25, 1892-1901.	4.6	14
67	A Balance-of-Plant Vanadium Redox Battery System Model. IEEE Transactions on Sustainable Energy, 2015, 6, 557-564.	5.9	14
68	Microgrid application with computer models and power management integrated using PSCAD/EMTDC. , 2011, , .		13
69	A Feedback Linearization Based Unified Power Flow Controller Internal Controller for Power Flow Control. Electric Power Components and Systems, 2012, 40, 628-647.	1.0	13
70	A Transactive Operating Model for Smart Airport Parking Lots. IEEE Power and Energy Technology Systems Journal, 2018, 5, 157-166.	3.5	13
71	Mitigating Event Confidentiality Violations in Smart Grids: An Information Flow Security-Based Approach. IEEE Transactions on Smart Grid, 2013, 4, 1227-1234.	6.2	12
72	Decentralized DC Voltage and Power Sharing Control of the Parallel Grid Converters in Multi-Terminal DC Power Integration System. IEEE Transactions on Sustainable Energy, 2019, 10, 1971-1980.	5.9	12

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73	Neural Network Based Decentralized Controls of Large Scale Power Systems. , 2007, , .		11
74	Optimal Placement and Control of Unified Power Flow Control devices using Evolutionary Computing and Sequential Quadratic Programming. , 2006, , .		10
75	Damping inter-area oscillations in power systems by STATCOMs. , 2008, , .		10
76	Design of a Conditioner for smoothing wind turbine output power. , 2010, , .		10
77	Modeling of multi-terminal VSC-based HVDC system. , 2016, , .		10
78	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
79	Empirical Investigation of Non-Convexities in Optimal Power Flow Problems. , 2018, , .		10
80	A feasibility study of on-line excitation system parameter estimation. IEEE Transactions on Power Systems, 1998, 13, 910-916.	4.6	9
81	Cascading Line Outage Prevention with Multiple UPFCs. , 2007, , .		9
82	A comparison of linear and nonlinear STATCOM control for power quality enhancement. , 2008, , .		9
83	An analysis of the impact of plug-in hybrid electric vehicles on power system stability. , 2009, , .		9
84	A novel phase-locked-loop and its application in STATCOM system. , 2010, , .		9
85	Adaptive quadrant filter based phase locked loop system. , 2010, , .		9
86	Predicting performance of a renewable energy-powered microgrid throughout the United States using typical meteorological year 3 data. Renewable Energy, 2013, 55, 189-195.	4.3	9
87	Clustering-based methodology for optimal residential time of use design structure. , 2014, , .		9
88	A Novel Flow Invariants-Based Approach to Microgrid Management. IEEE Transactions on Smart Grid, 2015, 6, 516-525.	6.2	8
89	Dynamics of voltage instability and collapse. International Journal of Electrical Power and Energy Systems, 1994, 16, 235-241.	3.3	7
90	An energy based approach to undervoltage load shedding. Electric Power Systems Research, 1995, 32, 11-18.	2.1	7

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91	An Open Framework for Highly Concurrent Real-Time Hardware-in-the-Loop Simulation. , 2008, , .		7
92	Integrating research results into a power engineering curriculum. IEEE Transactions on Power Systems, 1999, 14, 404-411.	4.6	6
93	Dynamic response improvement in a buck type converter using capacitor current feed-forward control. , 2010, , .		6
94	Programmed for Success: Educating Tomorrow's Workforce [From the Guest Editor. IEEE Power and Energy Magazine, 2010, 8, 14-17.	1.6	6
95	Development of a Mobile Water Disinfection Unit Powered by Renewable Energy. Journal of Energy Engineering - ASCE, 2011, 137, 207-213.	1.0	6
96	Computer models for microgrid applications. , 2011, , .		6
97	Discussion on Effective Control of Inter-Area Oscillations by UPFCs. , 2007, , .		5
98	Optimal placement and signal selection for wide-area controlled UPFCs for damping power system oscillations. , 2009, , .		5
99	Vulnerability analysis of a smart grid with monitoring and control system. , 2013, , .		5
100	Comparison of Various Trilinear Monomial Envelopes for Convex Relaxations of Optimal Power Flow Problems. , 2018, , .		5
101	New Infeed Correction Methods for Distance Protection in Distribution Systems. Energies, 2021, 14, 4652.	1.6	5
102	Voltage collapse. IEEE Potentials, 1994, 13, 18-21.	0.2	4
103	Damping inter-area oscillations by UPFCs based on selected global measurements. , 2008, , .		4
104	Dynamic response improvement in a three-level buck type converter. , 2010, , .		4
105	Feedback linearization internal control for the unified power flow controller. , 2010, , .		4
106	Investigation on singularity of stochastic differential algebraic power system model. , 2011, , .		4
107	Using Conditional Probability to Predict Solar-Powered Pump-and-Treat Performance. Journal of Hazardous, Toxic, and Radioactive Waste, 2013, 17, 31-37.	1.2	4
108	Multi-objective electric vehicle scheduling considering customer and system objectives. , 2017, , .		4

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109	Synchronverter-based Control of Multi-Port Autonomous Reconfigurable Solar Plants (MARS). , 2020, , .		4
110	Impact of Load Tap Changing Transformers on Power Transfer Capability. Electric Power Components and Systems, 2004, 32, 1331-1346.	1.0	3
111	Symbolic Reduction for High-Speed Power System Simulation. Simulation, 2008, 84, 297-309.	1.1	3
112	Test bed evaluation of future power distribution systems with renewable resources. , 2009, , .		3
113	Decentralized control of large scale interconnected systems using adaptive neural network-based dynamic surface control. , 2009, , .		3
114	Dynamic placement and signal selection for UPFCs in wide-area controlled power systems. , 2010, , .		3
115	An automated forward operating base electrical distribution system simulator. , 2012, , .		3
116	The Fokker-Planck equation for power system stability probability density function evolution. , 2014, , .		3
117	Capture Zone Comparison for Photovoltaic Microgrid-Powered Pump and Treat Remediation. Journal of Hazardous, Toxic, and Radioactive Waste, 2014, 18, .	1.2	3
118	An integrated active power filter-ultracapacitor design to provide intermittency smoothing and reactive power support to the distribution grid. , 2015, , .		3
119	Economic and battery health conscious vehicle-to-grid electric vehicle operation. , 2016, , .		3
120	A Chain Method for Preconditioned Iterative Linear Solvers for Power System Matrices. IEEE Transactions on Power Systems, 2018, 33, 166-173.	4.6	3
121	The Effect of Various UPFC Operating Points on Transient Stability. , 2006, , .		2
122	Comparisons Of An Adaptive Neural Network Based Controller And An Optimized Conventional Power System Stabilizer. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	2
123	Development of a FACTS Real-Time Hardware-in-the-Loop Simulation. , 2007, , .		2
124	A hardware-in-loop FACTS control system design for real-time power system simulation. , 2009, , .		2
125	Dynamic response improvement in H-bridge enhanced buck converter. , 2012, , .		2
126	Novel dynamic representation and control of power networks embedded with FACTS devices. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	1

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127	Power engineering education: Challenges and opportunities. , 2008, , .		1
128	Hamiltonian theory based coordinated nonlinear control of generator excitation and STATCOMs. , 2010, , .		1
129	Fokker-Planck equation application to analysis of a simplified wind turbine model. , 2012, , .		1
130	Modeling of vanadium redox battery by field analysis and neural network approach. , 2014, , .		1
131	Computationally efficient solvers for power system applications. , 2015, , .		1
132	An ultracapacitor integrated power conditioner for intermittency smoothing and improving power quality of distribution grid. , 2015, , .		1
133	A First Course in Power: Can a Single Course Serve All Students?. , 2007, , .		0
134	Questioning the metrics for performance evaluation. , 2008, , .		0
135	Proposal writing from three perspectives: Technical Communication, Engineering, and science. , 2009, , .		0
136	Ultracapacitor frequency analysis and its equivalent circuit modeling. , 2009, , .		0
137	Distributed Power Generation at State Facilities: Economic Analysis of Savings and Carbon Credits. , 2009, , .		0
138	A Mobile Emergency Drinking Water System Powered by Renewable Energy. , 2009, , .		0
139	Distribution system operation with solid state controller and energy storage management. , 2012, , .		0
140	A Solid State Transformer Model for Proper Integration to Distribution Networks. , 2019, , .		0