Chia-Chi Chu

List of Publications by Year
in descending order

150 papers	2,802 citations	236833 25 h-index	197736 49 g-index
150 all docs	150 docs citations	150 times ranked	2429 citing authors

#	ARTICLE	IF	CITATIONS
1	A New Droop Control Method for the Autonomous Operation of Distributed Energy Resource Interface Converters. IEEE Transactions on Power Electronics, 2013, 28, 1980-1993.	5.4	367
2	Direct stability analysis of electric power systems using energy functions: theory, applications, and perspective. Proceedings of the IEEE, 1995, 83, 1497-1529.	16.4	345
3	Consensus-Based Secondary Frequency and Voltage Droop Control of Virtual Synchronous Generators for Isolated AC Micro-Grids. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 443-455.	2.7	152
4	Consensus-Based Droop Control Synthesis for Multiple DICs in Isolated Micro-Grids. IEEE Transactions on Power Systems, 2015, 30, 2243-2256.	4.6	136
5	A Novel Transformer-less Adaptable Voltage Quadrupler DC Converter with Low Switch Voltage Stress. IEEE Transactions on Power Electronics, 2014, 29, 4787-4796.	5.4	133
6	A Novel Transformerless Interleaved High Step-Down Conversion Ratio DC–DC Converter With Low Switch Voltage Stress. IEEE Transactions on Industrial Electronics, 2014, 61, 5290-5299.	5.2	106
7	Wide-Area Measurement-Based Voltage Stability Indicators by Modified Coupled Single-Port Models. IEEE Transactions on Power Systems, 2014, 29, 756-764.	4.6	101
8	NTL Detection in Electric Distribution Systems Using the Maximal Overlap Discrete Wavelet-Packet Transform and Random Undersampling Boosting. IEEE Transactions on Power Systems, 2018, 33, 7171-7180.	4.6	94
9	Complex Networks Theory For Modern Smart Grid Applications: A Survey. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2017, 7, 177-191.	2.7	81
10	On projection-based algorithms for model-order reduction of interconnects. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2002, 49, 1563-1585.	0.1	75
11	A systematic search method for obtaining multiple local optimal solutions of nonlinear programming problems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1996, 43, 99-109.	0.1	69
12	On the fractal nature of trabecular structure. Medical Physics, 1994, 21, 1535-1540.	1.6	57
13	Three-Phase PLLs by Using Frequency Adaptive Multiple Delayed Signal Cancellation Prefilters Under Adverse Grid Conditions. IEEE Transactions on Industry Applications, 2018, 54, 3832-3844.	3.3	57
14	A new droop control method for the autonomous operation of distributed energy resource interface converters. , 2010, , .		49
15	Intrusion Detection in Distributed Frequency Control of Isolated Microgrids. IEEE Transactions on Smart Grid, 2019, 10, 6502-6515.	6.2	49
16	Model Reference Adaptive Back-Electromotive-Force Estimators for Sensorless Control of Grid-Connected DFIGs. IEEE Transactions on Industry Applications, 2018, 54, 1701-1711.	3.3	47
17	Distributed Pinning Droop Control in Isolated AC Microgrids. IEEE Transactions on Industry Applications, 2017, 53, 3237-3249.	3.3	42
18	An adaptive-order rational Arnoldi method for model-order reductions of linear time-invariant systems. Linear Algebra and Its Applications, 2006, 415, 235-261.	0.4	37

#	Article	IF	Citations
19	Dynamic Performance Improvement of Multiple Delayed Signal Cancelation Filters Based Three-Phase Enhanced-PLL. IEEE Transactions on Industry Applications, 2018, 54, 5293-5305.	3.3	34
20	Iterative Distributed Algorithms for Real-Time Available Transfer Capability Assessment of Multiarea Power Systems. IEEE Transactions on Smart Grid, 2015, 6, 2569-2578.	6.2	33
21	Constructing Analytical Energy Functions for Network-Preserving Power System Models. Circuits, Systems, and Signal Processing, 2005, 24, 363-383.	1.2	30
22	Distributed Probabilistic ATC Assessment by Optimality Conditions Decomposition and LHS Considering Intermittent Wind Power Generation. IEEE Transactions on Sustainable Energy, 2019, 10, 375-385.	5.9	30
23	Improved practices in machine learning algorithms for NTL detection with imbalanced data. , 2017, , .		28
24	Model-order reductions for MIMO systems using global Krylov subspace methods. Mathematics and Computers in Simulation, 2008, 79, 1153-1164.	2.4	27
25	Single-Phase Enhanced Phase-Locked Loops Based on Multiple Delayed Signal Cancellation Filters for Micro-Grid Applications. IEEE Transactions on Industry Applications, 2019, 55, 7122-7133.	3.3	27
26	Deception Attack Detection of Isolated DC Microgrids Under Consensus- Based Distributed Voltage Control Architecture. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2021, 11, 155-167.	2.7	26
27	Hybrid search for the optimal PMU placement problem on a power grid. European Journal of Operational Research, 2015, 243, 985-994.	3.5	25
28	Consensus-Based Droop Control of Isolated Micro-Grids by ADMM Implementations. IEEE Transactions on Smart Grid, 2018, 9, 5101-5112.	6.2	25
29	Dynamic Performance Enhancement of Single-Phase and Two-Phase Enhanced Phase-Locked Loops by Using In-Loop Multiple Delayed Signal Cancellation Filters. IEEE Transactions on Industry Applications, 2020, 56, 740-751.	3.3	22
30	Long-Term Voltage Instability Detections of Multiple Fixed-Speed Induction Generators in Distribution Networks Using Synchrophasors. IEEE Transactions on Smart Grid, 2015, 6, 2069-2079.	6.2	21
31	Design and Deployment of Special Protection System for Kinmen Power System in Taiwan. IEEE Transactions on Industry Applications, 2017, 53, 4176-4185.	3.3	19
32	Recursive Implementation of Multiple Delayed Signal Cancellation Operators and Their Applications in Prefiltered and In-Loop Filtered PLLs Under Adverse Grid Conditions. IEEE Transactions on Industry Applications, 2019, 55, 5383-5394.	3.3	18
33	A Fast Frequency Control Based on Model Predictive Control Taking Into Account of Optimal Allocation of Power From the Energy Storage System. IEEE Transactions on Power Delivery, 2021, 36, 2467-2478.	2.9	18
34	Constructing analytical energy functions for lossless network-reduction power system models: Framework and new developments. Circuits, Systems, and Signal Processing, 1999, 18, 1-16.	1.2	17
35	Enhanced Optimal PMU Placements With Limited Observability Propagations. IEEE Access, 2020, 8, 22515-22524.	2.6	17
36	Integrations of Neural Networks and Transient Energy Functions for Designing Supplementary Damping Control of UPFC. IEEE Transactions on Industry Applications, 2019, 55, 6438-6450.	3.3	15

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37	Chance-constrained unit commitment with energy storage systems in electric power systems. Energy Reports, 2022, 8, 1067-1090.	2.5	15
38	Nonlinear STATCOM Controller using Passivity-Based Sliding Mode Control. , 2006, , .		13
39	Power swings damping improvement by control of UPFC and SMES based on direct Lyapunov method application. , 2008, , .		13
40	Applications of Nonlinear Control for Fault Ride-Through Enhancement of Doubly Fed Induction Generators. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 749-763.	3.7	13
41	Autonomous power management and load sharing in isolated micro-grids by consensus-based droop control of power converters. , 2013, , .		12
42	Effect of Taiwan's energy policy on unit commitment in 2025. Applied Energy, 2020, 277, 115585.	5.1	11
43	Passivity-based Nonlinear STATCOM Controller Design for Improving Transient Stability of Power Systems. , 0, , .		10
44	Control strategies for distributed energy resources interface converters in the low voltage Microgrid. , 2009, , .		10
45	Modelling and locating unified power-flow controllers for static voltage stability enhancements. International Transactions on Electrical Energy Systems, 2014, 24, 1524-1540.	1.2	10
46	Probabilistic Optimal PMU Placements Under Limited Observability Propagations. IEEE Systems Journal, 2022, 16, 767-776.	2.9	10
47	Developing an Optimal Scheduling of Taiwan Power System With Highly Penetrated Renewable Energy Resources and Pumped Hydro Storages. IEEE Transactions on Industry Applications, 2021, 57, 1973-1986.	3.3	10
48	Robust consensus-based droop control for multiple power converters in isolated micro-grids. , 2014, , .		9
49	Multiple Delayed Signal Cancellation Filter-Based Enhanced Frequency-Locked Loop Under Adverse Grid Conditions. IEEE Transactions on Industry Applications, 2022, 58, 6612-6628.	3.3	9
50	Application of Lyapunov-based adaptive neural network upfc damping controllers for transient stability enhancement. , 2008, , .		8
51	Structure preserving model-order reductions of MIMO second-order systems using Arnoldi methods. Mathematical and Computer Modelling, 2010, 51, 956-973.	2.0	8
52	Boundary properties of the BCU method for power system transient stability assessment. , 2010, , .		7
53	Implementations of seamless transfer and active islanding detections for microgrid applications. , 2013, , .		7
54	Consensus-based P-f /Q-V droop control in autonomous micro-grids with wind generators and energy storage systems. , 2014, , .		7

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55	Three-phase grid synchronization PLL using multiple delayed signal cancellation under adverse grid voltage conditions. , 2017, , .		7
56	Performance enhancement of pre-filtered multiple delayed signal cancellation based PLL. , 2017, , .		6
57	Power flow computations of convertible static compensators for large-scale power systems. , 0, , .		5
58	Integrated application of SSSC and SMES to improve power swings damping based on direct Lyapunov method. , 2008, , .		5
59	Fault locating estimation using thevenin equivalent in power systems. , 2010, , .		5
60	Consensus-based droop control synthesis for multiple power converters in lossy micro-grids. , 2013, , .		5
61	Short-term voltage instability detections of wind generators using synchrophasors. , 2014, , .		5
62	Recursive Implementation of Multiple Delayed Signal Cancellation Operators and Their Applications in Pre-Filtered and In-Loop Filtered PLLs Under Adverse Grid Conditions. , 2018, , .		5
63	Applications of multi-point Arnoldi algorithms to linear lumped transformer model simplifications. , 0, , .		4
64	Comprehensive UPFC models for power flow calculations in practical power systems. , 2001, , .		4
65	Robust power system stabilizer design for an industrial power system in Taiwan using linear matrix inequality techniques. , 0, , .		4
66	Infrastructure Development and Integration of Electrical-Based Dimensional Process Window Checking. IEEE Transactions on Semiconductor Manufacturing, 2004, 17, 123-141.	1.4	4
67	Universal field-oriented rotor-side controllers for doubly-fed induction generators. , 2009, , .		4
68	Energy function based neural networks UPFC for transient stability enhancement of network-preserving power systems. , 2010, , .		4
69	Quantitative analysis of system parameters asymmetry on droop-controlled converters. , 2012, , .		4
70	Multi-objective power management on smart grid. , 2014, , .		4
71	Optimal PMU placements under propagation depth constraints by mixed integer linear programming. , 2016, , .		4
72	Consensus-based distributed droop control of VSGs for isolated AC micro-grids by ADMMs. , 2016, , .		4

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73	UPFC Supplementary Damping Control Synthesis: A Forward Neural Networks Approximated Energy Function Approach. , 2018, , .		4
74	Experiences on Remediation of Special Protection System for Kinmen Power System in Taiwan. IEEE Transactions on Industry Applications, 2020, 56, 2418-2426.	3.3	4
75	Synchronization of Heterogeneous Forced First-Order Kuramoto Oscillator Networks: A Differential Inequality Approach. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 757-770.	3.5	4
76	Some results on the problems of decentralized reliable stabilization. International Journal of Control, 1991, 53, 1343-1358.	1.2	3
77	Analysis of transmission capability associated with the installation of the largest nonutility generating (NUG) facility in Taiwan. , 0, , .		3
78	Efficient look-ahead load margin and voltage profiles contingency analysis using the tangent vector index method. , 0, , .		3
79	The Global Lanczos Method for MIMO Interconnect Order Reductions. , 0, , .		3
80	Passivity-based control of UPFCs. , 2009, , .		3
81	Impacts on the transmission grid for integrations of renewable energy in Taiwan. , 2011, , .		3
82	Real-time simulations of a laboratory-scale micro-grid system in Taiwan. , 2012, , .		3
83	Smart Grid Development in Taiwan. IEEJ Journal of Industry Applications, 2012, 1, 41-45.	0.9	3
84	Laboratory-scaled STATCOM for unbalanced voltage sag mitigation by decoupled double synchronous reference current controllers. , 2013, , .		3
85	Back-EMF-based model-reference adaptive sensorless control for grid-connected DFIGs. , 2013, , .		3
86	Consensus-based distributed droop control of synchronverters for isolated micro-grids. , 2015, , .		3
87	Capacity-based service restoration using Multi-Agent technology and ensemble learning. , 2015, , .		3
88	Distributed pinning droop control in isolated AC microgrids. , 2016, , .		3
89	Design and deployment of special protection system for Kinmen power system. , 2016, , .		3
90	Single-Phase Multiple Delayed Signal Cancellation Filter-Based Enhanced Phase-Locked Loop for Accurate Estimations of Grid Voltage Information. , 2018, , .		3

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91	Novel Control Method for Ultra-High Step-Down Converter. , 2019, , .		3
92	An Accurate Accelerated Steady-State Model for High-Level Modular Multilevel Converters. IEEE Transactions on Industry Applications, 2021, 57, 4278-4293.	3.3	3
93	Interconnect Model Reductions by Using the AORA Algorithm With Considering the Adjoint Network. , 0, , .		2
94	A Web-based Power Flow Calculation of Large-Scale Power Systems Embedded with VSC-based HVDC systems. , 0, , .		2
95	MIMO Interconnects Order Reductions by Using the Global Arnoldi Algorithm. , 0, , .		2
96	An internet based embedded network monitoring system for renewable energy systems. , 2007, , .		2
97	Applications of STATCOMs for voltage security enhancements in Taiwan power system. , 2009, , .		2
98	PMU measurement-based voltage stability indicators by modified multi-port equivalent models. , 2013, , .		2
99	Guest Editorial Complex Network for Modern Smart Grid Application—Part 2: Stability, Reliability and Resilience Issues. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2017, 7, 345-348.	2.7	2
100	A Novel Load Margin Sensitivity Method for Predicting Load Margin of Line Outage with Wind Power Generation Systems. IFAC-PapersOnLine, 2018, 51, 586-591.	0.5	2
101	Improved Performance of Single-phase and Two-Phase Enhanced Phase-Locked Loops by using Multiple Delayed Signal Cancellation Filters. , 2018, , .		2
102	Decentralized PMU Placements in a Dynamic Programming Approach. , 2019, , .		2
103	An investigation of invariant properties of unstable equilibrium points on the stability boundary for simple power system models. , 0, , .		1
104	Chaotic motions of simple power system models. , 0, , .		1
105	Optimal strategy to split firm and recallable available transfer capability in the deregulated environment. , 0, , .		1
106	Power flow models of unified power flow controllers in various operation modes. , 0, , .		1
107	Smart gateway systems for Internet security for broadband communication networks: SoC solutions and FPGA demonstrations. , 2003, , .		1
108	Applications of tree/link partitioning for moment computations of general lumped RLC networks with resistor loops. , 0, , .		1

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109	Multi-point model reductions of VLSI interconnects using the rational arnoldi method with adaptive orders (RAMAO). , 0, , .		1
110	Model-Order Reduction Algorithm with Structure Preserving Techniques. , 2006, , .		1
111	Dynamical equivalencing of large-scale power systems using Second-Order Arnoldi algorithms. , 2009, , .		1
112	Fault ride-through enhancements of wind turbine with doubly-fed induction generator using the robust variable structure system control. , 2010, , .		1
113	A novel high step-up ratio interleaved dc converter with low switch voltage stress. , 2010, , .		1
114	Risk-based generator rejection protection system design in Taiwan Power System. , 2012, , .		1
115	Distributed real-time simulation modeling and analysis of a micro-grid with renewable energy sources. , 2012, , .		1
116	Distributed real-time simulation and on-site development of a micro-grid with renewable energy sources. , 2012, , .		1
117	A transformer-less interleaved four-phase current-fed converter with new voltage multiplier topology. , 2013, , .		1
118	Probabilistic load margins of power systems embedded with wind farms. , 2013, , .		1
119	Distributed algorithm for PMU placement under n-1 line outage conditions. , 2015, , .		1
120	Consensus-based distributed droop control of isolated micro-grids by alternating direction multipliers methods. , 2015, , .		1
121	On the use of optimality conditions decomposition techniques for distributed ATC assessment of multi-area power systems. , 2016, , .		1
122	Pinning-based distributed droop control of power converters in isolated AC microgrids. , 2016, , .		1
123	Model reference adaptive back-EMF estimations for sensorless control of grid-connected doubly-fed induction generators. , 2016, , .		1
124	Guest Editorial Complex Network for Modern Smart Grid Applications (Part 1: Analysis and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 To	2.7	1
125	Impacts of Wind Gust and Cloud-Shading on Renewable Energy Generation. , 2019, , .		1
126	Experiences on Remediation of Special Protection System for Kinmen Power System in Taiwan. , 2019, , .		1

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127	Multiple Delayed Signal Cancellation Filter-Based Enhanced Frequency-Locked Loop Under Adverse Grid Conditions. , 2021, , .		1
128	A systematic search method for obtaining multiple local optimal solutions of nonlinear programming problems. , 0, , .		0
129	Multi-swing transient instability problems in electric power systems: a preliminary study. , 0, , .		0
130	Crosstalk estimation in high-speed VLSI interconnect using coupled RLC-tree models. , 0, , .		0
131	Intelligent multipoint Arnoldi (IMA) approximations of FIR filters by low-order linear-phase IIR filters. , 0, , .		0
132	Moment computations for R(L)C interconnects with multiple resistor loops using robdd techniques. , 0, , .		0
133	Generalizations of adjoint networks technique for RLC interconnects model-order reductions. , 0, , .		0
134	Moment computations of nonuniform distributed coupled RLC trees with applications to estimating crosstalk noise. , 0, , .		0
135	Error estimations of projection-based interconnect model-order reduction techniques. , 0, , .		0
136	The Multiple Point Global Lanczos Method for MIMO Interconnect Model-Order Reductions. , 2006, , .		0
137	Applications of AOGL Model-Order Reduction Techniques in Interconnect Analysis. , 2007, , .		0
138	Applying power domination with hybrid search to optimal PMU placement problems. , 2013, , .		0
139	A novel transformer-less interleaved four-phase high step-down DC converter with low switch voltage stress. , 2014, , .		0
140	Distributed APPM for on-line voltage stability assessment of the large-scale power grid. , 2014, , .		0
141	Applications of solid-state fault current limiters for transient stability enhancement of wind power generation systems. , 2015, , .		0
142	An efficient method for small-signal stability assessment of $P âˆ' Æ'/Q âˆ' VÌ‡$ droop control in an isolated micro-grid. , 2016, , .		0
143	Probabilistic Load Margin Analysis Considering Stochastic Wind Power Fluctuations. , 2018, , .		0
144	Single-Phase Enhanced Phase-Locked Loops Based on Multiple Delayed Signal Cancellation Filters. , 2019, , .		0

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145	Applications of System Integrity Protection Scheme and Multi-Phase Reclosing of Transmission Lines for Stability Enhancement in Taiwan Power System. IEEE Transactions on Industry Applications, 2021, 57, 4548-4557.	3.3	0
146	Research of Digital Relays based on Real-Time Simulation Techniques. , 2011, , .		0
147	The Refinement of Generation Scheduling and Underfrequency Load Shedding Protection Scheme for Nangan-Beigan Power System in Taiwan. , 2021, , .		0
148	High Step-Down Conversion Ratios of DC-DC Converters Under Triple PWM Control Schemes. , 2021, , .		0
149	Dynamical Performance Enhancement of Synchronous Reference Frame Phase-Locked Loop by K-Factor Method. , 2021, , .		0
150	Distributed Optimal Consensus-Based Secondary Frequency and Voltage Control of Isolated AC Microgrids. , 2021, , .		0