

# Ching-Ming Lai

## List of Publications by Year in descending order

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107  
papers

2,291  
citations

218381

26  
h-index

233125

45  
g-index

107  
all docs

107  
docs citations

107  
times ranked

1604  
citing authors

#	ARTICLE	IF	CITATIONS
1	Load-Adaptive Resonant Frequency-Tuned $\Delta\sigma$ Pulse Density Modulation for Class-D ZVS High-Frequency Inverter-Based Inductive Wireless Power Transfer. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 411-420.	3.0	8
2	Network topology optimisation based on dynamic thermal rating and battery storage systems for improved wind penetration and reliability. Applied Energy, 2022, 305, 117837.	5.1	99
3	Available Capacity Computation Model Based on Long Short-Term Memory Recurrent Neural Network for Gelled-Electrolyte Batteries in Golf Carts. IEEE Access, 2022, 10, 54433-54444.	2.6	7
4	MHz-Driving Current-Fed Snubberless Soft Switching DC-DC Converter. IEEE Transactions on Industry Applications, 2022, 142, 9-17.	0.1	4
5	Comprehensive review of the dynamic thermal rating system for sustainable electrical power systems. Energy Reports, 2022, 8, 3263-3288.	2.5	66
6	Fuzzy Dynamic Thermal Rating System-Based Thermal Aging Model for Transmission Lines. Energies, 2022, 15, 4395.	1.6	3
7	Optimum allocation of battery energy storage systems for power grid enhanced with solar energy. Energy, 2021, 223, 120105.	4.5	114
8	Novel Offline Software-in-the-Loop Simulation Technique for Modular Single-Phase Flyback Current Source Grid-Tie Inverter System. IEEE Access, 2021, 9, 100814-100826.	2.6	2
9	Simulation-Assisted Design Process of a 22 kW Wireless Power Transfer System Using Three-Phase Coil Coupling for EVs. Sustainability, 2021, 13, 12257.	1.6	0
10	The Role of International Journal of Energy and Power Systems (IJEPS). , 2021, , .		0
11	A Compensated Peak Current Mode Control PWM for Primary-Side Controlled Flyback Converters. Energies, 2021, 14, 7458.	1.6	1
12	GaN-HEMT MHz-Driving Current-Fed Snubberless ZCS High Step-Up DC-DC Converter for Fuel Cell Vehicles. , 2021, , .		0
13	A Magnetic Integrated LCL-EMI Filter for a Single-Phase SiC-MOSFET Grid-Connected Inverter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 601-617.	3.7	36
14	Predictive Adaptive Filter for Reducing Total Harmonics Distortion in PV Systems. Energies, 2020, 13, 3286.	1.6	17
15	Demand Response and Dynamic Line Ratings for Optimum Power Network Reliability and Ageing. IEEE Access, 2020, 8, 175319-175328.	2.6	34
16	Integration of Wind and Demand Response for Optimum Generation Reliability, Cost and Carbon Emission. IEEE Access, 2020, 8, 183606-183618.	2.6	30
17	Study of a Bidirectional Power Converter Integrated with Battery/Ultracapacitor Dual-Energy Storage. Energies, 2020, 13, 1234.	1.6	8
18	Development of a DC-Side Direct Current Controlled Active Ripple Filter for Eliminating the Double-Line-Frequency Current Ripple in a Single-Phase DC/AC Conversion System. Energies, 2020, 13, 4772.	1.6	7

#	ARTICLE	IF	CITATIONS
19	Coupled Inductor-assisted Current-Fed Snubber-less Zero-Current-Soft Switching High Step-Up DC-DC Converter for Fuel Cell Power Interface. , 2020, , .		6
20	Risk-Based Management of Transmission Lines Enhanced With the Dynamic Thermal Rating System. IEEE Access, 2019, 7, 76562-76572.	2.6	49
21	Reliability impacts of the dynamic thermal rating and battery energy storage systems on wind-integrated power networks. Sustainable Energy, Grids and Networks, 2019, 20, 100268.	2.3	77
22	Development of a Novel Battery-Powered DC-AC System. , 2019, , .		0
23	Reliability Impacts of the Dynamic Thermal Rating System on Smart Grids Considering Wireless Communications. IEEE Access, 2019, 7, 41625-41635.	2.6	64
24	An Active Damping Control Method for the <i>LLCL</i> Filter-Based SiC MOSFET Grid-Connected Inverter in Vehicle-to-Grid Application. IEEE Transactions on Vehicular Technology, 2019, 68, 3411-3423.	3.9	19
25	Fuzzy Evaluation of Transmission Line End-of-Life Reliability Model. , 2019, , .		1
26	On the Stability of Virtual Inertia Control Implemented by Grid-Connected Power Converters with Delay Effects. , 2019, , .		1
27	Prospects of Using the Dynamic Thermal Rating System for Reliable Electrical Networks: A Review. IEEE Access, 2018, 6, 26765-26778.	2.6	87
28	Development of a modular single-phase grid-tie inverter system for fuel-cell power generation. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers, Series A/Chung-kuo Kung Ch'eng Hsueh K'an, 2018, 41, 112-123.	0.6	8
29	Development of a Bidirectional DC/DC Converter With Dual-Battery Energy Storage for Hybrid Electric Vehicle System. IEEE Transactions on Vehicular Technology, 2018, 67, 1036-1052.	3.9	106
30	Application of Particle Swarm Optimization to Design Control Strategy Parameters of Parallel Hybrid Electric Vehicle with Fuel Economy and Low Emission. , 2018, , .		2
31	A Systematic Review of Reliability Studies on Composite Power Systems: A Coherent Taxonomy Motivations, Open Challenges, Recommendations, and New Research Directions. Energies, 2018, 11, 2417.	1.6	37
32	A Bidirectional Converter with Hybrid Energy Sources for Light Electric Vehicle (LEV). , 2018, , .		0
33	Impact of Demand Side Management and Dynamic Thermal Rating System on the Reliability of Power Systems. , 2018, , .		1
34	Evolutionary Computation-Based Memetic Algorithm Against Genetic Algorithm to Improve PCR-RFLP Assay Primers of SNP Genotyping. IEEE Access, 2018, 6, 77807-77815.	2.6	1
35	Development of Energy Storage Systems for Power Network Reliability: A Review. Energies, 2018, 11, 2278.	1.6	112
36	Photovoltaic Integrated Shunt Active Power Filter with Simpler ADALINE Algorithm for Current Harmonic Extraction. Energies, 2018, 11, 1152.	1.6	17

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37	Composite Reliability Evaluation of Load Demand Side Management and Dynamic Thermal Rating Systems. <i>Energies</i> , 2018, 11, 466.	1.6	34
38	A High-Gain Reflex-Based Bidirectional DC Charger with Efficient Energy Recycling for Low-Voltage Battery Charging-Discharging Power Control. <i>Energies</i> , 2018, 11, 623.	1.6	14
39	Improving the Penetration of Wind Power with Dynamic Thermal Rating System, Static VAR Compensator and Multi-Objective Genetic Algorithm. <i>Energies</i> , 2018, 11, 815.	1.6	29
40	LCL Filter Design with EMI Noise Consideration for Grid-Connected Inverter. <i>Energies</i> , 2018, 11, 1646.	1.6	17
41	Composite reliability evaluation for transmission network planning. <i>AIMS Energy</i> , 2018, 6, 170-186.	1.1	3
42	Development of a modular single-stage grid-connected fuel-cell inverter system with power management and remote monitoring interface. , 2017, , .		1
43	Impact of the Real-Time Thermal Loading on the Bulk Electric System Reliability. <i>IEEE Transactions on Reliability</i> , 2017, 66, 1110-1119.	3.5	90
44	Maximization of wind energy utilization through a multi-objective optimization framework. , 2017, , .		1
45	Comparison of the adaptive inertia weight PSOs based on chaotic logistic map and tent map. , 2017, , .		1
46	A reflex-charging based bidirectional DC charger for light electric vehicle and DC-microgrids. , 2017, , .		9
47	A novel multiport converter with an auxiliary voltage pumping circuit for fuel-cell/battery hybrid energy sources. , 2017, , .		3
48	Memetic algorithm for fuel economy and low emissions parallel hybrid electric vehicles. , 2017, , .		12
49	A framework for transmission network planning. , 2017, , .		0
50	An efficient active ripple filter for use in single-phase DC-AC conversion system. , 2017, , .		3
51	Control Strategy Optimization for Parallel Hybrid Electric Vehicles Using a Memetic Algorithm. <i>Energies</i> , 2017, 10, 305.	1.6	32
52	A New Combined Boost Converter with Improved Voltage Gain as a Battery-Powered Front-End Interface for Automotive Audio Amplifiers. <i>Energies</i> , 2017, 10, 1128.	1.6	9
53	Optimization of Control Strategy for Hybrid Electric Vehicles Based on Improved Genetic Algorithm. , 2017, , .		5
54	Genetic algorithm with small population size for search feasible control parameters for parallel hybrid electric vehicles. <i>AIMS Energy</i> , 2017, 5, 930-943.	1.1	16

#	ARTICLE	IF	CITATIONS
55	A High-Gain Three-Port Power Converter with Fuel Cell, Battery Sources and Stacked Output for Hybrid Electric Vehicles and DC-Microgrids. <i>Energies</i> , 2016, 9, 180.	1.6	25
56	Development of a Novel Bidirectional DC/DC Converter Topology with High Voltage Conversion Ratio for Electric Vehicles and DC-Microgrids. <i>Energies</i> , 2016, 9, 410.	1.6	32
57	An isolated AC module for photovoltaic energy conversion. <i>International Journal of Green Energy</i> , 2016, 13, 1460-1466.	2.1	3
58	Study and Analysis of a Battery-Powered High Step-Up Front-End Converter for Automotive Audio Amplifier. , 2016, , .		5
59	Study of a high-gain two-port power converter with fuel cell/battery sources and stacked output for hybrid electric vehicle and dc-microgrid. , 2016, , .		1
60	Effective Natural PCR-RFLP Primer Design for SNP Genotyping Using Teaching-Learning-Based Optimization With Elite Strategy. <i>IEEE Transactions on Nanobioscience</i> , 2016, 15, 657-665.	2.2	14
61	A newly-designed multiport bidirectional power converter with battery/supercapacitor for hybrid electric/fuel-cell vehicle system. , 2016, , .		12
62	An integrated two-input three-output DC/DC boost converter with fuel-cell/battery energy resources for HEV and DC-distribution system. , 2016, , .		0
63	Study and Implementation of a Two-Phase Interleaved Bidirectional DC/DC Converter for Vehicle and DC-Microgrid Systems. <i>Energies</i> , 2015, 8, 9969-9991.	1.6	54
64	Passive ripple mirror circuit and its application in pulse-width modulated DC-DC converters. , 2015, , .		3
65	Newly-constructed bidirectional DC/DC converter topology with high voltage conversion ratio for vehicle to DC-microgrid (V2DCG) system. , 2015, , .		4
66	Current-Ripple-Free Module Integrated Converter With More Precise Maximum Power Tracking Control for PV Energy Harvesting. <i>IEEE Transactions on Industry Applications</i> , 2015, 51, 271-278.	3.3	52
67	A Zero Input Current Ripple ZVS/ZCS Boost Converter with Boundary-Mode Control. <i>Energies</i> , 2014, 7, 6765-6782.	1.6	6
68	A Novel Approach to Implement a Single-Stage Step Up/Down Inverter by Using Auxiliary Pumping Circuit. , 2014, , .		0
69	A Novel Bidirectional Switched-Capacitor Converter with Selectable Output Voltages. , 2014, , .		0
70	Parallel-operated single-stage flyback-type single-phase solar micro-inverter. , 2014, , .		10
71	A Single-Stage Grid-Connected PV Micro-inverter Based on Interleaved Flyback Converter Topology. , 2014, , .		7
72	A battery-powered single-stage three-phase high step-up converter topology for micro DC-UPS. <i>IEICE Electronics Express</i> , 2014, 11, 20140852-20140852.	0.3	5

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73	Current ripple-free module integrated converter (MIC) with more precise maximum power tracking control for PV energy harvesting. , 2013, , .		4
74	Study and development of a negative ion driving circuit with 8kV/4kV dual-output for air purifier. , 2013, , .		1
75	Modeling, Analysis, and Design of an Interleaved Four-Phase Current-Fed Converter With New Voltage Multiplier Topology. IEEE Transactions on Industry Applications, 2013, 49, 208-222.	3.3	9
76	Design, analysis and experimental verification of a modularized output current ripple-free microgrid inverter. , 2013, , .		0
77	Development of an instantaneous real power tracking control scheme for a single-phase grid-tied photovoltaic inverter with minimum DC-Link capacitance. , 2012, , .		2
78	A novel control strategy of circulating currents in parallel single-phase boost rectifiers. , 2012, , .		6
79	High-Efficiency Modular High Step-Up Interleaved Boost Converter for DC-Microgrid Applications. IEEE Transactions on Industry Applications, 2012, 48, 161-171.	3.3	173
80	A Novel Integrated DC/AC Converter With High Voltage Gain Capability for Distributed Energy Resource Systems. IEEE Transactions on Power Electronics, 2012, 27, 2385-2395.	5.4	30
81	Three-phase boost converter with integrated auxiliary step-up circuit for electric vehicle applications. , 2011, , .		1
82	Study and realization of a non-contact power supply system with fast information transmission capability. , 2011, , .		3
83	Modeling and design of an improved current-fed converter with new voltage multiplier circuit combination. , 2011, , .		1
84	A family of single-stage single-switch PV MICs with steep conversion gain. , 2011, , .		0
85	Solar power battery charger with a parallel-load resonant converter. , 2011, , .		6
86	Newly-constructed single-phase multistring multilevel inverter for fuel-cell microgrid. , 2011, , .		11
87	Study and implementation of a high power factor single-stage contactless power supply with load/gap detection mechanisms. , 2011, , .		0
88	Newly-Constructed Simplified Single-Phase Multistring Multilevel Inverter Topology for Distributed Energy Resources. IEEE Transactions on Power Electronics, 2011, 26, 2386-2392.	5.4	139
89	A High-Efficiency High Step-Up Converter With Low Switch Voltage Stress for Fuel-Cell System Applications. IEEE Transactions on Industrial Electronics, 2010, 57, 1998-2006.	5.2	163
90	A Novel High Step-Up Ratio Inverter for Distributed Energy Resources (DERs). , 2010, , .		7

#	ARTICLE	IF	CITATIONS
91	High efficiency high step-up converter module for DC microgrid systems. , 2010, , .		2
92	Integrated Single-Phase Inverter with an Auxiliary Step-Up Circuit for Low-Voltage Alternative Energy Source Applications. , 2010, , .		0
93	A Novel Integrated Single-Phase Inverter With Auxiliary Step-Up Circuit for Low-Voltage Alternative Energy Source Applications. IEEE Transactions on Power Electronics, 2010, 25, 2234-2241.	5.4	29
94	Output Current Ripple-Free PWM Inverters. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 823-827.	2.2	14
95	A novel high step-up ratio interleaved dc converter with low switch voltage stress. , 2010, , .		1
96	A low switch voltage stress interleaved boost converter for power factor correction. , 2009, , .		13
97	A zero input current ripple boost converter for fuel cell applications by using a mirror ripple circuit. , 2009, , .		12
98	Modeling of circulating currents for grid-connected parallel three-phase inverters. , 2008, , .		11
99	Implementation of a PLL-based high frequency resonant ac power supply. , 2008, , .		4
100	Analysis of double line frequency for PWM rectifier using instantaneous power method. , 2008, , .		0
101	Design and Implementation of a Single-Stage LLC Resonant Converter with High Power Factor. , 2007, , .		21
102	Design fuzzy SOC estimation for sealed lead-acid batteries of electric vehicles in Reflex &sup>TM&sup>. , 2007, , .		5
103	A single-stage AC/DC converter based on zero voltage switching LLC resonant topology. IET Electric Power Applications, 2007, 1, 743.	1.1	75
104	Using Automatic Frequency Shifting Techniques for LLC-SRC Output Voltage Regulation. , 2006, , .		2
105	A Single-Stage AC/DC LLC Resonant Converter. , 2006, , .		10
106	Using Automatic Frequency Shifting Techniques for LLC-SRC Output Voltage Regulation. , 2006, , .		0
107	Using on-line estimation techniques for output feedback VSC design. , 0, , .		0