Hadi Youssef Kanaan

List of Publications by Year
in descending order

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163	2,713	331259	288905
papers	citations	21 h-index	40 g-index

164	164	164	1686
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Open-Circuit Fault Detection and Isolation Method for Five-Level PUC Inverter Based on the Wavelet Packet Transform of the Radiated Magnetic Field. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	2.4	9
2	A review on the deployment of demand response programs with multiple aspects coexistence over smart grid platform. Renewable and Sustainable Energy Reviews, 2022, 162, 112446.	8.2	24
3	New Routing Application Using Bees Colony for Energy Internet. , 2022, , .		7
4	Switching-Based Optimized Sliding-Mode Control for Capacitor Self-Voltage Balancing Operation of Seven-Level PUC Inverter. IEEE Transactions on Industrial Electronics, 2021, 68, 3044-3057.	5.2	56
5	Multilevel Switching-Mode Operation of Finite-Set Model Predictive Control for Grid-Connected Packed E-Cell Inverter. IEEE Transactions on Industrial Electronics, 2021, 68, 6992-7001.	5.2	50
6	Design of a Model Predictive Control for a Boost Type Matrix Converter. , 2021, , .		1
7	Efficient Low-Cost Method For The Estimation Of Clouds Shading Rate on PV Farms - Real-Time Reconfiguration Application. , 2021, , .		0
8	A Review on Artificial Intelligence Based Strategies for Open-Circuit Switch Fault Detection in Multilevel Inverters. , 2021, , .		4
9	A Review on Electric Vehicles Battery Chargers and AC/DC Converters for Fast Charging Stations. , 2021, , .		7
10	Gate Drive Implementation of an Indirect Matrix Converter with Hybrid PWM Modulation. , 2020, , .		1
11	Six-Switch and Seven-Switch Grid-Connected Current Source Inverters for Transformerless Photovoltaic Applications. , 2020, , .		4
12	Design of a 7-Level Single-Stage/Phase PUC Grid-Connected PV Inverter with FS-MPC Control. , 2020, , .		9
13	A Review on Three-phase AC/AC Power Converters Derived from the Conventional Indirect Matrix Converter. , 2020, , .		7
14	Two stages Kâ€•means and PSOâ€‘based method for optimal allocation of multiple parallel DRPs application & deployment. IET Smart Grid, 2020, 3, 216-225.	1.5	11
15	Industrial Loads Used as Virtual Resources for a Cost-Effective Optimized Power Distribution. IEEE Access, 2020, 8, 14901-14916.	2.6	12
16	Original Approach Toward Three-Phase Indirect Matrix Converters Through Hybrid PWM Modulation and DSP Implementation. IEEE Access, 2020, 8, 45837-45852.	2.6	9
17	A Voltage-Based Open-Switch Fault Identification Method for Single-Phase Five-level Packed U-cell Inverter. , 2020, , .		5
18	Experimental Application of Double Space Vector Pulse Width Modulation on Three Phase Indirect Matrix Converters. , 2020, , .		2

#	Article	IF	Citations
19	A Review on Modular Multilevel Converters in Electric Vehicles. , 2020, , .		18
20	Bidirectional Electric Vehicle Battery Charger Assisted by Photovoltaic Panels. , 2020, , .		5
21	Deployment of Multiple Demand Response Programs Using Data-Driven Multi-Step Method with Elasticity. , 2020, , .		4
22	Design of a direct control strategy for a static shunt compensator to improve power quality in polluted and unbalanced grids. Mathematics and Computers in Simulation, 2019, 158, 199-215.	2.4	4
23	Experimental Design of Fixed Switching Frequency Model Predictive Control for Sensorless Five-Level Packed U-Cell Inverter. IEEE Transactions on Industrial Electronics, 2019, 66, 3427-3434.	5.2	39
24	Comparative Analysis of Predictive Control Systems Applied to a Grid-Tied NPC Inverter. , 2019, , .		3
25	Design of an Artificial Neural Network Control Based on Levenberg-Marquart Algorithm for Grid-Connected Packed U-Cell Inverter. , 2019, , .		22
26	The Original DSP Technique Implemented on a Five-Phase Indirect Matrix Converter 5P-IMC. , 2019, , .		6
27	Comparative Analysis Attributed to DSVPWM-Mode Versus SPWM-Mode Indirect Matrix Converter. , 2019, , .		5
28	PV Assisted EV Charging in DC Micro-Grids. , 2019, , .		10
29	Insertion Index Generation Method Using Available Leg-Average Voltage to Control Modular Multilevel Converters. IEEE Transactions on Industrial Electronics, 2018, 65, 6206-6216.	5.2	15
30	Novel Current Controller Based on MPC With Fixed Switching Frequency Operation for a Grid-Tied Inverter. IEEE Transactions on Industrial Electronics, 2018, 65, 6198-6205.	5.2	42
31	An Optimal Approach for Offering Multiple Demand Response Programs Over a Power Distribution Network. , 2018, , .		4
32	A Novel Digital Signal Processing Modular Technique for a Grid-Tie Indirect Matrix Converter. , 2018, , .		6
33	Improved control method of HVAC system for Demand Response. , 2018, , .		3
34	Optimal PMU placement for reverse power flow detection. , 2018, , .		9
35	Review of Indirect Matrix Converter Topologies with Uniform Inputs versus Multi-Various Outputs. , 2018, , .		8
36	Implementation of a series Z-source very sparse matrix converter in a PMSG-based WECS. , 2018, , .		5

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37	Virtual-flux estimation and SVM based direct power control of a three-level NPC rectifier. , 2018, , .		1
38	A simple hybrid PWM algorithm for a five-phase indirect matrix converter topology. , 2018, , .		10
39	Optimized modulation technique for series Z-Source Very Sparse Matrix Converter. , 2018, , .		3
40	MPPT-based predictive control of a back-to-back converter for a wind power generation system. , 2018, , .		10
41	A simple control method for modular multilevel converters. , 2017, , .		5
42	FCS-MPC with PNSC reference generation method for a 3L-NPC inverter under grid faults. , 2017, , .		4
43	A novel generic architecture for the implementation of demand response programs in a smart grid. , 2017, , .		5
44	New voltage vector generation method for a MPC algorithm with constant switching frequency operation. , 2017, , .		4
45	A new insertion index selection method to control modular multilevel converters. , 2017, , .		3
46	A novel hybrid modulation algorithm for the indirect matrix converter topology. , 2017, , .		11
47	Direct control for active power in single-phase application on perturbed network. , 2017, , .		1
48	Finite control set model predictive controller for grid connected inverter design. , 2016, , .		15
49	Model predictive controller with fixed switching frequency for a 3L-NPC inverter. , 2016, , .		15
50	Solar energy processor based on Packed U-Cells 7-level inverter for grid applications. , 2016, , .		13
51	Design and Implementation of Space Vector Modulation-Based Sliding Mode Control for Grid-Connected 3L-NPC Inverter. IEEE Transactions on Industrial Electronics, 2016, 63, 7854-7863.	5.2	122
52	Energy equalization module for modular multilevel converters in variable speed motor drives. , 2016, , .		17
53	Voltage stability based on the implementation of a coordinate secondary voltage control system. , 2016, , .		0
54	A novel instantaneous power based control method for a four-wire SAPF operating with highly perturbed mains voltages. , 2016, , .		4

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55	Model predictive control for the packed U-Cells 7-level grid connected inverter. , 2016, , .		13
56	Sliding Mode Fixed Frequency Current Controller Design for Grid-Connected NPC Inverter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 1397-1405.	3.7	77
57	Real-Time Implementation of Model-Predictive Control on Seven-Level Packed U-Cell Inverter. IEEE Transactions on Industrial Electronics, 2016, 63, 4180-4186.	5.2	119
58	Pilot buses selection based on reduced Jacobian matrix. , 2015, , .		3
59	PUC converter review: Topology, control and applications. , 2015, , .		54
60	Model predictive control of a dual output seven-level rectifier. , 2015, , .		19
61	A new 7L-PUC multi-cells modular multilevel converter for AC-AC and AC-DC applications. , 2015, , .		28
62	A new five-level buck-boost active rectifier. , 2015, , .		27
63	A comparative study of four bidirectional sparse matrix converter topologies for wind power applications. , 2015, , .		10
64	Power Factor Correction With a Modified Sheppardâ€“Taylor Topology Operating in Discontinuous Capacitor Voltage Mode and Low Output Voltage. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 430-439.	3.7	7
65	Pilot buses selection used in secondary voltage control. , 2014, , .		6
66	Design of passive power filters for a three-phase semi-controlled rectifier with typical loads. , 2014, , .		4
67	Modern power switches: the Gallium Nitride (GaN) technology. , 2014, , .		1
68	A control strategy in Active Power Filter for power quality improvement. , 2014, , .		5
69	A flying-capacitor-based multilevel shunt active power filter for power quality improvement under severe operating conditions. , 2014, , .		5
70	A Comparative Evaluation of Conventionnal and Supercapacitors in Grid-Connected Transformerless PV Systems. , 2014, , .		6
71	A new voltage balancing controller applied on 7-level PUC inverter. , 2014, , .		50
72	Design and Implementation of a Two-Stage Grid-Connected High Efficiency Power Load Emulator. IEEE Transactions on Power Electronics, 2014, 29, 3997-4006.	5.4	43

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73	Vienna Rectifier With Power Quality Added Function. IEEE Transactions on Industrial Electronics, 2014, 61, 3847-3856.	5.2	66
74	An efficient implementation of the Self-Organizing Map algorithm for power network partitioning. , 2014, , .		5
75	Modeling and simulation of a complex mechanical load using the multi-mass approach. , 2014, , .		7
76	A survey on modeling, control, and dc-fault protection of modular multilevel converters for HVDC systems. , 2014, , .		23
77	ERL sliding mode control of an electrohydraulic active suspension. , 2014, , .		2
78	A review of modulation and control strategies for matrix converters applied to PMSG based wind energy conversion systems. , 2014, , .		18
79	Three-level neutral-point-clamped inverters in transformerless PV systems — State of the art. , 2014, , .		36
80	A Four-leg active power filter for harmonic mitigation and reactive power compensation in unbalanced loads systems using CFL technology. , 2013, , .		7
81	Modeling, control and simulation of DFIG for maximum power point tracking. , 2013, , .		20
82	A review of matrix converters applied to PMSG based wind energy conversion systems. , 2013, , .		19
83	Comparative study of partitioning methods used for secondary voltage control in distributed power networks. , 2013, , .		9
84	Modeling and multi-loop feedback control design of a SEPIC power factor corrector in single-phase rectifiers. Mathematics and Computers in Simulation, 2013, 91, 274-283.	2.4	6
85	Design and implementation of a modified Sheppard-Taylor Power Factor Corrector operating in Discontinuous Capacitor Voltage Mode and very low output voltage level. , 2013, , .		2
86	Modeling and control of a two-switch asymmetrical half-bridge Boost Power Factor Corrector for single-phase rectifiers. , 2013, , .		6
87	Modern power switch: Silicon carbide technology. , 2012, , .		2
88	Real-time fuzzy control of a three-phase phase-controlled rectifier operating in discontinuous conduction mode. , 2012, , .		0
89	Modelling, design and control of a SEPIC power factor corrector for single-phase rectifiers: experimental validation. International Journal of Power Electronics, 2012, 4, 221.	0.1	3
90	Three-Phase Current-Injection Rectifiers: Competitive Topologies for Power Factor Correction. IEEE Industrial Electronics Magazine, 2012, 6, 24-40.	2.3	30

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91	Experimental implementation of a passive current-injection high power factor three-phase rectifier. , 2012, , .		4
92	Performance evaluation of a PMSG-based variable speed wind generation system using maximum Power Point Tracking. , 2012, , .		9
93	Design, modeling, control and simulation of a two-stage grid-connected power load emulator. , 2012, , .		8
94	A study on the impact of a massive integration of compact fluorescent lamps on power quality in distribution power systems. , 2012, , .		17
95	Switch-mode power converters for harmonics mitigation in power systems — Technology progress. , 2012, , .		7
96	A multifunctional power flow controller for photovoltaic generation systems with compliance to power quality standards. , 2012, , .		17
97	Average modeling and linear control of a buck-boost KY converter. , 2012, , .		5
98	A single-stage DC-AC Boost topology and control for solar PV systems supplying a PMSM. , 2012, , .		10
99	A modified Sheppard-Taylor power factor corrector operating in Discontinuous Capacitor Voltage Mode. , 2011, , .		10
100	A unified approach for the analysis of single-phase Power Factor Correction converters. , 2011, , .		14
101	Sliding-Mode Robot Control With Exponential Reaching Law. IEEE Transactions on Industrial Electronics, 2011, 58, 600-610.	5.2	403
102	Comparative control analysis of the Vienna rectifier based on its averaged model. International Journal of Power Electronics, 2011, 3, 78.	0.1	4
103	Design, modelling, control and simulation of a three-phase DCâ€“DC converter for high currents applications. IET Power Electronics, 2011, 4, 424.	1.5	12
104	LQR with integral action controller applied to a three-phase three-switch three-level AC/DC converter. , 2010, , .		10
105	Three-phase rectifier with an active current injection and a single high-frequency inductor. , 2010, , .		6
106	Design, study, modelling and control of a new single-phase high power factor rectifier based on the single-ended primary inductance converter and the Sheppardâ€“Taylor topology. IET Power Electronics, 2009, 2, 163-177.	1.5	35
107	Small-signal modelling and linear control of a high efficiency dual boost single-phase power factor correction circuit. IET Power Electronics, 2009, 2, 665-674.	1.5	23
108	Design, study, modeling and control of a modified Sheppard-Taylor PFC. , 2009, , .		4

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109	Study, modelling and control of a single-phase power factor corrector based on the Sheppard-Taylor topology. International Journal of Power Electronics, 2009, 1, 434.	0.1	2
110	Small-signal averaged model and carrier-based linear control of a new Sheppard-Taylor-based PFC. , 2008, , .		7
111	Multi-loops control design for a new Sheppard-Taylor based Power Factor Corrector with model-nonlinearity compensation. , 2008, , .		3
112	Implementation of a New Linear Control Technique Based on Experimentally Validated Small-Signal Model of Three-Phase Three-Level Boost-Type Vienna Rectifier. IEEE Transactions on Industrial Electronics, 2008, 55, 1666-1676.	5.2	42
113	Small-signal averaged model and carrier-based linear control of a SEPIC-type Power Factor Correction circuit. , 2008, , .		9
114	Large-Signal Modeling and Steady-State Analysis of a 1.5-kW Three-Phase/Switch/Level (Vienna) Rectifier With Experimental Validation. IEEE Transactions on Industrial Electronics, 2008, 55, 1213-1224.	5.2	45
115	Real-Time Implementation of a Discrete Nonlinearity Compensating Multiloops Control Technique for a 1.5-kW Three-Phase/Switch/Level Vienna Converter. IEEE Transactions on Industrial Electronics, 2008, 55, 1225-1234.	5.2	21
116	Two PWM techniques for single-phase shunt active power filters employing a direct current control strategy. IET Power Electronics, 2008, 1, 376.	1.5	40
117	Sliding mode control of three-phase four-leg shunt active power filter. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	17
118	Universal control protocol for power electronics building blocks design. IET Power Electronics, 2008, 1, 368.	1.5	3
119	A linear decoupling control for a PWM three-phase four-wire shunt Active Power Filter. , 2008, , .		8
120	Modeling techniques applied to switch-mode power converters: application to the boost-type single-phase full-bridge rectifier. , 2008, , .		6
121	RÃ©duction du TDH d'un redresseur triphasÃ© par rÃ©glage du courant injectÃ©. Revue Internationale De GÃ©nie Ã©lectrique, 2008, 10, 41-68.	0.0	1
122	Carrier-Based Linear Decoupling Control of a Three-Phase Four-Leg Shunt Active Power Filter. , 2007, , .		9
123	Small-Signal Average Modeling, Simulation and Carrier-Based Linear Control of a Three-Phase Four-Leg Shunt Active Power Filter. , 2007, , .		17
124	Averaged-Model-Based Nonlinear Control of a PWM Three-Phase Four-Leg Shunt Active Power Filter. , 2007, , .		9
125	A new single-phase power factor corrector based on the sepic and Sheppard-Taylor topologies. , 2007, , .		12
126	Averaged Model Based Control of a Sheppard-Taylor PFC with Nonlinearity Compensation. , 2007, , .		10

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127	Comparative Study of Two Average-Model-Based PWM Control Schemes for a Sheppard-Taylor PFC. , 2007, , .		7
128	Frequency-domain small-signal modeling of a three-phase four-wire shunt Active Power Filter. , 2007, , .		1
129	Small-Signal Averaged Model and Carrier-Based Linear Control of a Sheppard-Taylor PFC. , 2007, , .		11
130	Small-signal perturbation technique used for DSP-based identification of a three-phase three-level boost-type Vienna rectifier. IET Electric Power Applications, 2007, 1, 199.	1.1	23
131	A New Methodology For Vienna Rectifier Rating And Controller Tuning Based on Control Saturation Analysis: Experimental Validation. , 2006, , .		2
132	DSP Based Experimental Validation Technique Applied to the Development of a New Vienna Rectifier Small Signal Model. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	5
133	Modeling and Control of a Single-Phase Sheppard-Taylor Based Power Factor Corrector. , 2006, , .		19
134	Design, Control and Simulation of a High-Efficiency Low-Cost DC-DC Converter for High Current Applications. , 2006, , .		2
135	Sliding Mode Nonlinear Switching Functions for Control Input Transient Constraints Reduction. , 2006, , .		4
136	New Modeling, Simulation and Control of a PWM Single-Phase Shunt Hybrid Power Filter. , 2006, , .		4
137	Average Modeling and Hybrid Control of a Three-Phase Series Hybrid Power Filter. , 2006, , .		8
138	A comparative study of shunt hybrid and shunt active power filters for single-phase applications: Simulation and experimental validation. Mathematics and Computers in Simulation, 2006, 71, 345-359.	2.4	47
139	Practical Design of a SEPIC Power Factor Corrector with DC-Voltage Regulation. , 2006, , .		17
140	A study on the effects of the neutral inductor on the modeling and performance of a four-wire three-phase/switch/level fixed-frequency rectifier. Mathematics and Computers in Simulation, 2006, 71, 487-498.	2.4	4
141	Implementation and simulation of modified PWM with two current control techniques applied to single-phase shunt hybrid power filter. IET Electric Power Applications, 2006, 153, 317.	1.4	29
142	Real Time Linear Control implementation Based on Experimentally Validated Small Signal Model of a Three-Phase Three-Level Boost-Type Vienna Rectifier. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	3
143	Modified PWM with a new indirect current control technique applied to a single-phase shunt active power filter. Canadian Journal of Electrical and Computer Engineering, 2006, 31, 135-144.	1.5	14
144	Experimental design and simulation of a modified PWM with an indirect current control technique applied to a single-phase shunt active power filter. , 2005, , .		12

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145	Modelling and control of three-phaseâ•switchâ•level fixed-frequency PWM rectifier: state-space averaged model. IET Electric Power Applications, 2005, 152, 551.	1.4	53
146	Switching-Functions-Based Modeling of a Three-Phase Three-Switch Three-Level Rectifier in Continuous and Discontinuous Modes for Real-Time Simulations. , 2005, , .		4
147	Observer based reference current generation for a three-phase shunt active power filter. , 2005, , .		6
148	Comparative evaluation of control laws based on pulse-width modulation and on hysteresis: application on a current-injection-based three-phase rectifier. Canadian Journal of Electrical and Computer Engineering, 2005, 30, 215-223.	1.5	2
149	Design, Modeling and Simulation of an AC-DC-AC Transmission System with Low AC-Current Distortion and DC-Voltage Regulation. , 2005, , .		3
150	A comparative analysis of nonlinear current control schemes applied to a SEPIC power factor corrector. , 2005, , .		10
151	Fuzzy PID Control of a Five DOF Robot Arm. Journal of Intelligent and Robotic Systems: Theory and Applications, 2004, 40, 299-320.	2.0	26
152	Linear Control Design for a Current-Injection-Based Three-Phase Unity-Power-Factor Rectifier. IEEE Transactions on Industrial Electronics, 2004, 51, 429-438.	5.2	11
153	Analysis of the electromechanical vibrations in induction motor drives due to the imperfections of the mechanical transmission system. Mathematics and Computers in Simulation, 2003, 63, 421-433.	2.4	19
154	ImpÃ©dance d'entrÃ©e et susceptibilitÃ© d'un redresseur monophasÃ© non polluant. Revue Internationale De GÃ©nie Ã©lectrique, 2003, 6, 187-224.	0.0	2
155	Averaged modeling and control of a three-phase series active power filter for voltage harmonic compensation. , 0, , .		11
156	Implementation of a dSPACE-based digital controller for a single-phase UPF two-stage boost rectifier. , 0, , .		6
157	Small-signal modeling and linear control of a dual boost power factor correction circuit. , 0, , .		10
158	Matrix converter control: a sliding mode approach. , 0, , .		18
159	A Comparative Study of Two PWM Techniques for Single-Phase Shunt Active Power Filters Employing Direct Current Control Strategy. , 0, , .		13
160	Implementation and Simulation of a Modified PWM with Two Current Control Techniques Applied To A Single-Phase Shunt Hybrid Power Filter. , 0, , .		3
161	A large signal averaged modelling and control of paralleled DC/DC converters with automatic load sharing. , 0, , .		14
162	Real Time Implementation of a Sliding Mode Regulator for Current-Controlled Magnetic Levitation System. , 0, , .		10

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163	A Novel Averaged-Model-Based Control of a SEPIC Power Factor Corrector Using the Input/Output Feedback Linearization Technique. , 0, , .		12