

Abdelali El Aroudi

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112
papers

1,490
citations

21
h-index

34
g-index

126
ext. papers

1,892
ext. citations

3.3
avg, IF

5.02
L-index

#	Paper	IF	Citations
112	BIFURCATIONS IN DCDC SWITCHING CONVERTERS: REVIEW OF METHODS AND APPLICATIONS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2005 , 15, 1549-1578	2	96
111	Impedance Matching in Photovoltaic Systems Using Cascaded Boost Converters and Sliding-Mode Control. <i>IEEE Transactions on Power Electronics</i> , 2015 , 30, 3185-3199	7.2	91
110	Hopf bifurcation and chaos from torus breakdown in a PWM voltage-controlled DC-DC boost converter. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 1999 , 46, 1374-1382		77
109	A Noninverting BuckBoost DCDC Switching Converter With High Efficiency and Wide Bandwidth. <i>IEEE Transactions on Power Electronics</i> , 2011 , 26, 2490-2503	7.2	71
108	A Review on Stability Analysis Methods for Switching Mode Power Converters. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2015 , 5, 302-315	5.2	64
107	Synthesis of Canonical Elements for Power Processing in DC Distribution Systems Using Cascaded Converters and Sliding-Mode Control. <i>IEEE Transactions on Power Electronics</i> , 2014 , 29, 1366-1381	7.2	63
106	Quasi-periodic route to chaos in a PWM voltage-controlled DC-DC boost converter. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2001 , 48, 967-978		62
105	A Ripple-Based Design-Oriented Approach for Predicting Fast-Scale Instability in DCDC Switching Power Supplies. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2012 , 59, 215-227	3.9	56
104	A Design-Oriented Combined Approach for Bifurcation Prediction in Switched-Mode Power Converters. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2010 , 57, 218-222	3.5	55
103	Dynamics and Stability Issues of a Single-Inductor Dual-Switching DCDC Converter. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2010 , 57, 415-426	3.9	50
102	Synthesis of loss-free resistors based on sliding-mode control and its applications in power processing. <i>Control Engineering Practice</i> , 2013 , 21, 689-699	3.9	47
101	Modeling of switching frequency instabilities in buck-based DCAC H-bridge inverters. <i>International Journal of Circuit Theory and Applications</i> , 2011 , 39, 175-193	2	34
100	Discrete time model of a multi-cell dc/dc converter: Non linear approach. <i>Mathematics and Computers in Simulation</i> , 2006 , 71, 310-319	3.3	31
99	A New Approach for Accurate Prediction of Subharmonic Oscillation in Switching Regulators Part I: Mathematical Derivations. <i>IEEE Transactions on Power Electronics</i> , 2017 , 32, 5651-5665	7.2	28
98	Sliding-mode control of a boost converter under constant power loading conditions. <i>IET Power Electronics</i> , 2019 , 12, 521-529	2.2	27
97	Design of ACDC PFC High-Order Converters With Regulated Output Current for Low-Power Applications. <i>IEEE Transactions on Power Electronics</i> , 2016 , 31, 2012-2025	7.2	24
96	Modeling and Design Rules of a Two-Cell Buck Converter Under a Digital PWM Controller. <i>IEEE Transactions on Power Electronics</i> , 2008 , 23, 859-870	7.2	23

95	Poincaré maps modeling and local orbital stability analysis of discontinuous piecewise affine periodically driven systems. <i>Nonlinear Dynamics</i> , 2007 , 50, 431-445	5	23
94	Fixed Switching Frequency Digital Sliding-Mode Control of DC-DC Power Supplies Loaded by Constant Power Loads with Inrush Current Limitation Capability. <i>Energies</i> , 2019 , 12, 1055	3.1	22
93	Analysis of a Self-Oscillating Bidirectional DCDC Converter in Battery Energy Storage Applications. <i>IEEE Transactions on Power Delivery</i> , 2012 , 27, 1292-1300	4.3	22
92	A REPRESENTATIVE DISCRETE-TIME MODEL FOR UNCOVERING SLOW AND FAST SCALE INSTABILITIES IN BOOST POWER FACTOR CORRECTION AC-DC PRE-REGULATORS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2008 , 18, 3073-3092	2	22
91	Suppression of Line Frequency Instabilities in PFC AC-DC Power Supplies by Feedback Notch Filtering the Pre-Regulator Output Voltage. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2013 , 60, 796-809	3.9	20
90	Power Distribution Based on Gytrators. <i>IEEE Transactions on Power Electronics</i> , 2009 , 24, 2907-2909	7.2	20
89	A New Approach for Accurate Prediction of Subharmonic Oscillation in Switching Regulators Part II: Case Studies. <i>IEEE Transactions on Power Electronics</i> , 2017 , 32, 5835-5849	7.2	18
88	STABILIZING A TWO-CELL DC-DC BUCK CONVERTER BY FIXED POINT INDUCED CONTROL. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009 , 19, 2043-2057	2	18
87	Nonlinear Control for Output Voltage Regulation of a Boost Converter With a Constant Power Load. <i>IEEE Transactions on Power Electronics</i> , 2019 , 34, 10381-10385	7.2	17
86	Prediction of Subharmonic Oscillation in Switching Converters Under Different Control Strategies. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2014 , 61, 910-914	3.5	15
85	INSTABILITIES IN DIGITALLY CONTROLLED VOLTAGE-MODE SYNCHRONOUS BUCK CONVERTER. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1250012	2	15
84	Fast-scale stability limits of a two-stage boost power converter. <i>International Journal of Circuit Theory and Applications</i> , 2016 , 44, 1127-1141	2	14
83	Fast-Scale Stability Analysis of a DCDC Boost Converter With a Constant Power Load. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021 , 9, 549-558	5.6	14
82	Improved static and dynamic performances of a two-cell DCDC buck converter using a digital dynamic time-delayed control. <i>International Journal of Circuit Theory and Applications</i> , 2012 , 40, 395-407 ²		13
81	Self-compensation of DCDC converters under peak current mode control. <i>Electronics Letters</i> , 2017 , 53, 345-347	1.1	12
80	Complex non-linear phenomena and stability analysis of interconnected power converters used in distributed power systems. <i>IET Power Electronics</i> , 2016 , 9, 855-863	2.2	12
79	High performance hysteresis modulation technique for high-order PFC circuits. <i>Electronics Letters</i> , 2014 , 50, 113-114	1.1	11
78	Analysis of Start-Up Response in a Digitally Controlled Boost Converter With Constant Power Load and Mitigation of Inrush Current Problems. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 1276-1285	3.9	11

77	Characteristic curves for analysing limit cycle behaviour in switching convertors. <i>Electronics Letters</i> , 1999 , 35, 687	1.1	10
76	PWM Nonlinear Control With Load Power Estimation for Output Voltage Regulation of a Boost Converter With Constant Power Load. <i>IEEE Transactions on Power Electronics</i> , 2021 , 36, 2143-2153	7.2	10
75	Analysis and design of a loss-free resistor based on a boost converter in PWM operation 2010 ,		9
74	Analysis of Nonlinear Dynamics of a Quadratic Boost Converter Used for Maximum Power Point Tracking in a Grid-Interlinked PV System. <i>Energies</i> , 2019 , 12, 61	3.1	9
73	Synthesis of Constant Power Loads Using Switching Converters Under Sliding-Mode Control. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 524-535	3.9	9
72	Sliding-mode control of a boost converter supplying a constant power load. <i>IFAC-PapersOnLine</i> , 2017 , 50, 7807-7812	0.7	8
71	A Comparison Between Static and Dynamic Performances of a Z-source and a Dual-Stage Boost Converter Under SMC for PV Energy Applications. <i>Energy Procedia</i> , 2013 , 42, 587-596	2.3	8
70	A frequency domain approach for controlling chaos in switching converters 2010 ,		8
69	Limit cycle bifurcations in resonant LC power inverters under zero current switching strategy. <i>Nonlinear Dynamics</i> , 2018 , 91, 1145-1161	5	8
68	Prediction of subharmonic oscillation in switching regulators: from a slope to a ripple standpoint. <i>International Journal of Electronics</i> , 2016 , 103, 2090-2109	1.2	8
67	Coordinated control of parallel operated renewable-energy-based DG systems. <i>IET Renewable Power Generation</i> , 2018 , 12, 1623-1632	2.9	8
66	Improving the Dimming Performance of Low-Power Single-Stage ACDC HBLED Drivers. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 5797-5806	8.9	7
65	A Frequency Domain Approach for Controlling Fast-Scale Instabilities in Switching Power Converters. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2015 , 25, 1550141	2	7
64	Sliding Mode Control of output-parallel-connected two-stage boost converters for PV systems 2014 ,		7
63	Large-signal modeling and stability analysis of two-cascaded boost converters connected to a PV panel under SMC with MPPT 2013 ,		7
62	Sliding-Mode Control of DC-DC Switching Converters. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 1910-1916		7
61	Optimizing the dynamics of a two-cell DCDC buck converter by time delayed feedback control. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2011 , 16, 4349-4364	3.7	7
60	Avoiding instabilities in power electronic systems: toward an on-chip implementation. <i>IET Power Electronics</i> , 2017 , 10, 1778-1787	2.2	6

59	LQR control of an asymmetrical interleaved boost converter working in inherent DCM 2005 ,		6
58	Piecewise Quadratic Slope Compensation Technique for DC-DC Switching Converters. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 5574-5585	3.9	5
57	Classification of Three-Phase Grid-Tied Microinverters in Photovoltaic Applications. <i>Energies</i> , 2020 , 13, 2929	3.1	5
56	Modelling and Control of Modular DC-Nanogrids Based on Loss-Free Resistors. <i>IEEE Access</i> , 2020 , 8, 33305-33317	3.5	5
55	A Combined Analytical-Numerical Methodology for Predicting Subharmonic Oscillation in H-Bridge Inverters Under Double Edge Modulation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2018 , 65, 2341-2351	3.9	5
54	Stability analysis of two-cell Buck converter driven DC motor with a discrete-time closed loop 2009 ,		5
53	Sliding mode control of a high voltage DC-DC buck converter		5
52	Suppression of Undesired Attractors in a Self-Oscillating H-Bridge Parallel Resonant Converters Under Zero Current Switching Control. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2019 , 66, 692-696	3.5	5
51	Nonlinear Dynamic Modeling and Analysis of Self-Oscillating H-Bridge Parallel Resonant Converter Under Zero Current Switching Control: Unveiling Coexistence of Attractors. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019 , 66, 1657-1667	3.9	5
50	Nonaveraged control-oriented modeling and relative stability analysis of DC-DC switching converters. <i>International Journal of Circuit Theory and Applications</i> , 2018 , 46, 565-580	2	5
49	Multi-Input Ćk-Derived Buck-Boost Voltage Source Inverter for Photovoltaic Systems in Microgrid Applications. <i>Energies</i> , 2019 , 12, 2007	3.1	4
48	Modified Ćk converter for high-performance power factor correction applications. <i>IET Power Electronics</i> , 2015 , 8, 2058-2064	2.2	4
47	Unveiling nonlinear dynamics in resonant inductively coupled wireless power transfer 2014 ,		4
46	Combined Photovoltaic / Thermal Energy System for Stand-alone Operation 2007 ,		4
45	Non-observable chaos in piecewise smooth systems. <i>Nonlinear Dynamics</i> , 2020 , 99, 2031-2048	5	4
44	Mitigating the Problem of Inrush Current in a Digital Sliding Mode Controlled Boost Converter Taking into Account Load and Inductor Nonlinearities and Propagation Delay in the Feedback Loop 2019 ,		3
43	On the Coexistence of Multiple Limit Cycles in H-Bridge Wireless Power Transfer Systems With Zero Current Switching Control. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 1729-1739	3.9	3
42	Transient Voltage and Current Stresses Estimation of MMC-MTDC System via Discrete-Time Analysis. <i>IEEE Transactions on Power Delivery</i> , 2020 , 35, 2821-2830	4.3	3

41	Nonlinear dynamics in a graphene nanostructured device for energy harvesting 2013 ,		3
40	Analysis of a modular one-phase PV inverter 2009 ,		3
39	A nonlinear time-varying map of a buck power-switching amplifier for wide band tracking applications. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2010 , 29, 90-108	0.7	3
38	Stability of DC-DC converters: A ripple based index approach 2008 ,		3
37	Multiple-Loop Control Design for a Single-Stage PV-Fed Grid-Tied Differential Boost Inverter. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 4808	2.6	3
36	A Large-Signal Model for a Peak Current Mode Controlled Boost Converter With Constant Power Loads. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021 , 9, 559-568	5.6	3
35	Hourglass-shaped impedance network based nonelectrolytic capacitors high step-up converter with low voltage stress. <i>International Journal of Circuit Theory and Applications</i> , 2021 , 49, 1147-1163	2	3
34	Design of Current Programmed Switching Converters Using Sliding-Mode Control Theory. <i>Energies</i> , 2018 , 11, 2034	3.1	3
33	A Cascaded Controller for a Grid-Tied Photovoltaic System With Three-Phase Half-Bridge Interleaved Buck Shunt Active Power Filter: Hybrid Control Strategy and Fuzzy Logic Approach. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2022 , 12, 320-330	5.2	3
32	Single-loop control scheme for electrolytic capacitor-less ACDC rectifiers with PFC in continuous conduction mode. <i>Electronics Letters</i> , 2020 , 56, 506-508	1.1	2
31	Digital Control of a Buck Converter Based on Input-Output Linearization. An Interpretation Using Discrete-Time Sliding Control Theory. <i>Energies</i> , 2019 , 12, 2738	3.1	2
30	Stability issues in cascade connected switching converters for DC microgrid applications 2013 ,		2
29	Notch filtering-based stabilization of PFC AC-DC pre-regulators 2010 ,		2
28	Photovoltaic / thermal system for stand-alone operation. <i>Power Electronics Specialist Conference (PESC), IEEE</i> , 2008 ,		2
27	Ripple Based Index for Predicting Fast-Scale Instability of DC-DC Converters in CCM and DCM 2006 ,		2
26	Dynamic analysis of self-oscillating H-bridge inverters with state feedback. <i>Journal of the Franklin Institute</i> , 2020 , 357, 494-521	4	2
25	Auto-Tuned Quadratic Slope Compensation for Current Mode Controlled DC-DC Converters 2020 ,		2
24	Non-visible transformations of chaotic attractors due to their ultra-low density in ACDC power factor correction converters. <i>Nonlinear Dynamics</i> , 2020 , 102, 2905-2924	5	2

23	Analytical Determination of Fast-Scale Instability Boundaries for Current Mode Controlled DCDC Converters With CPL and Closed Voltage Loop. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2021 , 11, 39-48	5.2	2
22	Fast-Scale Instability and Stabilization by Adaptive Slope Compensation of a PV-Fed Differential Boost Inverter. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 2106	2.6	2
21	Advanced nonlinear controller of single-phase shunt active power filter interfacing solar photovoltaic source and electrical power grid. <i>International Transactions on Electrical Energy Systems</i> , 2021 , 31,	2.2	2
20	Analytical multi-parametric stability boundaries of DC-DC buck converters under V1 control concept. <i>International Journal of Circuit Theory and Applications</i> , 2017 , 45, 1686-1700	2	1
19	Sliding-mode control of a boost converter feeding a buck converter operating as a constant power load 2017 ,		1
18	Subharmonic instability boundary in DC-AC H-bridge inverters with double edge PWM 2015 ,		1
17	Nonlinear Dynamics and Bifurcation Behavior of a 2-DOF Spring Resonator with End Stopper for Energy Harvesting. <i>MATEC Web of Conferences</i> , 2014 , 16, 08006	0.3	1
16	Cascade connection of DC-DC switching converters by means of self-oscillating dc-transformers 2012 ,		1
15	Ripple-based prediction of fast-scale instabilities in current mode controlled switching converters 2012 ,		1
14	Novel autonomous current mode one-cycle controller for PFC AC-DC pre-regulators		1
13	Nonlinear Dynamics of an Ambient Noise Driven Array of Coupled Graphene Nanostructured Devices for Energy Harvesting. <i>MATEC Web of Conferences</i> , 2014 , 16, 01001	0.3	1
12	Fast Voltage-Based MPPT Control for High Gain Switched Inductor DC-DC Boost Converters 2020 ,		1
11	Analysis of Subharmonic Oscillation and Slope Compensation for a Differential Boost Inverter. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 5626	2.6	1
10	Nonlinear Dynamics and Stability Analysis of a Three-Cell Flying Capacitor DC-DC Converter. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 1395	2.6	1
9	Replacing All ECs With NECs in Step-Up Converters A Systematic Approach. <i>IEEE Transactions on Power Electronics</i> , 2022 , 37, 31-36	7.2	1
8	Fault Tolerant Backstepping Control for Double-Stage Grid-Connected Photovoltaic Systems Using Cascaded H-Bridge Multilevel Inverters 2022 , 6, 1406-1411		1
7	Nonlinear Control Design and Stability Analysis of Single Phase Half Bridge Interleaved Buck Shunt Active Power Filter. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2022 , 1-12	3.9	0
6	Performance evaluation for an hourglass-shaped impedance-network-based high step-up converter in a photovoltaic system using PSIM simulation. <i>International Journal of Circuit Theory and Applications</i> , 2021 , 49, 2670-2685	2	0

5	Map Optimization Fuzzy Logic Framework in Wind Turbine Site Selection with Application to the USA Wind Farms. <i>Energies</i> , 2021 , 14, 6127	3.1	0
4	Control Design and Parameter Tuning for Islanded Microgrids by Combining Different Optimization Algorithms. <i>Energies</i> , 2022 , 15, 3756	3.1	0
3	Delay effects on the limit cycling behavior in resonant inverters with state feedback. <i>Nonlinear Theory and Its Applications IEICE</i> , 2019 , 10, 337-356	0.6	
2	Improvement of Extracted Power of Pole Mounted Solar Panels by Effective Cooling Using Aluminum Heat Sink under Hot Weather and Variable Wind Speed Conditions. <i>Energies</i> , 2020 , 13, 3159	3.1	
1	Noise-induced and border-collision-induced bubbling. <i>Physica D: Nonlinear Phenomena</i> , 2022 , 435, 133273	3.3	