Serge Pierfederici

List of Publications by Year
in descending order

123	4,337	126708 33	114278 63
papers	citations	h-index	g-index

124	124	124	3057
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Energy Management of a Fuel Cell/Supercapacitor/Battery Power Source for Electric Vehicular Applications. IEEE Transactions on Vehicular Technology, 2011, 60, 433-443.	3.9	333
2	Large Signal Stability Analysis Tools in DC Power Systems With Constant Power Loads and Variable Power Loadsâ€"A Review. IEEE Transactions on Power Electronics, 2012, 27, 1773-1787.	5.4	272
3	A PSO-Based Global MPPT Technique for Distributed PV Power Generation. IEEE Transactions on Industrial Electronics, 2015, 62, 1047-1058.	5.2	254
4	Energy management of fuel cell/solar cell/supercapacitor hybrid power source. Journal of Power Sources, 2011, 196, 313-324.	4.0	231
5	Large-Signal Stabilization of a DC-Link Supplying a Constant Power Load Using a Virtual Capacitor: Impact on the Domain of Attraction. IEEE Transactions on Industry Applications, 2012, 48, 878-887.	3.3	196
6	Linear Stabilization of a DC Bus Supplying a Constant Power Load: A General Design Approach. IEEE Transactions on Power Electronics, 2010, 25, 475-488.	5.4	178
7	High Voltage Ratio DCâ€"DC Converter for Fuel-Cell Applications. IEEE Transactions on Industrial Electronics, 2010, 57, 3944-3955.	5.2	131
8	Energy control of supercapacitor/fuel cell hybrid power source. Energy Conversion and Management, 2008, 49, 1637-1644.	4.4	124
9	General Active Global Stabilization of Multiloads DC-Power Networks. IEEE Transactions on Power Electronics, 2012, 27, 1788-1798.	5.4	121
10	Energy Management in a Fuel Cell/Supercapacitor Multisource/Multiload Electrical Hybrid System. IEEE Transactions on Power Electronics, 2009, 24, 2681-2691.	5.4	106
11	Control of High-Energy High-Power Densities Storage Devices by Li-ion Battery and Supercapacitor for Fuel Cell/Photovoltaic Hybrid Power Plant for Autonomous System Applications. IEEE Transactions on Industry Applications, 2016, 52, 4395-4407.	3.3	105
12	Active Stabilization of DC Microgrids Without Remote Sensors for More Electric Aircraft. IEEE Transactions on Industry Applications, 2013, 49, 2352-2360.	3.3	89
13	Control of a Hybrid Energy Source Comprising a Fuel Cell and Two Storage Devices Using Isolated Three-Port Bidirectional DCâ€"DC Converters. IEEE Transactions on Industry Applications, 2015, 51, 491-497.	3.3	87
14	Dynamic Consideration of DC Microgrids With Constant Power Loads and Active Damping Systemâ€"A Design Method for Fault-Tolerant Stabilizing System. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 562-570.	3.7	82
15	DCâ€"DC Converters Dynamic Modeling With State Observer-Based Parameter Estimation. IEEE Transactions on Power Electronics, 2015, 30, 3356-3363.	5.4	78
16	Implementation of energy management strategy of hybrid power source for electrical vehicle. Energy Conversion and Management, 2019, 195, 830-843.	4.4	77
17	Stability Analysis and Dynamic Performance Evaluation of a Power Electronics-Based DC Distribution System With Active Stabilizer. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 93-102.	3.7	74
18	Interconnection and Damping Assignment Passivity-Based Control Applied to On-Board DCâ€"DC Power Converter System Supplying Constant Power Load. IEEE Transactions on Industry Applications, 2019, 55, 6476-6485.	3.3	67

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19	A New Control Law Based on the Differential Flatness Principle for Multiphase Interleaved DCâ€“DC Converter. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 903-907.	2.2	66
20	Discrete-Time Tool for Stability Analysis of DC Power Electronics-Based Cascaded Systems. IEEE Transactions on Power Electronics, 2017, 32, 652-667.	5.4	66
21	Hybrid maximum power point tracking algorithm with improved dynamic performance. Renewable Energy, 2019, 130, 982-991.	4.3	62
22	Photovoltaic Potential Assessment and Dust Impacts on Photovoltaic Systems in Iran: Review Paper. IEEE Journal of Photovoltaics, 2020, 10, 824-837.	1.5	59
23	Optimal Angle Droop for Power Sharing Enhancement With Stability Improvement in Islanded Microgrids. IEEE Transactions on Smart Grid, 2018, 9, 5014-5026.	6.2	58
24	An Adapted Control Strategy to Minimize DC-Bus Capacitors of a Parallel Fuel Cell/Ultracapacitor Hybrid System. IEEE Transactions on Power Electronics, 2011, 26, 3843-3852.	5.4	57
25	A Control Strategy for Electric Traction Systems Using a PM-Motor Fed by a Bidirectional <inline-formula> <tex-math notation="TeX">Z</tex-math></inline-formula>-Source Inverter. IEEE Transactions on Vehicular Technology, 2014, 63, 4178-4191.	3.9	55
26	Efficiency Improvement of a Quasi-Z-Source Inverter-Fed Permanent-Magnet Synchronous Machine-Based Electric Vehicle. IEEE Transactions on Transportation Electrification, 2016, 2, 14-23.	5.3	52
27	Distributed Active Resonance Suppression in Hybrid DC Power Systems Under Unbalanced Load Conditions. IEEE Transactions on Power Electronics, 2013, 28, 1833-1842.	5.4	51
28	Analysis of Differential Flatness-Based Control for a Fuel Cell Hybrid Power Source. IEEE Transactions on Energy Conversion, 2010, 25, 909-920.	3.7	48
29	A Novel Quasi-Z-Source Inverter Topology With Special Coupled Inductors for Input Current Ripples Cancellation. IEEE Transactions on Power Electronics, 2016, 31, 2409-2416.	5.4	44
30	Efficiency Optimization Through Current-Sharing for Paralleled DCâ€“DC Boost Converters With Parameter Estimation. IEEE Transactions on Power Electronics, 2014, 29, 759-767.	5.4	41
31	Asymptotic Stability Analysis of the Limit Cycle of a Cascaded DCâ€“DC Converter Using Sampled Discrete-Time Modeling. IEEE Transactions on Industrial Electronics, 2016, 63, 2477-2487.	5.2	40
32	DC Power Networks With Very Low Capacitances for Transportation Systems: Dynamic Behavior Analysis. IEEE Transactions on Power Electronics, 2013, 28, 5865-5877.	5.4	35
33	Discrete-Time Modeling, Stability Analysis, and Active Stabilization of DC Distribution Systems With Multiple Constant Power Loads. IEEE Transactions on Industry Applications, 2016, 52, 4888-4898.	3.3	34
34	Modeling and Control of Multiphase Interleaved Fuel-Cell Boost Converter Based on Hamiltonian Control Theory for Transportation Applications. IEEE Transactions on Transportation Electrification, 2020, 6, 519-529.	5.3	34
35	DC Bus Stabilization of Li-Ion Battery Based Energy Storage for a Hydrogen/Solar Power Plant for Autonomous Network Applications. IEEE Transactions on Industry Applications, 2015, 51, 2717-2725.	3.3	30
36	Design and Modeling of an Equalizer for Fuel Cell Energy Management Systems. IEEE Transactions on Power Electronics, 2019, 34, 10925-10935.	5.4	30

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37	Toward Stabilization of Constant Power Loads Using IDA-PBC for Cascaded LC Filter DC/DC Converters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 1302-1314.	3.7	29
38	Flatness-Based Grey Wolf Control for Load Voltage Unbalance Mitigation in Three-Phase Four-Leg Voltage Source Inverters. IEEE Transactions on Industry Applications, 2020, 56, 1869-1881.	3.3	28
39	Observer and Lyapunov-Based Control for Switching Power Converters With LC Input Filter. IEEE Transactions on Power Electronics, 2019, 34, 7053-7066.	5.4	27
40	Active stabilization of a poorly damped input filter supplying a constant power load. , 2009, , .		26
41	Nonlinear single-loop control of the parallel converters for a fuel cell power source used in DC grid applications. International Journal of Electrical Power and Energy Systems, 2015, 65, 41-48.	3.3	26
42	Design and control of multiphase interleaved boost converters-based on differential flatness theory for PEM fuel cell multi-stack applications. International Journal of Electrical Power and Energy Systems, 2021, 124, 106346.	3.3	26
43	Nonlinear intelligent DC grid stabilization for fuel cell vehicle applications with a supercapacitor storage device. International Journal of Electrical Power and Energy Systems, 2015, 64, 723-733.	3.3	25
44	Power Sharing and Synchronization Strategies for Multiple PCC Islanded Microgrids. International Journal of Electrical and Electronic Engineering and Telecommunications, 2020, , 156-162.	3.4	25
45	Bifurcation Analysis and Stabilization of DC Power Systems for Electrified Transportation Systems. IEEE Transactions on Transportation Electrification, 2016, 2, 86-95.	5.3	24
46	Nonlinear Stabilization of a DC-Bus Supplying a Constant Power Load. , 2009, , .		23
47	Estimation of the bifurcation point of a modulatedâ€hysteresis currentâ€controlled DCâ€“DC boost converter: stability analysis and experimental verification. IET Power Electronics, 2015, 8, 2195-2203.	1.5	22
48	A Lyapunov Function for Switching Command of a DCâ€“DC Power Converter With an LC Input Filter. IEEE Transactions on Industry Applications, 2017, 53, 5041-5050.	3.3	22
49	Robust Hamiltonian Energy Control Based on Lyapunov Function for Four-Phase Parallel Fuel Cell Boost Converter for DC Microgrid Applications. IEEE Transactions on Sustainable Energy, 2021, 12, 1500-1511.	5.9	21
50	New Method to Filter HF Current Ripples Generated by Current-Fed DC/DC Converters. IEEE Transactions on Power Electronics, 2011, 26, 3832-3842.	5.4	20
51	Active stabilisation design of DCâ€“DC converters with constant power load using a sampled discreteâ€time model: stability analysis and experimental verification. IET Power Electronics, 2018, 11, 1519-1528.	1.5	20
52	Optimal Design of a DCâ€“DC Boost Converter in Load Transient Conditions, Including Control Strategy and Stability Constraint. IEEE Transactions on Transportation Electrification, 2019, 5, 1214-1224.	5.3	20
53	Multi-Stack Lifetime Improvement through Adapted Power Electronic Architecture in a Fuel Cell Hybrid System. Mathematics, 2020, 8, 739.	1.1	20
54	Proposed system based on a three-level boost converter to mitigate voltage imbalance in photovoltaic power generation systems. IEEE Transactions on Power Electronics, 2021, , 1-1.	5.4	20

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55	Study of a Hybrid Fixed Frequency Current Controller Suitable for DCâ€“DC Applications. IEEE Transactions on Power Electronics, 2008, 23, 1437-1448.	5.4	18
56	Reliability Improvement Approach Based on Flatness Control of Parallel-Connected Inverters. IEEE Transactions on Power Electronics, 2017, 32, 681-692.	5.4	18
57	A Modular DC-DC Converter Topology Based On A Three-Level DC-DC Converter For Distributed Fuel Cell Architecture. , 2019, , .		18
58	Design and control of permanent magnet assisted synchronous reluctance motor with copper loss minimization using MTPA. Journal of Electrical Engineering, 2020, 71, 11-19.	0.4	18
59	Stability Improvement of Cascaded Power Conversion Systems Based on Hamiltonian Energy Control Theory. IEEE Transactions on Industry Applications, 2021, 57, 1081-1093.	3.3	16
60	Permanent Magnet Synchronous Motor Dynamic Modeling with State Observer-based Parameter Estimation for AC Servomotor Drive Application. Applied Science and Engineering Progress, 2019, 12, .	0.5	16
61	Stability Analysis and Active Stabilization of DC Power Systems for Electrified Transportation Systems, Taking into Account the Load Dynamics. IEEE Transactions on Transportation Electrification, 2017, 3, 3-12.	5.3	15
62	Adaptive Control of Fuel Cell Converter Based on a New Hamiltonian Energy Function for Stabilizing the DC Bus in DC Microgrid Applications. Mathematics, 2020, 8, 2035.	1.1	15
63	Discrete-time modelling, stability analysis, and active stabilization of dc distribution systems with constant power loads. , 2015, , .		14
64	Fault-tolerant consideration and active stabilization for floating interleaved boost converter system. , 2017, , .		14
65	Large-Signal Stable Nonlinear Control of DC/DC Power Converter With Online Estimation of Uncertainties. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 7355-7368.	3.7	14
66	Step-By-Step Guide to Model Photovoltaic Panels: An Up-To-Date Comparative Review Study. IEEE Journal of Photovoltaics, 2022, 12, 915-928.	1.5	14
67	Nonlinear Estimation of Stator Currents in a Wound Rotor Synchronous Machine. IEEE Transactions on Industry Applications, 2018, 54, 3858-3867.	3.3	13
68	A Proposed Configuration Based on Three-Level Boost Converter for Unbalancing Voltage issue in Photovoltaic Systems Operation. , 2019, , .		13
69	Overall Size Optimization of a High-Speed Starter Using a Quasi-Z-Source Inverter. IEEE Transactions on Transportation Electrification, 2017, 3, 891-900.	5.3	12
70	Generalisation of an averaged model approach to estimate the periodâ€doubling bifurcation onset in power converters. IET Power Electronics, 2016, 9, 977-988.	1.5	11
71	Large-Signal Stabilization of Power Converters Cascaded Input Filter Using Adaptive Energy Shaping Control. IEEE Transactions on Transportation Electrification, 2021, 7, 838-853.	5.3	11
72	Commandable areas of a modular converter for DC voltage imbalance mitigation in fuel cell systems. Sustainable Energy Technologies and Assessments, 2021, 48, 101664.	1.7	11

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73	Fuel cell management system: An approach to increase its durability. Applied Energy, 2022, 306, 118070.	5.1	11
74	A Fixed-Frequency Optimization of PWM Current Controllerâ€"Modeling and Design of Control Parameters. IEEE Transactions on Transportation Electrification, 2018, 4, 671-683.	5.3	10
75	New Decentralized Control of Mesh AC Microgrids: Study, Stability, and Robustness Analysis. Sustainability, 2021, 13, 2243.	1.6	10
76	Generalization of a DCâ€"DC Modular Converter Topology for Fuel Cell Applications. IEEE Transactions on Industry Applications, 2022, 58, 2255-2267.	3.3	10
77	Switching command based on Lyapunov function for a boost converter with an LC input filter in dc microgrid application. , 2015, , .		8
78	IDA-Passivity-Based Control for Boost Converter with LC Filter Supplying Constant Power Load. , 2018, , .		8
79	Research on LC Filter Cascaded with Buck Converter Supplying Constant Power Load Based on IDA-Passivity-Based Control. , 2018, , .		8
80	Improving the Stability of Cascaded DC-DC Converter Systems via the Viewpoints of Passivity-Based Control and Port-Controlled Hamiltonian Framework. , 2019, , .		8
81	Differential Flatness Based-Control Strategy of a Two-Port Bidirectional Supercapacitor Converter for Hydrogen Mobility Applications. Energies, 2020, 13, 2794.	1.6	8
82	IDA-Passivity-Based Control for On-board DC Power Converter System with Constant Power Load. , 2018, , .		7
83	Commandability of a modular Three-Level Boost Converter in Fuel-cell Systems. , 2019, , .		7
84	Study of Hamiltonian Energy Control of Multiphase Interleaved Fuel Cell Boost Converter. , 2019, , .		7
85	Novel non-linear control for synchronization and power sharing in islanded and grid-connected mesh microgrids. Electric Power Systems Research, 2022, 208, 107869.	2.1	7
86	Lyapunov-based control and observer of a boost converter with LC input filter and stability analysis. , 2016, , .		6
87	Hybrid Fuel Cell/Supercapacitor using a Series Converter. , 2019, , .		6
88	Operating Mode Analysis of a Modular Converter: Experimental Validation. IEEE Transactions on Industry Applications, 2022, 58, 4889-4902.	3.3	6
89	Cascaded Controller for Controlling DC Bus Voltage in Mismatched Input Powers. IEEE Transactions on Power Electronics, 2022, 37, 13834-13847.	5.4	5
90	Improved performance of a control using switching command based on Lyapunov functions of a boost converter with an LC input filter. , 2016, , .		4

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91	DC Microgrid Topologies and Stability Analysis for Electrified Transportation Systems. , 2018, , .		4
92	Improved Adaptive Hamiltonian Control Law for Constant Power Load Stability Issue in DC Microgrid: Case Study for Multiphase Interleaved Fuel Cell Boost Converter. Sustainability, 2021, 13, 8093.	1.6	4
93	Power equalizer for a series fuel cell architecture based on load tracking control. Renewable and Sustainable Energy Reviews, 2022, 166, 112644.	8.2	4
94	Current sensorless control using a nonlinear observer applied to a wound rotor synchronous machine. , 2017, , .		3
95	DC bus voltage instability detection and stabilization under constant power load variation. , 2018, , .		3
96	Comparative study of two control methods for a boost converter with LC input filter: Indirect sliding-mode and flatness based control. , 2015, , .		2
97	Nonlinear estimations of stator currents in a wound rotor synchronous machine. , 2016, , .		2
98	Control of a Two-Phase Interleaved Boost Converter with Input LC Filter for Fuel Cell Vehicle Applications. , 2017, , .		2
99	Improvement of the Commandability zones of A Modular DC-DC Converter Based On A Three-Level Boost Converter. , 2020, , .		2
100	A DC-DC modular structure converter for photovoltaic applications. , 2021, , .		2
101	Pulse-width modulation technique for a multi-input dc-dc boost converter. , 2021, , .		2
102	Evaluation of the performance of a controller based on indirect-sliding mode in a renewable system. , 2021, , .		2
103	Lyapunov functionâ€based improved switching command for a boost converter with an inductorâ€“capacitor input filter. IET Power Electronics, 2020, 13, 3940-3953.	1.5	2
104	Robust control based on flatness properties for a dc-dc switching power converter. , 2020, , .		2
105	Flatness-based control of a 3-phases PWM rectifier with LCL-filter & disturbance observer. , 2020, , .		2
106	Large-signal average modeling of 2-module Converter for renewable energy applications. , 2021, , .		2
107	Control of an electric starter to a DC-embedded microgrid: Dynamical stability issue. , 2018, , .		1
108	Differential Flatness-Based Energy/Current Cascade Control for Multiphase Interleaved Boost Fuel Cell Converter. , 2019, , .		1

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109	Hamiltonian Control Law Based on Lyapunovâ€“Energy Function for Four-Phase Parallel Fuel Cell Boost Converter. , 2020, , .		1
110	Comparative Study of Model-Based Control of Energy/Current Cascade Control for a Multiphase Interleaved Fuel Cell Boost Converter. , 2020, , .		1
111	Investigation of three-module converter structure in photovoltaic systems. , 2021, , .		1
112	Accurate Power Sharing and Synchronization Strategies in Mesh Islanded or Grid-Connected Microgrids. , 2021, , .		1
113	Sensorless Robust Flatness-Based Control With Nonlinear Observer for Non-Ideal Parallel DCâ€“AC Inverters. IEEE Access, 2022, 10, 53940-53953.	2.6	1
114	Ripple capacitor's voltage analysis on two-input three-level boost converter. , 2022, , .		1
115	Effect of fault in output capacitor due to its parasitic resistance in modular DC-DC three-level converter. , 2022, , .		1
116	Robust sensorless control strategy with enhanced dynamics. , 2017, , .		0
117	Hybrid power electronics architecture to implement the fuel cell management system. , 2020, , .		0
118	Cascade control with flatness-based charge MPPT control applied to photovoltaic boost converters. , 2021, , .		0
119	Investigation of the operating point effect on commandable zones of a two-modular DC-DC converter based on a three-level boost converter. , 2021, , .		0
120	Control investigation of a modular system using two-loop control in renewable energy systems. , 2022, , .		0
121	A control method for a DC-DC boost converter with an LC input filter based on Lyapunov function. Journal of Control, 2021, 15, 107-116.	0.1	0
122	Effect of the parasitic resistances on the voltage gain in a dc-dc modular system. , 2022, , .		0
123	Comparison behavior of the capacitor voltages balancing using linear and nonlinear controllers. , 2022, , .		0