

Teuvo Suntio

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

144
papers

2,328
citations

27
h-index

43
g-index

161
ext. papers

2,838
ext. citations

5.1
avg, IF

5.33
L-index

#	Paper	IF	Citations
144	Methods to Estimate Load-Transient Response of Buck Converter Under Direct-Duty-Ratio and Peak-Current-Mode Control. <i>IEEE Transactions on Power Electronics</i> , 2020 , 35, 6436-6446	7.2	2
143	Modeling and Analysis of a PCM-Controlled Boost Converter Designed to Operate in DCM. <i>Energies</i> , 2019 , 12, 4	3.1	5
142	Impedance-Based Interactions in Grid-Tied Three-Phase Inverters in Renewable Energy Applications. <i>Energies</i> , 2019 , 12, 464	3.1	16
141	Direct Fixed-Step Maximum Power Point Tracking Algorithms with Adaptive Perturbation Frequency. <i>Energies</i> , 2019 , 12, 399	3.1	5
140	Maximum Perturbation Step Size in MPP-Tracking Control for Ensuring Predicted PV Power Settling Behavior. <i>Energies</i> , 2019 , 12, 3984	3.1	4
139	Load-resistor-affected dynamic models in control design of switched-mode converters. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2018 , 1-10	0.4	3
138	Online dynamic conductance estimation based maximum power point tracking of photovoltaic generators. <i>Energy Conversion and Management</i> , 2018 , 166, 687-696	10.6	11
137	Design Guidelines for Multiloop Perturbative Maximum Power Point Tracking Algorithms. <i>IEEE Transactions on Power Electronics</i> , 2018 , 33, 1284-1293	7.2	28
136	. <i>IEEE Transactions on Power Electronics</i> , 2018 , 33, 5502-5518	7.2	11
135	Dynamic Modeling and Analysis of PCM-Controlled DCM-Operating Buck Converters Reexamination. <i>Energies</i> , 2018 , 11, 1267	3.1	8
134	Frequency Response Analysis of Load Effect on Dynamics of Grid-Forming Inverter 2018 ,		1
133	Revisited Perturbation Frequency Design Guideline for Direct Fixed-Step Maximum Power Point Tracking Algorithms. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 4601-4609	8.9	31
132	Effect of Active Damping on Output Impedance of Three-Phase Grid-Connected Converter. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 7532-7541	8.9	32
131	Dynamic Analysis and Control Design Preliminaries 2017 , 27-122		
130	Dynamic Modeling of Direct-on-Time Control 2017 , 123-188		
129	Dynamic Modeling of Current-Mode Control 2017 , 189-264		
128	Dynamic Modeling of Current-Output Converters 2017 , 265-276		

127	Introduction to Current-Fed Converters 2017 , 339-354		
126	Introduction to Photovoltaic Generator 2017 , 423-464		
125	Photovoltaic Generator Interfacing Issues 2017 , 465-490		
124	Dynamic Modeling of Three-Phase Inverters 2017 , 491-532		0
123	Control Design of Grid-Connected Three-Phase Inverters 2017 , 533-586		
122	Reduced-Order Closed-Loop Modeling of Inverters 2017 , 587-632		
121	Multivariable Closed-Loop Modeling of Inverters 2017 , 633-662		1
120	Impedance-Based Stability Assessment 2017 , 663-680		
119	Control Design Issues in Voltage-Fed DCDC Converters 2017 , 277-338		
118	Dynamic Modeling of DDR-Controlled CF Converters 2017 , 355-402		
117	Dynamic Modeling of PCM/PVM-Controlled CF Converters 2017 , 403-422		
116	Solar Irradiation Independent Expression for Photovoltaic Generator Maximum Power Line. <i>IEEE Journal of Photovoltaics</i> , 2017 , 7, 1416-1420	3-7	15
115	Modeling of load-transient response of direct-duty-ratio-controlled buck converter 2017 ,		1
114	Grid-Forming-Mode Operation of Boost-Power-Stage Converter in PV-Generator-Interfacing Applications. <i>Energies</i> , 2017 , 10, 1033	3-1	11
113	Review of PV Generator as an Input Source for Power Electronic Converters. <i>Energies</i> , 2017 , 10, 1076	3-1	17
112	2017 ,		33
111	Design of grid-voltage feedforward to increase impedance of grid-connected three-phase inverters with LCL-filter 2016 ,		12
110	Grid-connected PV power plant induced power quality problems [Experimental evidence 2016 ,		10

109	Effect of single-current-feedback active damping on the output impedance of grid-connected inverter 2016 ,		3
108	Improving double-line-frequency voltage ripple rejection capability of DC/DC converter in grid connected two-stage PV inverter using DC-link voltage feedforward 2016 ,		2
107	An online measurement method for common-mode impedance in three-phase grid-connected converters 2016 ,		2
106	Sampling frequency design to optimizing MPP-tracking performance for open-loop-operated converters 2016 ,		2
105	Determining maximum MPP-tracking sampling frequency for input-voltage-controlled PV-interfacing converter 2016 ,		2
104	Output impedance of grid-connected converter with active damping and feed-forward schemes 2016 ,		2
103	Single-source multibattery solar charger: case study and implementation issues. <i>Progress in Photovoltaics: Research and Applications</i> , 2015 , 23, 1916-1928	6.8	6
102	Dynamics of Photovoltaic-Generator-Interfacing Voltage-Controlled Buck Power Stage. <i>IEEE Journal of Photovoltaics</i> , 2015 , 5, 633-640	3.7	18
101	Improved adaptive input voltage control of a solar array interfacing current mode controlled boost power stage. <i>Energy Conversion and Management</i> , 2015 , 98, 369-375	10.6	18
100	Interfacing renewable energy sources for maximum power transferPart II: Dynamics. <i>Renewable and Sustainable Energy Reviews</i> , 2015 , 51, 1771-1783	16.2	16
99	Comprehensive dynamic analysis of photovoltaic generator interfacing DCDC boost power stage. <i>IET Renewable Power Generation</i> , 2015 , 9, 306-314	2.9	34
98	An accurate small-signal model of a three-phase VSI-based photovoltaic inverter with LCL-filter 2015 ,		7
97	Dynamic characteristics of three-phase Z-source-based photovoltaic inverter with asymmetric impedance network 2015 ,		2
96	Generalized multivariable small-signal model of three-phase grid-connected inverter in DQ-domain 2015 ,		23
95	Comments on An Efficient Partial Power Processing DC/DC Converter for Distributed PV ArchitecturesIEEE Transactions on Power Electronics, 2015 , 30, 2372-2372	7.2	16
94	Effect of active damping on the output impedance of PV inverter 2015 ,		3
93	Single-Source Multi-Battery Solar Charger: Analysis and Stability Issues. <i>Energies</i> , 2015 , 8, 6427-6450	3.1	5
92	Pseudo-Random Sequences in DQ-Domain Analysis of Feedforward Control in Grid-Connected Inverters. <i>IFAC-PapersOnLine</i> , 2015 , 48, 1301-1306	0.7	9

91	Design of boost-power-stage converter for PV generator interfacing 2014 ,		3
90	Characterizing the Dynamics of the Peak-Current-Mode-Controlled Buck-Power-Stage Converter in Photovoltaic Applications. <i>IEEE Transactions on Power Electronics</i> , 2014 , 29, 3840-3847	7.2	20
89	Effect of conventional grid-voltage feedforward on the output impedance of a three-phase photovoltaic inverter 2014 ,		6
88	Simple method for measuring output impedance of a three-phase inverter in dq-domain 2014 ,		12
87	. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2014 , 2, 949-961	5.6	22
86	Determining the Value of DC-Link Capacitance to Ensure Stable Operation of a Three-Phase Photovoltaic Inverter. <i>IEEE Transactions on Power Electronics</i> , 2014 , 29, 665-673	7.2	66
85	Physical insight into the factors affecting the load-transient response of a buck converter 2014 ,		3
84	Time and frequency-domain evidence on power quality issues caused by grid-connected three-phase photovoltaic inverters 2014 ,		11
83	Grid-Connected Photovoltaic Generation Plants: Components and Operation. <i>IEEE Industrial Electronics Magazine</i> , 2013 , 7, 6-20	6.2	294
82	Modeling the grid synchronization induced negative-resistor-like behavior in the output impedance of a three-phase photovoltaic inverter 2013 ,		48
81	Simplified small-signal stability analysis for optimized power system architecture 2013 ,		4
80	Impedance-Based Stability and Transient-Performance Assessment Applying Maximum Peak Criteria. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 2099-2104	7.2	125
79	Photovoltaic Generator as an Input Source for Power Electronic Converters. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 3028-3038	7.2	103
78	Origin of Cross-Coupling Effects in Distributed DCDC Converters in Photovoltaic Applications. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 4625-4635	7.2	33
77	. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 2647-2648	7.2	8
76	Minimum DC-link capacitance requirement of a two-stage photovoltaic inverter 2013 ,		3
75	Effect of Control Method on Impedance-Based Interactions in a Buck Converter. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 5311-5322	7.2	22
74	Operation of TUT Solar PV Power Station Research Plant under Partial Shading Caused by Snow and Buildings. <i>International Journal of Photoenergy</i> , 2013 , 2013, 1-13	2.1	34

73	Dynamic Properties of Current-Fed Quadratic Full-Bridge Buck Converter for Distributed Photovoltaic MPP-Tracking Systems. <i>IEEE Transactions on Power Electronics</i> , 2012 , 27, 4681-4689	7.2	28
72	Dynamic properties of a voltage source inverter-based three-phase inverter in photovoltaic application. <i>IET Renewable Power Generation</i> , 2012 , 6, 381-391	2.9	18
71	Practical characterization of input-parallel-connected converters with a common input filter 2012 ,		4
70	Modelling the effect of non-ideal load in three-phase converter dynamics. <i>Electronics Letters</i> , 2012 , 48, 402	1.1	7
69	Dynamic Characteristics of Current-Fed Superbuck Converter. <i>IEEE Transactions on Power Electronics</i> , 2011 , 26, 200-209	7.2	32
68	Current-fed quadratic full-bridge buck converter for PV systems interfacing: Dynamic characterization 2011 ,		1
67	Appearance of a RHP-zero in VSI-based photovoltaic converter control dynamics 2011 ,		2
66	Stability and transient performance assessment in a COTS-module-based distributed DC/DC system 2011 ,		7
65	Effect of minimizing input capacitance in VSI-based renewable energy source converters 2011 ,		8
64	Dynamic characteristics of current-fed semi-quadratic buck-boost converter in photovoltaic applications 2011 ,		3
63	Dynamic Properties and Stability Assessment of Current-Fed Converters in Photovoltaic Applications. <i>IEEJ Transactions on Industry Applications</i> , 2011 , 131, 976-984	0.2	23
62	Fast Simulated Frequency Response Measurement for Switched-Mode Power Circuits. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2010 , 20, 14-20	0.4	
61	Dynamic Properties of PCM-Controlled Superbuck Converter [Discrete vs. Coupled Inductor Implementation. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2010 , 20, 8-10	0.4	3
60	Dynamic terminal characteristics of a photovoltaic generator 2010 ,		14
59	Implementing current-fed converters by adding an input capacitor at the input of voltage-fed converter for interfacing solar generator 2010 ,		14
58	Issues on Solar-Generator Interfacing With Current-Fed MPP-Tracking Converters. <i>IEEE Transactions on Power Electronics</i> , 2010 , 25, 2409-2419	7.2	80
57	Issues on Solar-Generator Interfacing with Voltage-Fed MPP-Tracking Converters. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2010 , 20, 40-47	0.4	17
56	Frequency-Response Measurement of Switched-Mode Power Supplies in the Presence of Nonlinear Distortions. <i>IEEE Transactions on Power Electronics</i> , 2010 , 25, 2179-2187	7.2	27

55	Circular correlation based identification of switching power converter with uncertainty analysis using fuzzy density approach. <i>Simulation Modelling Practice and Theory</i> , 2009 , 17, 1043-1058	3.9	27
54	Fast frequency response measurement of switched-mode Converters in the presence of nonlinear distortions 2009 ,		2
53	Fast Loop Gain Measurement of a Switched-Mode Converter Using a Binary Signal With a Specified Fourier Amplitude Spectrum. <i>IEEE Transactions on Power Electronics</i> , 2009 , 24, 2746-2755	7.2	27
52	Issues on solar-generator-interfacing with voltage-fed converter 2009 ,		10
51	Average and Small-Signal Modeling of Direct-On-Time Controlled Converters 2009 , 59-119		1
50	Average and Small-Signal Modeling of Peak-Current-Mode Control 2009 , 121-168		
49	Average and Small-Signal Modeling of Average-Current-Mode Control 2009 , 169-188		
48	Basis for Dynamic Analysis and Control Dynamics 2009 , 17-58		
47	Average and Small-Signal Modeling of Self-Oscillation Control 2009 , 189-210		1
46	Dynamic Modeling and Analysis of Current-Output Converters 2009 , 211-224		
45	The Fourth-Order Converter Ćuk Superbuck 2009 , 307-349		0
44	Control Design Issues 2009 , 261-305		
43	Interconnected Systems 2009 , 225-260		
42	On EMI-filter interactions in a regulated converter - stability and load-transient performance 2009 ,		4
41	The Short-Circuit Input Impedance as a Main Source of Input-Filter Interactions in a Regulated Converter. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2009 , 19, 31-40	0.4	2
40	Minor-Loop Gain as a Source of Information on Robust Stability and Transient Performance in an Interconnected System. <i>EPE Journal (European Power Electronics and Drives Journal)</i> , 2009 , 19, 28-35	0.4	1
39	2009 ,		74
38	Dynamical Modeling and Characterization of Peak-Current-Controlled Superbuck Converter. <i>IEEE Transactions on Power Electronics</i> , 2008 , 23, 1370-1380	7.2	32

37	Modelling and dynamic characterisation of peak-current-mode-controlled superboost converter. <i>IET Power Electronics</i> , 2008 , 1, 527	2.2	16
36	Methods to characterize open-loop dynamics of current-mode-controlled converters. <i>Power Electronics Specialist Conference (PESC), IEEE</i> , 2008 ,		4
35	PCM-controlled superbuck converter with super performance and surprises 2008 ,		2
34	Multi-channel semi-regulated bus converter. <i>Power Electronics Specialist Conference (PESC), IEEE</i> , 2008 ,		4
33	Dynamical Characterization of Peak-Current-Mode-Controlled Buck Converter With Output-Current Feedforward. <i>IEEE Transactions on Power Electronics</i> , 2007 , 22, 444-451	7.2	52
32	Source-Imposed Instability and Performance Degradation in a Regulated Converter 2007 ,		7
31	Dynamical profile of a switched-mode converter - reality or imagination 2007 ,		6
30	Impact of remote sensing on converter stability and performance 2007 ,		2
29	Dynamical modelling of peak-current-mode-controlled converter in continuous conduction mode. <i>Simulation Modelling Practice and Theory</i> , 2007 , 15, 1320-1337	3.9	20
28	QFT based robust controller design for a DC-DC switching power converter 2007 ,		6
27	. <i>IEEE Transactions on Industrial Electronics</i> , 2007 , 54, 1005-1013	8.9	36
26	Load-imposed instability and performance degradation in a regulated converter. <i>IET Electric Power Applications</i> , 2006 , 153, 781		28
25	EMI-Filter Interactions in a Buck Converter 2006 ,		1
24	Dynamical Characterization of Voltage-Mode Controlled Buck Converter Operating in CCM and DCM 2006 ,		2
23	Unified average and small-signal modeling of direct-on-time control. <i>IEEE Transactions on Industrial Electronics</i> , 2006 , 53, 287-295	8.9	51
22	Source-Reflected Load Interactions in a Regulated Converter. <i>Industrial Electronics Society (IECON), Annual Conference of IEEE</i> , 2006 ,		20
21	Stability and Performance Analysis of Regulated Converter Systems. <i>Industrial Electronics Society (IECON), Annual Conference of IEEE</i> , 2006 ,		4
20	Dynamic Properties of Interconnected Power Systems - A System Theoretic Approach 2006 ,		21

19	Average and small-signal modeling of self-oscillating flyback converter with applied switching delay. <i>IEEE Transactions on Power Electronics</i> , 2006 , 21, 479-486	7.2	28
18	Small-Signal Models for Constant-Current Regulated Converters. <i>Industrial Electronics Society (IECON), Annual Conference of IEEE</i> , 2006 ,		13
17	Analysis of the Load Interactions in Constant-Current-Controlled Buck Converter 2006 ,		3
16	Battery impedance characterization through inspection of discharge curve and testing with short pulses. <i>Journal of Power Sources</i> , 2006 , 158, 1029-1033	8.9	3
15	Characterization of Regulated Converters to Ensure Stability and Performance in Distributed Power Supply Systems 2005 ,		21
14	Load-Impedance Based Interactions in Regulated Converters 2005 ,		12
13	USING INPUT INVARIANCE AS A METHOD TO FACILITATE SYSTEM DESIGN IN DPS APPLICATIONS. <i>Journal of Circuits, Systems and Computers</i> , 2004 , 13, 707-723	0.9	13
12	A Method for Battery Impedance Analysis. <i>Journal of the Electrochemical Society</i> , 2004 , 151, A806	3.9	7
11	Evaluation of VRLA battery under overcharging: model for battery testing. <i>Journal of Power Sources</i> , 2002 , 111, 65-82	8.9	21
10	Input filter interactions in peak-current-mode-controlled buck converter operating in CICM. <i>IEEE Transactions on Industrial Electronics</i> , 2002 , 49, 76-86	8.9	31
9	Charge/discharge behaviour of VRLA batteries: model calibration and application for state estimation and failure detection. <i>Journal of Power Sources</i> , 2001 , 103, 42-53	8.9	31
8	Analysis and modeling of peak-current-mode-controlled buck converter in DICM. <i>IEEE Transactions on Industrial Electronics</i> , 2001 , 48, 127-135	8.9	34
7	Dynamics of a buck converter with a constant power load		77
6	Input filter interactions in multi-module parallel switching-mode power supplies		2
5	Load and supply interactions in VMC-buck converter operating in CCM and DCM		5
4	Load and supply invariance in a regulated converter		6
3	Design of EMI filter for stability and performance in switched-mode converters		7
2	Unified derivation and analysis of duty-ratio constraints for peak-current-mode control in continuous and discontinuous modes		8

1 Practical design issues of multi-loop controller for a telecom rectifier

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