Teuvo Suntio

List of Publications by Citations

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	Grid-Connected Photovoltaic Generation Plants: Components and Operation. *IEEE Industrial Electronics Magazine*, **2013**, 7, 6-20	6.2	294
143	Impedance-Based Stability and Transient-Performance Assessment Applying Maximum Peak Criteria. *IEEE Transactions on Power Electronics*, **2013**, 28, 2099-2104	7.2	125
142	Photovoltaic Generator as an Input Source for Power Electronic Converters. *IEEE Transactions on Power Electronics*, **2013**, 28, 3028-3038	7.2	103
141	Issues on Solar-Generator Interfacing With Current-Fed MPP-Tracking Converters. *IEEE Transactions on Power Electronics*, **2010**, 25, 2409-2419	7.2	80
140	Dynamics of a buck converter with a constant power load		77
139	**2009**,		74
138	Determining the Value of DC-Link Capacitance to Ensure Stable Operation of a Three-Phase Photovoltaic Inverter. *IEEE Transactions on Power Electronics*, **2014**, 29, 665-673	7.2	66
137	Dynamical Characterization of Peak-Current-Mode-Controlled Buck Converter With Output-Current Feedforward. *IEEE Transactions on Power Electronics*, **2007**, 22, 444-451	7.2	52
136	Unified average and small-signal modeling of direct-on-time control. *IEEE Transactions on Industrial Electronics*, **2006**, 53, 287-295	8.9	51
135	Modeling the grid synchronization induced negative-resistor-like behavior in the output impedance of a three-phase photovoltaic inverter **2013**,		48
134	. *IEEE Transactions on Industrial Electronics*, **2007**, 54, 1005-1013	8.9	36
133	Comprehensive dynamic analysis of photovoltaic generator interfacing DC□DC boost power stage. *IET Renewable Power Generation*, **2015**, 9, 306-314	2.9	34
132	Operation of TUT Solar PV Power Station Research Plant under Partial Shading Caused by Snow and Buildings. *International Journal of Photoenergy*, **2013**, 2013, 1-13	2.1	34
131	Analysis and modeling of peak-current-mode-controlled buck converter in DICM. *IEEE Transactions on Industrial Electronics*, **2001**, 48, 127-135	8.9	34
130	Origin of Cross-Coupling Effects in Distributed DC□DC Converters in Photovoltaic Applications. *IEEE Transactions on Power Electronics*, **2013**, 28, 4625-4635	7.2	33
129	**2017**,		33
128	Effect of Active Damping on Output Impedance of Three-Phase Grid-Connected Converter. *IEEE Transactions on Industrial Electronics*, **2017**, 64, 7532-7541	8.9	32

127	Dynamic Characteristics of Current-Fed Superbuck Converter. *IEEE Transactions on Power Electronics*, **2011**, 26, 200-209	7.2	32
126	Dynamical Modeling and Characterization of Peak-Current-Controlled Superbuck Converter. *IEEE Transactions on Power Electronics*, **2008**, 23, 1370-1380	7.2	32
125	Revisited Perturbation Frequency Design Guideline for Direct Fixed-Step Maximum Power Point Tracking Algorithms. *IEEE Transactions on Industrial Electronics*, **2017**, 64, 4601-4609	8.9	31
124	Charge□discharge behaviour of VRLA batteries: model calibration and application for state estimation and failure detection. *Journal of Power Sources*, **2001**, 103, 42-53	8.9	31
123	Input filter interactions in peak-current-mode-controlled buck converter operating in CICM. *IEEE Transactions on Industrial Electronics*, **2002**, 49, 76-86	8.9	31
122	Design Guidelines for Multiloop Perturbative Maximum Power Point Tracking Algorithms. *IEEE Transactions on Power Electronics*, **2018**, 33, 1284-1293	7.2	28
121	Dynamic Properties of Current-Fed Quadratic Full-Bridge Buck Converter for Distributed Photovoltaic MPP-Tracking Systems. *IEEE Transactions on Power Electronics*, **2012**, 27, 4681-4689	7.2	28
120	Load-imposed instability and performance degradation in a regulated converter. *IET Electric Power Applications*, **2006**, 153, 781		28
119	Average and small-signal modeling of self-oscillating flyback converter with applied switching delay. *IEEE Transactions on Power Electronics*, **2006**, 21, 479-486	7.2	28
118	Circular correlation based identification of switching power converter with uncertainty analysis using fuzzy density approach. *Simulation Modelling Practice and Theory*, **2009**, 17, 1043-1058	3.9	27
117	Fast Loop Gain Measurement of a Switched-Mode Converter Using a Binary Signal With a Specified Fourier Amplitude Spectrum. *IEEE Transactions on Power Electronics*, **2009**, 24, 2746-2755	7.2	27
116	Frequency-Response Measurement of Switched-Mode Power Supplies in the Presence of Nonlinear Distortions. *IEEE Transactions on Power Electronics*, **2010**, 25, 2179-2187	7.2	27
115	Generalized multivariable small-signal model of three-phase grid-connected inverter in DQ-domain **2015**,		23
114	Dynamic Properties and Stability Assessment of Current-Fed Converters in Photovoltaic Applications. *IEEJ Transactions on Industry Applications*, **2011**, 131, 976-984	0.2	23
113	. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2014**, 2, 949-961	5.6	22
112	Effect of Control Method on Impedance-Based Interactions in a Buck Converter. *IEEE Transactions on Power Electronics*, **2013**, 28, 5311-5322	7.2	22
111	Characterization of Regulated Converters to Ensure Stability and Performance in Distributed Power Supply Systems **2005**,		21
110	Dynamic Properties of Interconnected Power Systems - A System Theoretic Approach **2006**,		21

109	Evaluation of VRLA battery under overcharging: model for battery testing. *Journal of Power Sources* , **2002**, 111, 65-82	8.9	21
108	Characterizing the Dynamics of the Peak-Current-Mode-Controlled Buck-Power-Stage Converter in Photovoltaic Applications. *IEEE Transactions on Power Electronics*, **2014**, 29, 3840-3847	7.2	20
107	Dynamical modelling of peak-current-mode-controlled converter in continuous conduction mode. *Simulation Modelling Practice and Theory*, **2007**, 15, 1320-1337	3.9	20
106	Source-Reflected Load Interactions in a Regulated Converter. *Industrial Electronics Society (IECON), Annual Conference of IEEE*, **2006**,		20
105	Dynamics of Photovoltaic-Generator-Interfacing Voltage-Controlled Buck Power Stage. *IEEE Journal of Photovoltaics*, **2015**, 5, 633-640	3.7	18
104	Improved adaptive input voltage control of a solar array interfacing current mode controlled boost power stage. *Energy Conversion and Management*, **2015**, 98, 369-375	10.6	18
103	Dynamic properties of a voltage source inverter-based three-phase inverter in photovoltaic application. *IET Renewable Power Generation*, **2012**, 6, 381-391	2.9	18
102	Review of PV Generator as an Input Source for Power Electronic Converters. *Energies*, **2017**, 10, 1076	3.1	17
101	Issues on Solar-Generator Interfacing with Voltage-Fed MPP-Tracking Converters. *EPE Journal (European Power Electronics and Drives Journal)*, **2010**, 20, 40-47	0.4	17
100	Impedance-Based Interactions in Grid-Tied Three-Phase Inverters in Renewable Energy Applications. *Energies*, **2019**, 12, 464	3.1	16
99	Interfacing renewable energy sources for maximum power transfer Part II: Dynamics. *Renewable and Sustainable Energy Reviews*, **2015**, 51, 1771-1783	16.2	16
98	Comments on An Efficient Partial Power Processing DC/DC Converter for Distributed PV Architectures *IEEE Transactions on Power Electronics*, **2015**, 30, 2372-2372	7.2	16
97	Modelling and dynamic characterisation of peak-current-mode-controlled superboost converter. *IET Power Electronics*, **2008**, 1, 527	2.2	16
96	Solar Irradiation Independent Expression for Photovoltaic Generator Maximum Power Line. *IEEE Journal of Photovoltaics*, **2017**, 7, 1416-1420	3.7	15
95	Dynamic terminal characteristics of a photovoltaic generator **2010**,		14
94	Implementing current-fed converters by adding an input capacitor at the input of voltage-fed converter for interfacing solar generator **2010**,		14
93	Small-Signal Models for Constant-Current Regulated Converters. *Industrial Electronics Society (IECON), Annual Conference of IEEE*, **2006**,		13
92	USING INPUT INVARIANCE AS A METHOD TO FACILITATE SYSTEM DESIGN IN DPS APPLICATIONS. *Journal of Circuits, Systems and Computers*, **2004**, 13, 707-723	0.9	13

91	Design of grid-voltage feedforward to increase impedance of grid-connected three-phase inverters with LCL-filter **2016**,		12
90	Simple method for measuring output impedance of a three-phase inverter in dq-domain **2014**,		12
89	Load-Impedance Based Interactions in Regulated Converters **2005**,		12
88	Online dynamic conductance estimation based maximum power point tracking of photovoltaic generators. *Energy Conversion and Management*, **2018**, 166, 687-696	10.6	11
87	Grid-Forming-Mode Operation of Boost-Power-Stage Converter in PV-Generator-Interfacing Applications. *Energies*, **2017**, 10, 1033	3.1	11
86	Time and frequency-domain evidence on power quality issues caused by grid-connected three-phase photovoltaic inverters **2014**,		11
85	. *IEEE Transactions on Power Electronics*, **2018**, 33, 5502-5518	7.2	11
84	Grid-connected PV power plant induced power quality problems Experimental evidence **2016**,		10
83	Issues on solar-generator-interfacing with voltage-fed converter **2009**,		10
82	Pseudo-Random Sequences in DQ-Domain Analysis of Feedforward Control in Grid-Connected Inverters. *IFAC-PapersOnLine*, **2015**, 48, 1301-1306	0.7	9
81	. *IEEE Transactions on Power Electronics*, **2013**, 28, 2647-2648	7.2	8
80	Effect of minimizing input capacitance in VSI-based renewable energy source converters **2011**,		8
79	Unified derivation and analysis of duty-ratio constraints for peak-current-mode control in continuous and discontinuous modes		8
78	Dynamic Modeling and Analysis of PCM-Controlled DCM-Operating Buck Converters A Reexamination. *Energies*, **2018**, 11, 1267	3.1	8
77	An accurate small-signal model of a three-phase VSI-based photovoltaic inverter with LCL-filter **2015**,		7
76	Stability and transient performance assessment in a COTS-module-based distributed DC/DC system **2011**,		7
75	Modelling the effect of non-ideal load in three-phase converter dynamics. *Electronics Letters*, **2012**, 48, 402	1.1	7
74	Source-Imposed Instability and Performance Degradation in a Regulated Converter **2007**,		7

73	A Method for Battery Impedance Analysis. *Journal of the Electrochemical Society*, **2004**, 151, A806	3.9	7
72	Design of EMI filter for stability and performance in switched-mode converters		7
71	Single-source multibattery solar charger: case study and implementation issues. *Progress in Photovoltaics: Research and Applications*, **2015**, 23, 1916-1928	6.8	6
70	Effect of conventional grid-voltage feedforward on the output impedance of a three-phase photovoltaic inverter **2014**,		6
69	Dynamical profile of a switched-mode converter - reality or imagination **2007**,		6
68	QFT based robust controller design for a DC-DC switching power converter **2007**,		6
67	Load and supply invariance in a regulated converter		6
66	Modeling and Analysis of a PCM-Controlled Boost Converter Designed to Operate in DCM. *Energies*, **2019**, 12, 4	3.1	5
65	Direct Fixed-Step Maximum Power Point Tracking Algorithms with Adaptive Perturbation Frequency. *Energies*, **2019**, 12, 399	3.1	5
64	Single-Source Multi-Battery Solar Charger: Analysis and Stability Issues. *Energies*, **2015**, 8, 6427-6450	3.1	5
63	Load and supply interactions in VMC-buck converter operating in CCM and DCM		5
62	Simplified small-signal stability analysis for optimized power system architecture **2013**,		4
61	Practical characterization of input-parallel-connected converters with a common input filter **2012**,		4
60	On EMI-filter interactions in a regulated converter - stability and load-transient performance **2009**,		4
59	Methods to characterize open-loop dynamics of current-mode-controlled converters. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		4
58	Multi-channel semi-regulated bus converter. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		4
57	Stability and Performance Analysis of Regulated Converter Systems. *Industrial Electronics Society (IECON), Annual Conference of IEEE*, **2006**,		4
56	Maximum Perturbation Step Size in MPP-Tracking Control for Ensuring Predicted PV Power Settling Behavior. *Energies*, **2019**, 12, 3984	3.1	4

55	Load-resistor-affected dynamic models in control design of switched-mode converters. *EPE Journal (European Power Electronics and Drives Journal)*, **2018**, 1-10	0.4	3
54	Effect of single-current-feedback active damping on the output impedance of grid-connected inverter **2016**,		3
53	Design of boost-power-stage converter for PV generator interfacing **2014**,		3
52	Effect of active damping on the output impedance of PV inverter **2015**,		3
51	Physical insight into the factors affecting the load-transient response of a buck converter **2014**,		3
50	Minimum DC-link capacitance requirement of a two-stage photovoltaic inverter **2013**,		3
49	Dynamic Properties of PCM-Controlled Superbuck Converter Discrete vs. Coupled Inductor Implementation. *EPE Journal (European Power Electronics and Drives Journal)*, **2010**, 20, 8-10	0.4	3
48	Dynamic characteristics of current-fed semi-quadratic buck-boost converter in photovoltaic applications **2011**,		3
47	Analysis of the Load Interactions in Constant-Current-Controlled Buck Converter **2006**,		3
46	Battery impedance characterization through inspection of discharge curve and testing with short pulses. *Journal of Power Sources*, **2006**, 158, 1029-1033	8.9	3
45	Dynamic characteristics of three-phase Z-source-based photovoltaic inverter with asymmetric impedance network **2015**,		2
44	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
43	Appearance of a RHP-zero in VSI-based photovoltaic converter control dynamics **2011**,		2
42	Fast frequency response measurement of switched-mode Converters in the presence of nonlinear distortions **2009**,		2
41	The Short-Circuit Input Impedance as a Main Source of Input-Filter Interactions in a Regulated Converter. *EPE Journal (European Power Electronics and Drives Journal)*, **2009**, 19, 31-40	0.4	2
40	PCM-controlled superbuck converter with super performance and surprises **2008**,		2
39	Impact of remote sensing on converter stability and performance **2007**,		2
38	Input filter interactions in multi-module parallel switching-mode power supplies		2

37	Dynamical Characterization of Voltage-Mode Controlled Buck Converter Operating in CCM and DCM **2006**,		2
36	Practical design issues of multi-loop controller for a telecom rectifier		2
35	Methods to Estimate Load-Transient Response of Buck Converter Under Direct-Duty-Ratio and Peak-Current-Mode Control. *IEEE Transactions on Power Electronics*, **2020**, 35, 6436-6446	7.2	2
34	An online measurement method for common-mode impedance in three-phase grid-connected converters **2016**,		2
33	Sampling frequency design to optimizing MPP-tracking performance for open-loop-operated converters **2016**,		2
32	Determining maximum MPP-tracking sampling frequency for input-voltage-controlled PV-interfacing converter **2016**,		2
31	Output impedance of grid-connected converter with active damping and feed-forward schemes **2016**,		2
30	Multivariable Closed-Loop Modeling of Inverters **2017**, 633-662		1
29	Modeling of load-transient response of direct-duty-ratio-controlled buck converter **2017**,		1
28	Current-fed quadratic full-bridge buck converter for PV systems interfacing: Dynamic characterization **2011**,		1
27	Average and Small-Signal Modeling of Direct-On-Time Controlled Converters **2009**, 59-119		1
26	Average and Small-Signal Modeling of Self-Oscillation Control **2009**, 189-210		1
25	Minor-Loop Gain as a Source of Information on Robust Stability and Transient Performance in an Interconnected System. *EPE Journal (European Power Electronics and Drives Journal)*, **2009**, 19, 28-35	0.4	1
24	EMI-Filter Interactions in a Buck Converter **2006**,		1
23	Frequency Response Analysis of Load Effect on Dynamics of Grid-Forming Inverter **2018**,		1
22	Dynamic Modeling of Three-Phase Inverters **2017**, 491-532		0
21	The Fourth-Order Converter Superbuck **2009**, 307-349		0
20	Dynamic Analysis and Control Design Preliminaries **2017**, 27-122		

19 Dynamic Modeling of Direct-on-Time Control **2017**, 123-188

18 Dynamic Modeling of Current-Mode Control **2017**, 189-264

17 Dynamic Modeling of Current-Output Converters **2017**, 265-276

16 Introduction to Current-Fed Converters **2017**, 339-354

15 Introduction to Photovoltaic Generator **2017**, 423-464

14 Photovoltaic Generator Interfacing Issues **2017**, 465-490

13 Control Design of Grid-Connected Three-Phase Inverters **2017**, 533-586

12 Reduced-Order Closed-Loop Modeling of Inverters **2017**, 587-632

11 Impedance-Based Stability Assessment **2017**, 663-680

10 Control Design Issues in Voltage-Fed DCDC Converters **2017**, 277-338

9 Dynamic Modeling of DDR-Controlled CF Converters **2017**, 355-402

8 Dynamic Modeling of PCM/PVM-Controlled CF Converters **2017**, 403-422

7 Fast Simulated Frequency Response Measurement for Switched-Mode Power Circuits. *EPE Journal (European Power Electronics and Drives Journal)*, **2010**, 20, 14-20 0.4

6 Average and Small-Signal Modeling of Peak-Current-Mode Control **2009**, 121-168

5 Average and Small-Signal Modeling of Average-Current-Mode Control **2009**, 169-188

4 Basis for Dynamic Analysis and Control Dynamics **2009**, 17-58

3 Dynamic Modeling and Analysis of Current-Output Converters **2009**, 211-224

2 Control Design Issues **2009**, 261-305

1 Interconnected Systems **2009**, 225-260