Angelo Brambilla

List of Publications by Year
in descending order

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123	1,317	394286	526166
papers	citations	19	27
		h-index	g-index

123	123	123	676
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Isomorphic Circuit Clustering for Fast and Accurate Electromagnetic Transient Simulations of MMCs. IEEE Transactions on Energy Conversion, 2022, 37, 800-810.	3.7	4
2	Application of Envelope-Following Techniques to the Simulation of Hybrid Power Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1800-1810.	3.5	4
3	Modular Multilevel Converter Impedance Computation Based on Periodic Small-Signal Analysis and Vector Fitting. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1832-1842.	3.5	7
4	Stability Boundaries of Wide-Input-Range COT Buck Converters With Ripple Compensation. IEEE Open Journal of Circuits and Systems, 2022, 3, 15-24.	1.4	1
5	Towards the Co-Simulation of Charge Qubits: A Methodology Grounding on an Equivalent Circuit Representation. IEEE Open Journal of Circuits and Systems, 2021, 2, 548-563.	1.4	2
6	Simulation of Stochastic Electromagnetic Transients in EMTP: A Bug Turned Into a Feature. IEEE Transactions on Power Delivery, 2021, 36, 769-776.	2.9	6
7	A Stability Condition for Constant-On Time Buck Converters Suitable for Automotive Applications. , 2021, , .		3
8	Stability Analysis of MMC/MTDC Systems Considering DC-Link Dynamics. , 2021, , .		5
9	Partitioning-Based Unified Power Flow Algorithm for Mixed MTDC/AC Power Systems. IEEE Transactions on Power Systems, 2021, 36, 3406-3415.	4.6	8
10	Effects of inertia, load damping and dead-bands on frequency histograms and frequency control of power systems. International Journal of Electrical Power and Energy Systems, 2021, 129, 106842.	3.3	14
11	Closed-Form Operational Boundaries for Buck Converters With Constant On-Time Control. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 3331-3335.	2.2	1
12	Load Transient Response Analysis of Constant On-Time DCâ€“DC Converters Using a State-Variables Approach. IEEE Transactions on Power Electronics, 2020, 35, 4489-4499.	5.4	2
13	Simulations of Three-Phase Current Interruptions Through a Black-Box Model of Miniature Circuit Breakers. IEEE Transactions on Power Delivery, 2020, 35, 937-945.	2.9	1
14	Generalized Power Flow Analysis of Electrical Power Systems Modeled as Mixed Single-Phase/Three-Phase Sub-Systems. IEEE Transactions on Power Systems, 2020, 35, 1284-1293.	4.6	9
15	Numerical Approach to Compute the Power Flow Solution of Hybrid Generation, Transmission and Distribution Systems. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 936-940.	2.2	8
16	Application of Envelope-Following Techniques to the Shooting Method. IEEE Open Journal of Circuits and Systems, 2020, 1, 22-33.	1.4	5
17	A Nonlinear Behavioral Ferrite-Core Inductance Model Able to Reproduce Thermal Transients in Switch-Mode Power Supplies. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 1255-1263.	3.5	11
18	A reliable and efficient black box model of SF6 medium voltage circuit breakers. International Journal of Electrical Power and Energy Systems, 2020, 119, 105863.	3.3	11

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19	A novel sufficient condition to avoid subharmonic oscillations for buck converters with constant onâ€time control. Electronics Letters, 2020, 56, 305-308.	0.5	4
20	Analysis of the Impact of Synthetic Inertia on Frequency Variations and on Turbine Governor Dead-Bands. , 2020, , .		1
21	Shooting by a Two-Step Galerkin Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 383-390.	3.5	6
22	On the Impact of the Dead-Band of Power System Stabilizers and Frequency Regulation on Power System Stability. IEEE Transactions on Power Systems, 2019, 34, 3977-3979.	4.6	21
23	Efficient Isomorphism Based Simulation of Modular Multilevel Converters. , 2019, , .		5
24	Brushing Up on the Urbanek Black Box Arc Model. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1675-1683.	3.5	8
25	Simplified Model to Study the Induction Generator Effect of the Subsynchronous Resonance Phenomenon. IEEE Transactions on Energy Conversion, 2018, 33, 889-892.	3.7	23
26	FastSpice circuit partitioning to compute DC operating points preserving Spice -like simulators accuracy. Simulation Modelling Practice and Theory, 2018, 81, 51-63.	2.2	5
27	Circuit Level Model of Miniature Circuit Breakers. IEEE Transactions on Power Delivery, 2018, 33, 2700-2709.	2.9	8
28	Optimal Coefficient Quantization in Optimal-NTF <inline-formula> <tex-math notation="LaTeX">$Delta !Sigma $ </tex-math> </inline-formula> Modulators. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 542-546.	2.2	2
29	Analytic and Numerical Study of TCSC Devices: Unveiling the Crucial Role of Phase-Locked Loops. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1840-1849.	3.5	32
30	On the Benefit of Adopting Saturable Inductors in Switching-Mode Power-Supplies: A Case Study. , 2018, , .		6
31	The Urbanek Black Box Arc Model in Passive Resonance Circuit Breakers for HVDC Applications. , 2018, , .		4
32	Efficient and Reliable Small-Signal Estimate of Quantization Noise Contribution to Phase Noise in $Delta Sigma $ Fractional- N PLL. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 1494-1503.	3.5	5
33	On the Mechanisms Governing Spurious Tone Injection in Fractional PLLs. IEEE Transactions on Circuits and Systems II: Express Briefs, 2017, 64, 1267-1271.	2.2	11
34	PAN and MPanSuite: Simulation Vehicles towards the Analysis and Design of Heterogeneous Mixed Electrical Systems. , 2017, , .		31
35	Constant-time discontinuity map for forward sensitivity analysis to initial conditions: Spurs detection in fractional-N PLL as a case study. , 2017, , .		0
36	Harmonic Balance Based on Two-Step Galerkin Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 1476-1486.	3.5	6

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37	Periodic small-signal analysis as a tool to build transient stability models of VSC-based devices. , 2016, , .		3
38	The Probe-Insertion Technique for the Detection of Limit Cycles in Power Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 312-321.	3.5	10
39	Reduction of harmonic balance equations through Galerkin's method. , 2015, , .		3
40	Monitoring performance and efficiency of photovoltaic parks. Renewable Energy, 2015, 78, 314-321.	4.3	18
41	Efficient transient noise analysis of nonâ€periodic mixed analogue/digital circuits. IET Circuits, Devices and Systems, 2015, 9, 73-80.	0.9	4
42	A lumped model of lymphatic systems suitable for large scale simulations. , 2015, , .		3
43	Simulation of Real World Circuits: Extending Conventional Analysis Methods to Circuits Described by Heterogeneous Languages. IEEE Circuits and Systems Magazine, 2014, 14, 51-70.	2.6	39
44	Reliable AMS simulation of electrostatic vibration energy harvesters: a case study. , 2014, , .		0
45	Voltage Regulators Design Through Advanced Mixed-Mode Circuit Simulation. IEEE Transactions on Power Electronics, 2014, 29, 4496-4499.	5.4	9
46	Stability analysis of voltage regulators versus different digital control strategies by analog-mixed-signal circuit simulation. , 2014, , .		1
47	Accurate and Efficient PSD Computation in Mixed-Signal Circuits: A Time-Domain Approach. IEEE Transactions on Circuits and Systems II: Express Briefs, 2014, 61, 905-909.	2.2	10
48	Nonlinear behavioural model of charge pump PLLs. International Journal of Circuit Theory and Applications, 2013, 41, 1027-1046.	1.3	19
49	Lyapunov exponents computation for hybrid neurons. Journal of Computational Neuroscience, 2013, 35, 201-212.	0.6	27
50	Efficiency improvement of partially shaded photovoltaic panels. , 2013, , .		0
51	Modeling and estimating yield and efficiency of photovoltaic solar parks. , 2013, , .		7
52	Mixed-mode simulations to check stability of an adaptive constant on-time DC-DC converter. , 2013, , .		2
53	Reliable and efficient phase noise simulation of mixed-mode integer-N Phase-Locked Loops. , 2013, , .		5
54	Model of Photovoltaic Power Plants for Performance Analysis and Production Forecast. IEEE Transactions on Sustainable Energy, 2013, 4, 278-285.	5.9	94

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55	Probe Based Shooting Method to Find Stable and Unstable Limit Cycles of Strongly Nonlinear High-Q Oscillators. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 1870-1880.	3.5	5
56	Extension of the variational equation to analog/digital circuits: numerical and experimental validation. International Journal of Circuit Theory and Applications, 2013, 41, 743-752.	1.3	23
57	Effects of numerical noise floor on the accuracy of time domain noise analysis in circuit simulators. , 2013, , .		3
58	Time domain probe insertion to find steady state of strongly nonlinear high-Q oscillators. , 2013, , .		2
59	Steady State Simulation of Mixed Analog/Digital Circuits. , 2013, , 243-270.		3
60	Design and simulation of a power management unit in a solar based electric propulsion system. , 2012, , .		5
61	ADDA: Almost direct drive architecture for solar high power electrical propulsion in new generation spacecrafts. , 2012, , .		5
62	Periodic Small Signal Analysis of a Wide Class of Type-II Phase Locked Loops Through an Exhaustive Variational Model. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2221-2231.	3.5	24
63	Steady State Computation and Noise Analysis of Analog Mixed Signal Circuits. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 541-554.	3.5	44
64	Micro-inverter for solar power generation. , 2012, , .		16
65	MTFS: Mixed Timeâ€“Frequency Method for the Steady-State Analysis of Almost-Periodic Nonlinear Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 1346-1355.	1.9	1
66	A Probe-Based Harmonic Balance Method to Simulate Coupled Oscillators. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 960-971.	1.9	2
67	Phase Noise Simulation in Analog Mixed Signal Circuits: An Application to Pulse Energy Oscillators. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 154-158.	2.2	19
68	Noise in a phase-quadrature pulsed energy restore oscillator. , 2011, , .		7
69	Periodic noise analysis of electric circuits: Artifacts, singularities and a numerical method. International Journal of Circuit Theory and Applications, 2010, 38, 689-708.	1.3	21
70	CONTINUATION ANALYSIS OF A PHASE/QUADRATURE ELECTRONIC OSCILLATOR. Journal of Circuits, Systems and Computers, 2010, 19, 773-785.	1.0	4
71	Improved Small-Signal Analysis for Circuits Working in Periodic Steady State. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 427-437.	3.5	29
72	FSSA: Fast Steady-State Algorithm for the Analysis of Mixed Analog/Digital Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2010, 29, 528-537.	1.9	13

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73	Robust Harmonic-Probe Method for the Simulation of Oscillators. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 2531-2541.	3.5	12
74	Multi-probe harmonic balance method to simulate coupled oscillators. , 2009, , .		1
75	Electrothermal stability of uniform arrays of one-port elements. International Journal of Circuit Theory and Applications, 2009, 37, 67-85.	1.3	4
76	Accuracy of PSP and BSIM4 models in determination of IP3 compression point. Electronics Letters, 2009, 45, 345.	0.5	2
77	An I-IP based approach for the monitoring of NBTI effects in SoCs. , 2009, , .		1
78	Determination of Floquet Exponents for Small-Signal Analysis of Nonlinear Periodic Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2009, 28, 447-451.	1.9	16
79	Magnetic core model for circuit simulations including losses and hysteresis. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2008, 21, 309-334.	1.2	13
80	Computation of all the Floquet eigenfunctions in autonomous circuits. International Journal of Circuit Theory and Applications, 2008, 36, 717-737.	1.3	17
81	Numerical Determination of Possible Multiple DC Solutions of Nonlinear Circuits. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 1074-1083.	3.5	19
82	Numerical simulation of electrical circuits for radiofrequency applications. , 2008, , .		0
83	Numerical computation of the Floquent eigenfunctions. , 2008, , .		0
84	QR factorisation in the shooting method. , 2008, , .		0
85	Synchronization and Small-Signal Analysis of Nonlinear Periodic Circuits. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 1064-1073.	3.5	7
86	Computation of period sensitivity functions for the simulation of phase noise in oscillators. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 681-694.	0.1	26
87	Using Floquet eigenvectors in the design of electronic oscillators. , 2005, , .		7
88	Recasting modified nodal analysis to improve reliability in numerical circuit Simulation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 522-534.	0.1	9
89	A Statistical Approach to Derive an Electrical Port Model of Capacitively Coupled Interconnects. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2004, 51, 797-807.	0.1	0
90	Measurements and extractions of parasitic capacitances in ulsi layouts. IEEE Transactions on Electron Devices, 2003, 50, 2236-2247.	1.6	30

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91	Study of statistical approaches to the solution of linear discrete and integral problems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 1153-1161.	0.1	1
92	Envelope-following method to compute steady-state solutions of electrical circuits. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 407-417.	0.1	41
93	Frequency warping in time-domain circuit simulation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 904-913.	0.1	23
94	Analysis of substrate coupling by means of a stochastic method. IEEE Electron Device Letters, 2002, 23, 351-353.	2.2	8
95	Statistical method for the analysis of interconnects delay in submicrometer layouts. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2001, 20, 957-966.	1.9	14
96	Rigorous event-driven (RED) analysis of large-scale nonlinear RC circuits. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 938-946.	0.1	14
97	Energy-based control of numerical errors in time-domain simulation of dynamic circuits. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 543-551.	0.1	7
98	Method for simulating phase noise in oscillators. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 1318-1325.	0.1	7
99	Electrothermal dynamics of circuits: analysis and simulations. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 997-1005.	0.1	15
100	Exploiting electrothermal oscillations for identifying MOSFET thermal parameters. Microelectronics Journal, 2001, 32, 883-889.	1.1	0
101	Method for steady-state simulation of strongly nonlinear circuits in the time domain. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 885-889.	0.1	5
102	Modelling delay and crosstalk in VLSI interconnect for electrical simulation. Electronics Letters, 2000, 36, 862.	0.5	7
103	A statistical algorithm for 3D capacitance extraction. , 2000, 10, 304-306.		24
104	Envelope following method for the transient analysis of electrical circuits. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 999-1008.	0.1	32
105	ELECTRO-THERMAL DYNAMICS OF ELECTRONIC CIRCUITS. , 2000, , .		1
106	Multitone signal harmonic balance method. Electronics Letters, 1999, 35, 1809.	0.5	6
107	Electrothermal oscillations of a PN junction operating in avalanche breakdown region. IEEE Electron Device Letters, 1999, 20, 405-408.	2.2	15
108	A 2-kW 100-kHz power converter. IEEE Transactions on Industrial Electronics, 1999, 46, 300-308.	5.2	4

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109	Efficient method for simulating time delays of distributed interconnections in VLSI circuits. Electronics Letters, 1999, 35, 976.	0.5	5
110	A control-based approach to the solution of nonlinear algebraic equations. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 366-369.	0.1	1
111	A filter-based technique for the harmonic balance method. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1996, 43, 92-98.	0.1	4
112	Algorithm to simulate periodically switched power circuits in the time domain. Electronics Letters, 1994, 30, 1367-1368.	0.5	0
113	Study and implementation of a low conduction loss zero-current resonant switch. IEEE Transactions on Industrial Electronics, 1994, 41, 241-250.	5.2	9
114	Analysis and design of snubber circuits for high-power GTO DC-DC converters. IEEE Transactions on Power Electronics, 1994, 9, 7-17.	5.4	9
115	The simulation errors introduced by the SPICE transient analysis. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1993, 40, 57-60.	0.1	15
116	Snubber circuits and losses of voltage-source GTO inverters. IEEE Transactions on Power Electronics, 1992, 7, 231-239.	5.4	9
117	A circuit-level simulation model of PNPN devices. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1990, 9, 1254-1264.	1.9	6
118	Three-junction device simulation model. Electronics Letters, 1989, 25, 936.	0.5	5
119	A simulation model for the saturable reactor. IEEE Transactions on Industrial Electronics, 1988, 35, 301-306.	5.2	23
120	A new time step control method for the circuit simulator Spice. , 0, , .		1
121	Electro-thermal simulation of dynamic circuits in the time domain. , 0, , .		2
122	New approach to photovoltaic arrays maximum power point tracking. , 0, , .		80
123	Partitioning large circuits to speed up numerical simulations. , 0, , .		0