Federico Bizzarri

List of Publications by Year
in descending order

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113 papers	926 citations	623574 14 h-index	610775 24 g-index
113 all docs	113 docs citations	113 times ranked	577 citing authors

#	Article	IF	Citations
1	Model of Photovoltaic Power Plants for Performance Analysis and Production Forecast. IEEE Transactions on Sustainable Energy, 2013, 4, 278-285.	5.9	94
2	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
3	A modular supervised algorithm for vessel segmentation in red-free retinal images. Computers in Biology and Medicine, 2008, 38, 913-922.	3.9	41
4	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
5	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
6	PAN and MPanSuite: Simulation Vehicles towards the Analysis and Design of Heterogeneous Mixed Electrical Systems. , 2017, , .		31
7	Lyapunov exponents computation for hybrid neurons. Journal of Computational Neuroscience, 2013, 35, 201-212.	0.6	27
8	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
9	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
10	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
11	Output Filter Aware Optimization of the Noise Shaping Properties of Î”Î£ Modulators Via Semi-Definite Programming. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 2352-2365.	3.5	21
12	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
13	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
14	Monitoring performance and efficiency of photovoltaic parks. Renewable Energy, 2015, 78, 314-321.	4.3	18
15	On the Approximate Solution of a Class of Large Discrete Quadratic Programming Problems by $DeltaSigma$ Modulation: The Case of Circulant Quadratic Forms. IEEE Transactions on Signal Processing, 2010, 58, 6126-6139.	3.2	17
16	Micro-inverter for solar power generation. , 2012, , .		16
17	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
18	Nonlinear Fractional-Order Circuits and Systems: Motivation, A Brief Overview, and Some Future Directions. IEEE Open Journal of Circuits and Systems, 2020, 1, 220-232.	1.4	13

#	Article	IF	Citations
19	Noise Weighting in the Design of $DeltaSigma$ Modulators (With a Psychoacoustic Coder as an) Tj ETQq1 1 0.784314 rgBT /Overloc	2.2	12
20	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
21	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
22	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
23	Discontinuities in a one-dimensional map describing a hysteretic chaotic circuit. Nonlinear Analysis: Theory, Methods & Applications, 2001, 47, 5253-5264.	0.6	10
24	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
25	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
26	Basic bifurcation analysis of a hysteresis oscillator. International Journal of Circuit Theory and Applications, 2001, 29, 343-366.	1.3	9
27	TWO-DIMENSIONAL BIFURCATION DIAGRAMS OF A CHAOTIC CIRCUIT BASED ON HYSTERESIS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2002, 12, 43-69.	0.7	9
28	Towards Accurate PWL Approximations of Parameter-Dependent Nonlinear Dynamical Systems With Equilibria and Limit Cycles. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2007, 54, 620-631.	0.1	9
29	Voltage Regulators Design Through Advanced Mixed-Mode Circuit Simulation. IEEE Transactions on Power Electronics, 2014, 29, 4496-4499.	5.4	9
30	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
31	RC op-amp implementation of hysteresis chaotic oscillator. Electronics Letters, 2001, 37, 209.	0.5	8
32	Bifurcation analysis and its experimental validation for a hysteresis circuit oscillator. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2006, 53, 517-521.	2.3	8
33	Phase noise analysis of a mechanical autonomous impact oscillator with a MEMS resonator. , 2011, , .		8
34	Optimal design of the noise transfer function of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0022.gif" overflow="scroll"><mml:mi mathvariant="normal">Î”</mml:mi><mml:mi mathvariant="normal">Î£</mml:mi></mml:math> modulators: IIR strategies, FIR strategies, FIR strategies with preassigned poles. Signal Processing, 2015, 114, 117-130.	2.1	8
35	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
36	Circuit Level Model of Miniature Circuit Breakers. IEEE Transactions on Power Delivery, 2018, 33, 2700-2709.	2.9	8

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37	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
38	Partitioning-Based Unified Power Flow Algorithm for Mixed MTDC/AC Power Systems. IEEE Transactions on Power Systems, 2021, 36, 3406-3415.	4.6	8
39	Cellular non-linear networks for minimization of functionals. Part 1: Theoretical aspects. International Journal of Circuit Theory and Applications, 2001, 29, 151-167.	1.3	7
40	BIFURCATION ANALYSIS OF A PWL CHAOTIC CIRCUIT BASED ON HYSTERESIS THROUGH A ONE-DIMENSIONAL MAP. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 1911-1927.	0.7	7
41	Noise in a phase-quadrature pulsed energy restore oscillator. , 2011, , .		7
42	Modeling and estimating yield and efficiency of photovoltaic solar parks. , 2013, , .		7
43	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
44	Cellular non-linear networks for minimization of functionals. Part 2: Examples. International Journal of Circuit Theory and Applications, 2001, 29, 169-184.	1.3	6
45	BIFURCATION ANALYSIS OF AN IMPACT MODEL FOR FOREST FIRE PREDICTION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 2275-2288.	0.7	6
46	Optimal quantization noise management in wideband fractional-N PLLs. , 2015, , .		6
47	On the Benefit of Adopting Saturable Inductors in Switching-Mode Power-Supplies: A Case Study. , 2018, , .		6
48	Shooting by a Two-Step Galerkin Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 383-390.	3.5	6
49	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
50	Dynamic behaviour of hysteresis chaotic circuit. Electronics Letters, 1999, 35, 1896.	0.5	5
51	Design and simulation of a power management unit in a solar based electric propulsion system. , 2012, , .		5
52	Towards a nearly optimal synthesis of power bridge commands in the driving of AC motors. , 2012, , .		5
53	ADDA: Almost direct drive architecture for solar high power electrical propulsion in new generation spacecrafts. , 2012, , .		5
54	Reliable and efficient phase noise simulation of mixed-mode integer-N Phase-Locked Loops. , 2013, , .		5

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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	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
57	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
58	Efficient Isomorphism Based Simulation of Modular Multilevel Converters. , 2019, , .		5
59	Application of Envelope-Following Techniques to the Shooting Method. IEEE Open Journal of Circuits and Systems, 2020, 1, 22-33.	1.4	5
60	Stability Analysis of MMC/MTDC Systems Considering DC-Link Dynamics. , 2021, , .		5
61	Coexistence of attractors in an oscillator based on hysteresis. , 0, , .		4
62	PWL approximation of the Hindmarsh-Rose neuron model in view of its circuit implementation. , 2007, , .		4
63	On the synthesis of periodic signals by discrete pulse-trains and optimisation techniques. , 2009, , .		4
64	A heuristic solution to the optimisation of flutter control in compression systems (and to some more) Tj ETQq0 0 0 rgBT /Overlock 10 Tf		4
65	CONTINUATION ANALYSIS OF A PHASE/QUADRATURE ELECTRONIC OSCILLATOR. Journal of Circuits, Systems and Computers, 2010, 19, 773-785.	1.0	4
66	HARMONIC ANALYSIS OF OSCILLATORS THROUGH STANDARD NUMERICAL CONTINUATION TOOLS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 4029-4037.	0.7	4
67	Efficient transient noise analysis of nonâ€periodic mixed analogue/digital circuits. IET Circuits, Devices and Systems, 2015, 9, 73-80.	0.9	4
68	The Urbanek Black Box Arc Model in Passive Resonance Circuit Breakers for HVDC Applications. , 2018, , .		4
69	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
70	Isomorphic Circuit Clustering for Fast and Accurate Electromagnetic Transient Simulations of MMCs. IEEE Transactions on Energy Conversion, 2022, 37, 800-810.	3.7	4
71	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
72	A cellular non-linear network for image fusion based on data regularization. International Journal of Circuit Theory and Applications, 2006, 34, 533-546.	1.3	3

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73	On the complexity of periodic and nonperiodic behaviors of a hysteresis-based electronic oscillator. Chaos, 2007, 17, 043108.	1.0	3
74	Should ΔΣ modulators used in AC motor drives be adapted to the mechanical load of the motor?. , 2012, , .		3
75	Effects of numerical noise floor on the accuracy of time domain noise analysis in circuit simulators. , 2013, , .		3
76	A lumped model of lymphatic systems suitable for large scale simulations. , 2015, , .		3
77	Periodic small-signal analysis as a tool to build transient stability models of VSC-based devices. , 2016, , .		3
78	A Stability Condition for Constant-On Time Buck Converters Suitable for Automotive Applications. , 2021, , .		3
79	Steady State Simulation of Mixed Analog/Digital Circuits. , 2013, , 243-270.		3
80	Practical Solution of Periodic Filtered Approximation as a Convex Quadratic Integer Program. , 2010, , 149-160.		3
81	A CNN for biomedical image processing. , 0, , .		2
82	Piecewise-linear approximation of the Hindmarsh-Rose neuron model. Journal of Physics: Conference Series, 2008, 138, 012011.	0.3	2
83	Amplitude response of a unilaterally constrained nonlinear micromechanical resonator. Micro and Nano Letters, 2012, 7, 279.	0.6	2
84	Mixed-mode simulations to check stability of an adaptive constant on-time DC-DC converter. , 2013, , .		2
85	Time domain probe insertion to find steady state of strongly nonlinear high-Q oscillators. , 2013, , .		2
86	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
87	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
88	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
89	Structurally Stable PWL Approximation of Nonlinear Dynamical Systems Admitting Limit Cycles: An Example. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2006, E89-A, 2759-2766.	0.2	2
90	2-D bifurcation diagram of an oscillator based on PWL hysteresis. , 0, , .		1

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91	Optimal receiver for ergodic chaos shift keying. , 0, , .		1
92	BIFURCATION ANALYSIS OF A CIRCUIT-RELATED GENERALIZATION OF THE SHIPMAP. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 2435-2452.	0.7	1
93	DSP implementation of a low-complexity algorithm for real-time automated vessel detection in images of the fundus of the human retina. , 2007, , .		1
94	Stability analysis of voltage regulators versus different digital control strategies by analog-mixed-signal circuit simulation. , 2014, , .		1
95	Necessary and Sufficient Conditions for the Noninvertibility of Fundamental Solution Matrices of a Discontinuous System. SIAM Journal on Applied Dynamical Systems, 2016, 15, 84-105.	0.7	1
96	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
97	Guest Editorial Introduction to the Special Section on Nonlinear Fractional-Order Circuits and Systems: Advanced Analysis and Effective Implementation. IEEE Open Journal of Circuits and Systems, 2020, 1, 218-219.	1.4	1
98	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
99	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
100	Boundary cells in cellular circuits for the minimisation of continuous functionals. , 0, , .		0
101	CLASSIFICATION OF CHAOTIC SEQUENCES WITH OPEN-LOOP ESTIMATOR â€" OPTIMAL DESIGN FOR NOISY ENVIRONMENTS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2004, 14, 3023-3043.	0.7	0
102	Bifurcation analysis of a circuit-related piecewise-affine map. , 0, , .		0
103	SVDâ€"based approximations of bivariate functions. , 0, , .		0
104	Complex links between codimension-2 bifurcations in an electronic oscillator based on hysteresis. Journal of Physics: Conference Series, 2006, 55, 12-27.	0.3	0
105	Experimental validation of the bifurcation analysis of a hysteresis oscillator. , 0, , .		0
106	Bifurcation analysis of a second-order impact model for forest fire prediction through a 1D-map. , 0, , .		0
107	Efficiency improvement of partially shaded photovoltaic panels. , 2013, , .		0
108	Reliable AMS simulation of electrostatic vibration energy harvesters: a case study. , 2014, , .		0

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109	Teaching ΔΣ modulators with PyDSM and scientific Python. , 2015, , .		0
110	On the multistage design of optimal-NTF Î”Î£ modulators â€” The case of fractional synthesizers. , 2017, , .		0
111	Constant-time discontinuity map for forward sensitivity analysis to initial conditions: Spurs detection in fractional-N PLL as a case study. , 2017, , .		0
112	Discrete Programming Entailing Circulant Quadratic Forms: Refinement of a Heuristic Approach Based on Î”Î£ Modulation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 926-930.	2.2	0
113	Black-Box Modeling of Back-Up Short-Circuit Tests. IEEE Transactions on Smart Grid, 2024, 15, 1177-1179.	6.2	0