Fabio L Traversa

List of Publications by Year
in descending order

61 papers	823 citations	471061 17 h-index	525886 27 g-index
62 all docs	62 docs citations	62 times ranked	501 citing authors

#	Article	IF	Citations
1	Two-Point Versus Multipartite Entanglement in Quantum Phase Transitions. Physical Review Letters, 2005, 95, 056402.	2.9	87
2	Polynomial-time solution of prime factorization and NP-complete problems with digital memcomputing machines. Chaos, 2017, 27, 023107.	1.0	67
3	Perspective: Memcomputing: Leveraging memory and physics to compute efficiently. Journal of Applied Physics, 2018, 123, .	1.1	60
4	A frequencyâ€domain approach to the analysis of stability and bifurcations in nonlinear systems described by differentialâ€algebraic equations. International Journal of Circuit Theory and Applications, 2008, 36, 421-439.	1.3	48
5	Oscillator Noise: A Nonlinear Perturbative Theory Including Orbital Fluctuations and Phase-Orbital Correlation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 2485-2497.	3.5	38
6	Memory Models of Adaptive Behavior. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 1437-1448.	7.2	35
7	Improved harmonic balance implementation of Floquet analysis for nonlinear circuit simulation. AEU - International Journal of Electronics and Communications, 2012, 66, 357-363.	1.7	32
8	Time-Dependent Many-Particle Simulation for Resonant Tunneling Diodes: Interpretation of an Analytical Small-Signal Equivalent Circuit. IEEE Transactions on Electron Devices, 2011, 58, 2104-2112.	1.6	27
9	Generalized Floquet Theory: Application to Dynamical Systems with Memory and Blochâ€™s Theorem for Nonlocal Potentials. Physical Review Letters, 2013, 110, 170602.	2.9	27
10	Robust weak-measurement protocol for Bohmian velocities. Physical Review A, 2013, 87, .	1.0	24
11	Accelerating deep learning with memcomputing. Neural Networks, 2019, 110, 1-7.	3.3	23
12	Topological Field Theory and Computing with Instantons. Annalen Der Physik, 2017, 529, 1700123.	0.9	23
13	Frequency-domain evaluation of the adjoint Floquet eigenvectors for oscillator noise characterisation. IET Circuits, Devices and Systems, 2011, 5, 46.	0.9	20
14	COMPUTATION OF QUANTUM ELECTRICAL CURRENTS THROUGH THE RAMOâ€“SHOCKLEYâ€“PELLEGRINI THEOREM WITH TRAJECTORIES. Fluctuation and Noise Letters, 2012, 11, 1242008.	1.0	20
15	Evidence of Exponential Speed-Up in the Solution of Hard Optimization Problems. Complexity, 2018, 2018, 1-13.	0.9	20
16	An Impedance Matching Solution to Increase the Harvested Power and Efficiency of Nonlinear Piezoelectric Energy Harvesters. Energies, 2022, 15, 2764.	1.6	20
17	Leveraging circuit theory and nonlinear dynamics for the efficiency improvement of energy harvesting. Nonlinear Dynamics, 2021, 104, 367-382.	2.7	19
18	Analysis of influence of nonlinearities and noise correlation time in a single-DOF energy-harvesting system via power balance description. Nonlinear Dynamics, 2020, 100, 119-133.	2.7	17

#	Article	IF	Citations
19	ASYMPTOTIC STOCHASTIC CHARACTERIZATION OF PHASE AND AMPLITUDE NOISE IN FREE-RUNNING OSCILLATORS. Fluctuation and Noise Letters, 2011, 10, 207-221.	1.0	15
20	Large-Signal Stability of Symmetric Multibranch Power Amplifiers Exploiting Floquet Analysis. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1580-1587.	2.9	15
21	Selective Determination of Floquet Quantities for the Efficient Assessment of Limit Cycle Stability and Oscillator Noise. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 313-317.	1.9	14
22	Absence of chaos in digital memcomputing machines with solutions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 3255-3257.	0.9	14
23	EFFECT OF GATE-ALL-AROUND TRANSISTOR GEOMETRY ON THE HIGH-FREQUENCY NOISE: ANALYTICAL DISCUSSION. Fluctuation and Noise Letters, 2012, 11, 1241002.	1.0	13
24	Instantons in Self-Organizing Logic Gates. Physical Review Applied, 2018, 9, .	1.5	13
25	Taming a nonconvex landscape with dynamical long-range order: Memcomputing Ising benchmarks. Physical Review E, 2019, 100, 053311.	0.8	13
26	Improving the intrinsic cut-off frequency of gate-all-around quantum-wire transistors without channel length scaling. Applied Physics Letters, 2013, 102, .	1.5	12
27	Global minimization via classical tunneling assisted by collective force field formation. Science Advances, 2021, 7, eabh1542.	4.7	11
28	Absence of periodic orbits in digital memcomputing machines with solutions. Chaos, 2017, 27, 101101.	1.0	10
29	Assessment of Thermal Instabilities and Oscillations in Multifinger Heterojunction Bipolar Transistors Through a Harmonic-Balance-Based CAD-Oriented Dynamic Stability Analysis Technique. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 3461-3468.	2.9	8
30	Distribution and biokinetic analysis of 210Pb and 210Po in poultry due to ingestion of dicalcium phosphate. Science of the Total Environment, 2010, 408, 4695-4701.	3.9	8
31	Influence of Amplitude Fluctuations on the Noise-Induced Frequency Shift of Noisy Oscillators. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 698-702.	2.2	8
32	Colored Noise in Oscillators. Phase-Amplitude Analysis and a Method to Avoid the itÃ´-Stratonovich Dilemma. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 3917-3927.	3.5	8
33	A Generalized Drift-Diffusion Model for Rectifying Schottky Contact Simulation. IEEE Transactions on Electron Devices, 2010, 57, 1539-1547.	1.6	6
34	Memcomputing Numerical Inversion With Self-Organizing Logic Gates. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 2645-2650.	7.2	5
35	Stress-Testing Memcomputing on Hard Combinatorial Optimization Problems. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 2222-2226.	7.2	5
36	Floquet-Based Stability Analysis of Power Amplifiers Including Distributed Elements. IEEE Microwave and Wireless Components Letters, 2014, 24, 493-495.	2.0	4

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37	Application of Floquet theory to the large signal stability analysis of microwave amplifiers. , 2013, , .		3
38	A new numerical approach for the efficient computation of Floquet multipliers within the harmonic balance technique. , 2013, , .		3
39	On the Universality of Memcomputing Machines. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1610-1620.	7.2	3
40	On the application of circuit theory and nonlinear dynamics to the design of highly efficient energy harvesting systems. , 2021, , .		3
41	Application of Floquet theory to dynamical systems with memory. Chaos, 2020, 30, 123102.	1.0	3
42	A rigorous assessment of electro-thermal device instabilities via Harmonic Balance modeling. , 2008, , .		2
43	A critical discussion of the current collapse in multifinger HBTs based on Floquet stability analysis. , 2008, , .		2
44	Oscillator noise: a rigorous analysis including orbital fluctuations. , 2010, , .		2
45	BITLLES: An approach to quantum time-dependent electron transport at the nanoscale. , 2011, , .		2
46	Including orbital fluctuations in the noise spectrum of autonomous circuits. International Journal of Microwave and Wireless Technologies, 2011, 3, 11-18.	1.5	2
47	The Complex World of Oscillator Noise: Modern Approaches to Oscillator (Phase and Amplitude) Noise Analysis. IEEE Microwave Magazine, 2021, 22, 24-32.	0.7	2
48	Analytical assessment of orbital noise effects in ring oscillators. , 2011, , .		1
49	Bohmian formulation of Full Counting Statistics in mesoscopic systems. , 2011, , .		1
50	Phase noise spectrum of oscillators described by Itô stochastic differential equations. , 2015, , .		1
51	A rigorous assessment of electro-thermal device instabilities via Harmonic Balance modeling. , 2008, , .		0
52	The BITLLES simulator for nanoscale devices. , 2010, , .		0
53	A rigorous analysis of oscillator noise including orbital fluctuations. , 2011, , .		0
54	Study of the effect of device geometry on the AC behaviour of nanoelectronic devices. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
55	Multi-time measurement and displacement current in time-dependent quantum transport. , 2012, , .		0
56	Geometry engineering for the RF behavior of low-dimensional gate-all-around transistors. , 2012, , .		0
57	Towards the control of power dissipation through the use of many-body Coulomb correlations. , 2012, , .		0
58	Towards frequency performance improvement of emerging devices without length scaling. , 2013, , .		0
59	A 2D driven brownian particle with memory. , 2013, , .		0
60	Dynamic computing random access memory: A brain-inspired computing paradigm with memelements. , 2014, , .		0
61	Digital Memcomputing Machines. , 2016, , .		0