

Mohamed E Fouda

List of Publications by Year in Descending Order

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Version: 2024-04-23

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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.

103
papers

1,329
citations

19
h-index

32
g-index

120
ext. papers

1,752
ext. citations

3.6
avg, IF

5.31
L-index

#	Paper	IF	Citations
103	A flexible capacitive photoreceptor for the biomimetic retina.. <i>Light: Science and Applications</i> , 2022 , 11, 3	16.7	8
102	On numerical approximations of fractional-order spiking neuron models. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022 , 105, 106078	3.7	3
101	In-memory Associative Processors: Tutorial, Potential, and Challenges. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2022 , 1-1	3.5	2
100	CNTFET-Based Ternary Multiply-and-Accumulate Unit. <i>Electronics (Switzerland)</i> , 2022 , 11, 1455	2.6	0
99	Pinched hysteresis loops in non-linear resonators. <i>IET Circuits, Devices and Systems</i> , 2021 , 15, 88-93	1.1	2
98	Neural Coding in Spiking Neural Networks: A Comparative Study for Robust Neuromorphic Systems. <i>Frontiers in Neuroscience</i> , 2021 , 15, 638474	5.1	9
97	Revisiting the Time-Domain and Frequency-Domain Definitions of Capacitance. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 2912-2916	2.9	10
96	Comment on FPGA realization of fractional order neuron [Appl. Math. Model. 81 (2020) 372-385]. <i>Applied Mathematical Modelling</i> , 2021 , 92, 951-954	4.5	1
95	Optimal charging of fractional-order circuits with Cuckoo search. <i>Journal of Advanced Research</i> , 2021 , 32, 119-131	13	2
94	Programmable constant phase element realization with crossbar arrays. <i>Journal of Advanced Research</i> , 2021 , 29, 137-145	13	1
93	Variability analysis of resistive ternary content addressable memories. <i>International Journal of Circuit Theory and Applications</i> , 2021 , 49, 453-475	2	1
92	Design Exploration of Sensing Techniques in 2T-2R Resistive Ternary CAMs. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021 , 68, 762-766	3.5	5
91	Blind Source Separation For Full-Duplex Systems: Potential and Challenges. <i>IEEE Open Journal of the Communications Society</i> , 2021 , 2, 1379-1389	6.7	2
90	CNTFET design of a multiple-port ternary register file. <i>Microelectronics Journal</i> , 2021 , 113, 105076	1.8	2
89	Inverse problem of reconstructing the capacitance of electric double-layer capacitors. <i>Electrochimica Acta</i> , 2021 , 390, 138848	6.7	4
88	Memristive Bio-Impedance Modeling of Fruits and Vegetables. <i>IEEE Access</i> , 2021 , 9, 21498-21506	3.5	1
87	Toward the Optimal Design and FPGA Implementation of Spiking Neural Networks. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021 , PP,	10.3	3

86	Error-triggered Three-Factor Learning Dynamics for Crossbar Arrays 2020 ,		8
85	Spiking neural networks for inference and learning: a memristor-based design perspective 2020 , 499-530		3
84	Optimal Charging and Discharging of Supercapacitors. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 110521	3.9	5
83	Application of ICA on Self-Interference Cancellation of In-Band Full Duplex Systems. <i>IEEE Wireless Communications Letters</i> , 2020 , 9, 924-927	5.9	5
82	Nonlinear charge-voltage relationship in constant phase element. <i>AEU - International Journal of Electronics and Communications</i> , 2020 , 117, 153104	2.8	13
81	Communication The Ragone Plot of Supercapacitors Under Different Loading Conditions. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 020533	3.9	6
80	IR-QNN Framework: An IR Drop-Aware Offline Training of Quantized Crossbar Arrays. <i>IEEE Access</i> , 2020 , 8, 228392-228408	3.5	7
79	Two-Port Network Analysis of Equal Fractional-order Wireless Power Transfer Circuit 2020 ,		2
78	Compact memristor-based ultra-wide band chirp pulse generator. <i>International Journal of Circuit Theory and Applications</i> , 2020 , 48, 286-293	2	3
77	A general emulator for fractional-order memristive elements with multiple pinched points and application. <i>AEU - International Journal of Electronics and Communications</i> , 2020 , 124, 153338	2.8	10
76	Unsupervised Adaptive Weight Pruning for Energy-Efficient Neuromorphic Systems. <i>Frontiers in Neuroscience</i> , 2020 , 14, 598876	5.1	5
75	Towards Efficient Neuromorphic Hardware: Unsupervised Adaptive Neuron Pruning. <i>Electronics (Switzerland)</i> , 2020 , 9, 1059	2.6	5
74	Learning to Predict IR Drop with Effective Training for ReRAM-based Neural Network Hardware 2020 ,		6
73	2020 ,		2
72	On-Chip Error-Triggered Learning of Multi-Layer Memristive Spiking Neural Networks. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2020 , 10, 522-535	5.2	6
71	Ternary Functions Design Using Memristive Threshold Logic. <i>IEEE Access</i> , 2019 , 7, 48371-48381	3.5	15
70	Multiple Pinch-Off Points in Memristive Equations: Analysis and Experiments. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019 , 66, 3052-3063	3.9	11
69	Simple MOS Transistor-Based Realization of Fractional-Order Capacitors 2019 ,		1

68	Commercial supercapacitor parameter estimation from step voltage excitation. <i>International Journal of Circuit Theory and Applications</i> , 2019 , 47, 1705-1712	2	1
67	Supercapacitor discharge under constant resistance, constant current and constant power loads. <i>Journal of Power Sources</i> , 2019 , 435, 226829	8.9	21
66	Mask Technique for Fast and Efficient Training of Binary Resistive Crossbar Arrays. <i>IEEE Nanotechnology Magazine</i> , 2019 , 18, 704-716	2.6	13
65	Communication Convolution-Based Estimation of Supercapacitor Parameters under Periodic Voltage Excitations. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A2267-A2269	3.9	8
64	Realization of fractional-order capacitor based on passive symmetric network. <i>Journal of Advanced Research</i> , 2019 , 18, 147-159	13	25
63	N-digits Ternary Carry Lookahead Adder Design 2019 ,		2
62	Effect of Asymmetric Nonlinearity Dynamics in RRAMs on Spiking Neural Network Performance 2019 ,		3
61	Non-Stationary Polar Codes for Resistive Memories 2019 ,		4
60	A Universal Fractional-Order Memelement Emulation Circuit 2019 ,		2
59	Digital Emulation of a Versatile Memristor With Speech Encryption Application. <i>IEEE Access</i> , 2019 , 7, 174280-174297	3.5	4
58	Memristor FPGA IP Core Implementation for Analog and Digital Applications. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2019 , 66, 1381-1385	3.5	14
57	Independent Component Analysis Using RRAMs. <i>IEEE Nanotechnology Magazine</i> , 2019 , 18, 611-615	2.6	11
56	Memristor-CNTFET based ternary logic gates. <i>Microelectronics Journal</i> , 2018 , 72, 74-85	1.8	26
55	Capacitive behavior and stored energy in supercapacitors at power line frequencies. <i>Journal of Power Sources</i> , 2018 , 390, 142-147	8.9	37
54	Modeling and Analysis of Passive Switching Crossbar Arrays. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2018 , 65, 270-282	3.9	30
53	Study of fractional flux-controlled memristor emulator connections 2018 ,		4
52	Conditions and Emulation of Double Pinch-off Points in Fractional-order Memristor 2018 ,		7
51	Review of fractional-order electrical characterization of supercapacitors. <i>Journal of Power Sources</i> , 2018 , 400, 457-467	8.9	92

50	A generalized family of memristor-based voltage controlled relaxation oscillator. <i>International Journal of Circuit Theory and Applications</i> , 2018 , 46, 1311-1327	2	14
49	Memristor-CNTFET based Ternary Comparator unit 2018 ,		1
48	Overcoming Crossbar Nonidealities in Binary Neural Networks Through Learning 2018 ,		7
47	Experimental Verification of Triple Lobes Generation in Fractional Memristive Circuits. <i>IEEE Access</i> , 2018 , 6, 75169-75180	3.5	7
46	Memristor Based Programmable Current Reference Generator 2018 ,		2
45	A Novel Flux-Controlled Memristive Emulator for Analog Applications. <i>Studies in Computational Intelligence</i> , 2017 , 493-511	0.8	5
44	Memristor and Inverse Memristor: Modeling, Implementation and Experiments. <i>Studies in Computational Intelligence</i> , 2017 , 371-392	0.8	7
43	Electrical Nonlinearity Emulation Technique for Current-Controlled Memristive Devices. <i>IEEE Access</i> , 2017 , 5, 5399-5409	3.5	27
42	On the analysis of current-controlled fractional-order memristor emulator 2017 ,		12
41	On one step row readout technique of selector-less resistive arrays 2017 ,		3
40	Design and analysis of 2T-2M Ternary content addressable memories 2017 ,		8
39	Power and energy analysis of fractional-order electrical energy storage devices. <i>Energy</i> , 2016 , 111, 785-793	7.9	78
38	Fractional-Order Two-Port Networks. <i>Mathematical Problems in Engineering</i> , 2016 , 2016, 1-5	1.1	13
37	Process variations-aware resistive associative processor design 2016 ,		4
36	Simple generic memristor emulator for voltage-controlled models 2016 ,		8
35	2016 ,		2
34	Reactance-less RM relaxation oscillator using exponential memristor model 2016 ,		3
33	Fractional-order multi-phase oscillators design and analysis suitable for higher-order PSK applications. <i>Analog Integrated Circuits and Signal Processing</i> , 2016 , 87, 301-312	1.2	27

32	Memcapacitor: Modeling, Analysis, and Emulators. <i>Studies in Systems, Decision and Control</i> , 2015 , 151-185.	0.8	1
31	Memristor Mathematical Models and Emulators. <i>Studies in Systems, Decision and Control</i> , 2015 , 51-84	0.8	3
30	Meminductor: Modeling, Analysis, and Emulators. <i>Studies in Systems, Decision and Control</i> , 2015 , 207-227.	0.8	
29	Pinched hysteresis with inverse-memristor frequency characteristics in some nonlinear circuit elements. <i>Microelectronics Journal</i> , 2015 , 46, 834-838	1.8	30
28	On the Mathematical Modeling of Memristor, Memcapacitor, and Meminductor. <i>Studies in Systems, Decision and Control</i> , 2015 ,	0.8	58
27	Memristor emulator based on practical current controlled model 2015 ,		14
26	Memristor-Based Relaxation Oscillator Circuits. <i>Studies in Systems, Decision and Control</i> , 2015 , 85-119	0.8	
25	Memcapacitor Based Applications. <i>Studies in Systems, Decision and Control</i> , 2015 , 187-205	0.8	
24	Resistive-less memcapacitor-based relaxation oscillator. <i>International Journal of Circuit Theory and Applications</i> , 2015 , 43, 959-965	2	17
23	Fractional-order Memristor Response Under DC and Periodic Signals. <i>Circuits, Systems, and Signal Processing</i> , 2015 , 34, 961-970	2.2	37
22	Memristor emulator based on single CCII 2015 ,		13
21	A new simple emulator circuit for current controlled memristor 2015 ,		9
20	Series and parallel circuit models containing memristors and inverse memristors 2015 ,		4
19	Review of the missing mechanical element: Memdamper 2015 ,		2
18	A novel memristor emulator based only on an exponential amplifier and CCII+ 2015 ,		10
17	Power Dissipation of Memristor-Based Relaxation Oscillators. <i>Radioengineering</i> , 2015 , 24, 968-973	0.8	3
16	Boundary Dynamics of Memcapacitor in Voltage-Excited Circuits and Relaxation Oscillators. <i>Circuits, Systems, and Signal Processing</i> , 2015 , 34, 2765-2783	2.2	7
15	Memcapacitor response under step and sinusoidal voltage excitations. <i>Microelectronics Journal</i> , 2014 , 45, 1372-1379	1.8	13

14	Memristor-based voltage-controlled relaxation oscillators. <i>International Journal of Circuit Theory and Applications</i> , 2014 , 42, 1092-1102	2	31
13	Memristor-less current- and voltage-controlled meminductor emulators 2014 ,		11
12	Multi-phase oscillator for higher-order PSK applications 2014 ,		4
11	2014 ,		1
10	Meminductor Response Under Periodic Current Excitations. <i>Circuits, Systems, and Signal Processing</i> , 2014 , 33, 1573-1583	2.2	17
9	Optimization of Fractional-Order RLC Filters. <i>Circuits, Systems, and Signal Processing</i> , 2013 , 32, 2097-2118.	2	85
8	A Simple Model of Double-Loop Hysteresis Behavior in Memristive Elements. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2013 , 60, 487-491	3.5	83
7	On the mathematical modeling of series and parallel memcapacitors 2013 ,		4
6	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2013 , 60, 2701-2708	3.9	37
5	Improved memristor-based relaxation oscillator. <i>Microelectronics Journal</i> , 2013 , 44, 814-820	1.8	28
4	A simple MOS realization of current controlled memristor emulator 2013 ,		22
3	Charge controlled memristor-less memcapacitor emulator. <i>Electronics Letters</i> , 2012 , 48, 1454	1.1	62
2	Effect of boundary on controlled memristor-based oscillator 2012 ,		8
1	Memristor-based relaxation oscillators using digital gates 2012 ,		8