Alon Ascoli

List of Publications by Year
in descending order

83	2,252	279798	233421
papers	citations	23 h-index	45 g-index

84	84	84	1244
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nonlinear Dynamics of Memristor Oscillators. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 1323-1336.	5.4	289
2	Memristive diode bridge with LCR filter. Electronics Letters, 2012, 48, 824.	1.0	162
3	Memristor Model Comparison. IEEE Circuits and Systems Magazine, 2013, 13, 89-105.	2.3	158
4	Nonlinear Dynamics of a Locally-Active Memristor. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 1165-1174.	5.4	139
5	A Boundary Condition-Based Approach to the Modeling of Memristor Nanostructures. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2713-2726.	5.4	136
6	Physical model of threshold switching in NbO₂ based memristors. RSC Advances, 2015, 5, 102318-102322.	3.6	125
7	Analysis of currentâ€“voltage characteristics for memristive elements in pattern recognition systems. International Journal of Circuit Theory and Applications, 2012, 40, 1277-1320.	2.0	83
8	The Art of Finding Accurate Memristor Model Solutions. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 133-142.	3.6	65
9	On Local Activity and Edge of Chaos in a NaMLab Memristor. Frontiers in Neuroscience, 2021, 15, 651452.	2.8	63
10	History Erase Effect in a Non-Volatile Memristor. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 389-400.	5.4	60
11	Generalized boundary condition memristor model. International Journal of Circuit Theory and Applications, 2016, 44, 60-84.	2.0	59
12	Memristor-based filtering applications. , 2013, , .		54
13	Theoretical Foundations of Memristor Cellular Nonlinear Networks: Memcomputing With Bistable-Like Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 502-515.	5.4	49
14	Theoretical Foundations of Memristor Cellular Nonlinear Networks: Stability Analysis With Dynamic Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 1389-1401.	5.4	46
15	A class of versatile circuits, made up of standard electrical components, are memristors. International Journal of Circuit Theory and Applications, 2016, 44, 127-146.	2.0	44
16	Theoretical Foundations of Memristor Cellular Nonlinear Networks: A DRM₂-Based Method to Design Memcomputers With Dynamic Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2753-2766.	5.4	44
17	Ultrasensitive detection of Ebola matrix protein in a memristor mode. Nano Research, 2018, 11, 1057-1068.	10.4	43
18	Pattern Formation With Locally Active S-Type NbO_x Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2627-2638.	5.4	37

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19	Synchronization conditions in simple memristor neural networks. Journal of the Franklin Institute, 2015, 352, 3196-3220.	3.4	30
20	How to Build a Memristive Integrate-and-Fire Model for Spiking Neuronal Signal Generation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4837-4850.	5.4	30
21	Robust Simulation of a TaO Memristor Model. Radioengineering, 2015, 24, 384-392.	0.6	29
22	Edge of Chaos Theory Resolves Smale Paradox. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1252-1265.	5.4	28
23	NbO₂-Mott Memristor: A Circuit- Theoretic Investigation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4979-4992.	5.4	27
24	The First Ever Real Bistable Memristorsâ€"Part I: Theoretical Insights on Local Fading Memory. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 1091-1095.	3.0	25
25	MEMRISTOR MODELS IN A CHAOTIC NEURAL CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350052.	1.7	23
26	Modelling the dynamics of log-domain circuits. International Journal of Circuit Theory and Applications, 2007, 35, 33-70.	2.0	22
27	The First Ever Real Bistable Memristorsâ€"Part II: Design and Analysis of a Local Fading Memory System. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 1096-1100.	3.0	21
28	Memristorâ€enhanced humanoid robot control system â€“ Part I: Theory behind the novel memcomputing paradigm. International Journal of Circuit Theory and Applications, 2018, 46, 155-183.	2.0	20
29	Multiple slopes in the negative differential resistance region of NbO_x-based threshold switches. Journal Physics D: Applied Physics, 2019, 52, 325104.	2.8	19
30	PSpice switch-based versatile memristor model. , 2013, , .		18
31	Improved Vertex Coloring With NbOâ,“ Memristor-Based Oscillatory Networks. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 2082-2095.	5.4	18
32	Memristorâ€enhanced humanoid robot control system â€“ Part II: Circuit theoretic model and performance analysis. International Journal of Circuit Theory and Applications, 2018, 46, 184-220.	2.0	17
33	Exploring the Dynamics of Real-World Memristors on the Basis of Circuit Theoretic Model Predictions. IEEE Circuits and Systems Magazine, 2018, 18, 48-76.	2.3	17
34	A Simplified Model for a NbO₂ Mott Memristor Physical Realization. , 2020, , .		16
35	A Complete Analytical Solution for the On and Off Dynamic Equations of a TaO Memristor. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 682-686.	3.0	15
36	Graph Coloring via Locally-Active Memristor Oscillatory Networks. Journal of Low Power Electronics and Applications, 2022, 12, 22.	2.0	14

#	Article	IF	Citations
37	Application of the Volterra Series Paradigm to Memristive Systems. , 2014, , 163-191.		13
38	Unfolding the local activity of a memristor. , 2014, , .		12
39	Closedâ€form analytical solution for onâ€switching dynamics in a TaO memristor. Electronics Letters, 2017, 53, 1125-1126.	1.0	12
40	Improvement of NbO_x-based threshold switching devices by implementing multilayer stacks. Semiconductor Science and Technology, 2019, 34, 075005.	2.0	12
41	System-Theoretic Methods for Designing Bio-Inspired Mem-Computing Memristor Cellular Nonlinear Networks. Frontiers in Nanotechnology, 2021, 3, .	4.8	12
42	Toward Simplified Physics-Based Memristor Modeling of Valence Change Mechanism Devices. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2473-2477.	3.0	11
43	About v-i Pinched Hysteresis of Some Non-Memristive Systems. Mathematical Problems in Engineering, 2018, 2018, 1-10.	1.1	10
44	Memristor based-elements for chaotic circuits. Nonlinear Theory and Its Applications IEICE, 2012, 3, 336-356.	0.6	9
45	Memristor-based neural circuits. , 2013, , .		9
46	Memristor models for chaotic neural circuits. , 2012, , .		8
47	A Compact and Continuous Reformulation of the Strachan TaO_x Memristor Model With Improved Numerical Stability. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1266-1277.	5.4	8
48	Mathematical models and circuit implementations of memristive systems. , 2012, , .		7
49	Memristor circuit investigation through a new tutorial toolbox. , 2013, , .		7
50	Unfolding the Threshold Switching Behavior of a Memristor. Communications in Computer and Information Science, 2014, , 156-164.	0.5	7
51	Analysis of memristors with nonlinear memristance versus state maps. International Journal of Circuit Theory and Applications, 2017, 45, 1814-1832.	2.0	7
52	Cellular Nonlinear Networks with Memristor Synapses. , 2014, , 267-291.		7
53	Continuous and Differentiable Approximation of a TaO Memristor Model for Robust Numerical Simulations. Springer Proceedings in Physics, 2017, , 61-69.	0.2	6
54	Analytical Investigation of Pattern Formation in an M-CNN with Locally Active NbO_x Memristors. , 2021, , .		5

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55	Complex dynamics in neuromorphic memristor circuits. , 2013, , .		4
56	Analysis of Vth variability in NbOx-based threshold switches. , 2016, , .		4
57	Memristor Emulators: A Note on Modeling. Studies in Computational Intelligence, 2017, , 1-17.	0.9	4
58	Mathematical Investigation of Static Pattern Formation with a Locally Active Memristor Model. , 2021, , .		4
59	Complex dynamics in circuits with memristors. , 2017, , .		3
60	Memristor and Memristor Circuit Modelling Based on Methods of Nonlinear System Theory. PoliTO Springer Series, 2019, , 99-132.	0.5	3
61	Multi-tasking and Memcomputing with Memristor Cellular Nonlinear Networks. , 2020, , .		3
62	Pattern Formation in an M-CNN Structure Utilizing a Locally Active NbOx Memristor. , 2022, , 79-101.		3
63	Modeling dynamics of memristive nano-structures. , 2012, , .		2
64	Insights on memristor modeling. , 2013, , .		2
65	Emergence of synchronization in bio-inspired memristor-coupled oscillatory cells. Nonlinear Theory and Its Applications IEICE, 2014, 5, 292-308.	0.6	2
66	Complex behavior in memristor circuits based on static nonlinear two-ports and dynamic bipole. , 2015, , .		2
67	Simscape and LTspice models of HP ideal generic memristor based on finite closed form solution for window functions. , 2021, , .		2
68	On the Chaotic Behavior of a Third-Order Log-Domain Filter. Nonlinear Dynamics, 2006, 44, 45-54.	5.2	1
69	A novel elementary memristive system. , 2012, , .		1
70	Synchronization properties of a bio-inspired neural network. , 2015, , .		1
71	Theory of Cellular Nonlinear Networks with Analogue Dynamic Memristors. , 2019, , .		1
72	Implementation of Logical and Memory Functions with Memristor Cellular Nonlinear Networks. , 2020, , .		1

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73	Pattern Formation in a RD-MCNN with Locally Active Memristors. , 0, , .		1
74	Exploration of Edge of Chaos in Bio-Inspired Devices, Circuits, and Systems. , 2021, , .		1
75	Modeling the effects of BJT base currents on the dynamics of a log-domain filter. , 0, , .		0
76	Class of memristors from cascade of static nonlinear two ports with dynamic one-ports. , 2015, , .		0
77	Towards an analytical description of a TaO memristor. , 2017, , .		0
78	Gap engineering for improved control of memristor nanosensors. , 2017, , .		0
79	Image Processing by Cellular Memcomputing Structures. , 2020, , .		0
80	Image Mem-Processing Bio-Inspired Cellular Arrays with Bistable and Analogue Dynamic Memristors. , 2020, , .		0
81	Control Strategies to Optimize Graph Coloring via M-CNNs with Locally-Active NbOx Memristors. , 2021, , .		0
82	Optimization and Application of Niobium Oxide based Memristive NDR devices. , 2021, , .		0
83	System Theory Enables a Deep Exploration of ReRAM Cells' Switching Phenomena. , 2021, , .		0