

Dalibor Biolek

List of Publications by Year in descending order

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168
papers

2,554
citations

236925

25
h-index

265206

42
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170
all docs

170
docs citations

170
times ranked

907
citing authors

#	ARTICLE	IF	CITATIONS
1	Pinched hysteretic loops of ideal memristors, memcapacitors and meminductors must be self-crossing™. Electronics Letters, 2011, 47, 1385-1387.	1.0	176
2	Current mode quadrature oscillator using current differencing transconductance amplifiers (CDTA). IET Circuits, Devices and Systems, 2006, 153, 214.	0.6	166
3	Current-mode KHN filter employing current differencing transconductance amplifiers. AEU - International Journal of Electronics and Communications, 2006, 60, 443-446.	2.9	146
4	SPICE modeling of memristive, memcapacitative and meminductive systems. , 2009, , .		129
5	Mutator for transforming memristor into memcapacitor. Electronics Letters, 2010, 46, 1428.	1.0	86
6	High-performance current differencing transconductance amplifier and its application in precision current-mode rectification. AEU - International Journal of Electronics and Communications, 2008, 62, 92-96.	2.9	82
7	SPICE modelling of memcapacitor. Electronics Letters, 2010, 46, 520.	1.0	82
8	An analogue model of the memristor. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2011, 24, 400-408.	1.9	80
9	First-order voltage-mode all-pass filter employing one active element and one grounded capacitor. Analog Integrated Circuits and Signal Processing, 2010, 65, 123-129.	1.4	69
10	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
11	Realization of electronically tunable voltage-mode/current-mode quadrature sinusoidal oscillator using ZC-CG-CDBA. Microelectronics Journal, 2011, 42, 1116-1123.	2.0	62
12	Computation of the Area of Memristor Pinched Hysteresis Loop. IEEE Transactions on Circuits and Systems II: Express Briefs, 2012, 59, 607-611.	3.0	62
13	PSPICE modeling of meminductor. Analog Integrated Circuits and Signal Processing, 2011, 66, 129-137.	1.4	57
14	Grounded capacitor current mode single resistance-controlled oscillator using single modified current differencing transconductance amplifier. IET Circuits, Devices and Systems, 2010, 4, 496.	1.4	47
15	Bulk-Driven Current Differencing Transconductance Amplifier. Circuits, Systems, and Signal Processing, 2011, 30, 1071-1089.	2.0	44
16	Some fingerprints of ideal memristors. , 2013, , .		44
17	Interpreting area of pinched memristor hysteresis loop. Electronics Letters, 2014, 50, 74-75.	1.0	42
18	Reliable Modeling of Ideal Generic Memristors via State-Space Transformation. Radioengineering, 2015, 24, 393-407.	0.6	39

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19	Mutators simulating memcapacitors and meminductors. , 2010, , .		35
20	High-output-impedance current-mode multiphase sinusoidal oscillator employing current differencing transconductance amplifier-based allpass filters. International Journal of Electronics, 2010, 97, 811-826.	1.4	33
21	Allpass filter employing one grounded capacitor and one active element. Electronics Letters, 2009, 45, 807.	1.0	32
22	Hybrid modelling and emulation of memâ€systems. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2012, 25, 216-225.	1.9	32
23	Improved Model of TiO ₂ Memristor. Radioengineering, 2015, 24, 378-383.	0.6	32
24	Shadow filters for orthogonal modification of characteristic frequency and bandwidth. Electronics Letters, 2010, 46, 830.	1.0	29
25	CDTA-Based Capacitance Multipliers. Circuits, Systems, and Signal Processing, 2019, 38, 1466-1481.	2.0	29
26	Mutators for transforming nonlinear resistor into memristor. , 2011, , .		28
27	Memristor models for SPICE simulation of extremely large memristive networks. , 2016, , .		28
28	Utilizing the Bulk-driven technique in analog circuit design. , 2010, , .		27
29	Modeling and simulation of large memristive networks. International Journal of Circuit Theory and Applications, 2018, 46, 50-65.	2.0	27
30	Z Copyâ€Controlled Gainâ€Current Differencing Buffered Amplifier and its applications. International Journal of Circuit Theory and Applications, 2011, 39, 257-274.	2.0	26
31	Fully Balanced Voltage Differencing Buffered Amplifier and its applications. , 2009, , .		25
32	Modeling of TiO ₂ memristor: from analytic to numerical analyses. Semiconductor Science and Technology, 2014, 29, 125008.	2.0	25
33	Electronically controlled high input and low output impedance voltage mode multifunction filter with grounded capacitors. AEU - International Journal of Electronics and Communications, 2014, 68, 1239-1246.	2.9	23
34	Analytical Solution of Circuits Employing Voltage- and Current-Excited Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2619-2628.	5.4	22
35	Specification of one classical fingerprint of ideal memristor. Microelectronics Journal, 2015, 46, 298-300.	2.0	18
36	Memristive systems for analog signal processing. , 2014, , .		17

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37	How Can the Hysteresis Loop of the Ideal Memristor Be Pinched?. IEEE Transactions on Circuits and Systems II: Express Briefs, 2014, 61, 491-495.	3.0	17
38	Analog Emulator of Genuinely Floating Memcapacitor with Piecewise-Linear Constitutive Relation. Circuits, Systems, and Signal Processing, 2016, 35, 43-62.	2.0	17
39	Fourth Fundamental Circuit Element: SPICE Modeling and Simulation. , 2014, , 105-162.		15
40	Modeling of periodically switched networks by mixed s-z description. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 750-758.	0.1	14
41	Single-input multi-output resistorless current-mode biquad. , 2009, , .		14
42	Differential Equations of Ideal Memristors. Radioengineering, 2015, 24, 369-377.	0.6	14
43	Variation of a classical fingerprint of ideal memristor. International Journal of Circuit Theory and Applications, 2016, 44, 1202-1207.	2.0	13
44	Reconfigurable microwave filters using memristors. International Journal of Circuit Theory and Applications, 2018, 46, 113-121.	2.0	13
45	0.5 V Differential Difference Transconductance Amplifier and Its Application in Voltage-Mode Universal Filter. IEEE Access, 2022, 10, 43209-43220.	4.2	13
46	Generalized Pascal matrix of first order S-Z transforms. , 0, , .		11
47	Voltage-mode electronically tunable all-pass filter employing CCCII+, One capacitor and differential-input voltage buffer. , 2010, , .		11
48	Hysteresis versus PSM of ideal memristors, memcapacitors, and meminductors. Electronics Letters, 2016, 52, 1669-1671.	1.0	11
49	Every nonlinear element from Chua's table can generate pinched hysteresis loops: generalised homothety theorem. Electronics Letters, 2016, 52, 1744-1746.	1.0	11
50	RF/Microwave Applications of Memristors. Studies in Computational Intelligence, 2017, , 159-185.	0.9	11
51	Duality of Complex Systems Built from Higher-Order Elements. Complexity, 2018, 2018, 1-15.	1.6	11
52	(V)TEAM for SPICE Simulation of Memristive Devices With Improved Numerical Performance. IEEE Access, 2021, 9, 30242-30255.	4.2	11
53	About v-i Pinched Hysteresis of Some Non-Memristive Systems. Mathematical Problems in Engineering, 2018, 2018, 1-10.	1.1	10
54	0.3-Volt Rail-to-Rail DDTA and Its Application in a Universal Filter and Quadrature Oscillator. Sensors, 2022, 22, 2655.	3.8	10

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55	Adjoint voltage-current mode transformation for circuits based on modern current conveyors. , 0, , .		9
56	New voltage mode universal filter based on promising structure of Voltage Differencing Buffered Amplifier. , 2013, , .		9
57	Euler-Lagrange Equations of Networks with Higher-Order Elements. Radioengineering, 2017, 26, 397-405.	0.6	9
58	Predictive Models of Nanodevices. IEEE Nanotechnology Magazine, 2018, 17, 906-913.	2.0	9
59	Computer Simulation of Continuous-Time and Switched Circuits: Limitations of SPICE-Family Programs and Pending Issues. , 2007, , .		8
60	Universal Current-Mode Gm-C Biquad. , 2008, , .		8
61	Hybrid FSO/RF test link. , 2012, , .		8
62	Stability of digitally emulated mem-elements. , 2015, , .		8
63	(Co)content in Circuits With Memristive Elements. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 488-496.	5.4	8
64	Taxicab geometry in table of higher-order elements. Nonlinear Dynamics, 2019, 98, 623-636.	5.2	8
65	On the Design of low-voltage low-power bulk-driven CMOS Current Conveyors. , 2006, , .		7
66	Parametric reduction of Jacobian matrix for fault analysis. , 2010, , .		7
67	Low-distortion current-mode quadrature oscillator for low-voltage low-power applications with non-linear non-inertial automatic gain control. , 2011, , .		7
68	Computing Areas of Pinched Hysteresis Loops of Mem-Systems in OrCAD PSPICE. Applied Mechanics and Materials, 0, 278-280, 1081-1090.	0.2	7
69	Comments on Pinched Hysteresis Loops of Memristive Elements. Radioengineering, 2015, 24, 962-967.	0.6	7
70	The simplest memristor in the world. , 2016, , .		7
71	Analysis of memristors with nonlinear memristance versus state maps. International Journal of Circuit Theory and Applications, 2017, 45, 1814-1832.	2.0	7
72	Modified MIM model of titanium dioxide memristor for reliable simulations in SPICE. , 2017, , .		7

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73	About Fingerprints of Chua's Memristors. IEEE Circuits and Systems Magazine, 2018, 18, 35-47.	2.3	7
74	Mutual Transformation of Flux-Controlled and Charge-Controlled Memristors. IEEE Access, 2022, 10, 68307-68318.	4.2	7
75	Differential-input buffered and transconductance amplifier-based all-pass filter and its application in quadrature oscillator. , 2012, , .		6
76	Voltage-mode quadrature oscillator using VD-DIBA active elements. , 2014, , .		6
77	Memristors and other higher-order elements in generalized through-across domain. , 2016, , .		6
78	Evaluation of memristor models for large crossbar structures. , 2016, , .		6
79	Memristive two-ports. , 2017, , .		6
80	Novel signal flow graphs of current conveyors. , 0, , .		5
81	Analysis of switching effects in DC-DC converters via bias point computation. , 2007, , .		5
82	Frequency-domain steady-state analysis of circuits with mem-elements. Analog Integrated Circuits and Signal Processing, 2013, 74, 79-89.	1.4	5
83	Spice models of memristive devices forming a model of Hodgkin-Huxley axon. , 2013, , .		5
84	On Hybrid Emulation of Mem-Systems. , 2014, , .		5
85	Memristor pinched hysteresis loops: Touching points, Part I. , 2014, , .		5
86	Lagrangian for Circuits with Higher-Order Elements. Entropy, 2019, 21, 1059.	2.2	5
87	Modeling of switched DC-DC converters by mixed s-z description. , 0, , .		4
88	A new building block for analog signal processing: current follower/inverter buffered transconductance amplifier. , 2009, , .		4
89	On accuracy of averaged control-to-output frequency responses of switched DC-DC converters. , 2010, , .		4
90	On steady-state analysis of circuits with memristors. , 2011, , .		4

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91	Current-input current-output universal biquad employing two bulk-driven VDTAs. , 2012, , .		4
92	Nonlinear inerter in the light of Chua's table of higher-order electrical elements. , 2016, , .		4
93	New version of SNAP simulator. , 2017, , .		4
94	Programmable Emulator of Genuinely Floating Memristive Switching Devices. , 2019, , .		4
95	Utilization of Euler-Lagrange Equations in Circuits with Memory Elements. Radioengineering, 2016, 25, 783-789.	0.6	4
96	Memristor Emulators. , 2019, , 1137-1159.		4
97	Algorithmic s-z transformations for continuous-time to discrete-time filter conversion. , 0, , .		3
98	SPICE Modeling of Switched DC-DC Converters via Generalized Model of PWM Switch. , 2007, , .		3
99	Implementation of topological circuit reduction. , 2010, , .		3
100	Tolerance-based control mechanism for approximate symbolic analysis. , 2011, , .		3
101	Simplified SPICE model of TiO ₂ memristor. , 2015, , .		3
102	Memristor model for massively-parallel computations. , 2015, , .		3
103	Guest Editorial: Special Issue on Large-Scale Memristive Systems and Neurochips for Computational Intelligence. IEEE Transactions on Emerging Topics in Computational Intelligence, 2018, 2, 320-323.	4.9	3
104	Coupled memristors, memcapacitors, and meminductors and their fingerprints. AEU - International Journal of Electronics and Communications, 2018, 97, 263-266.	2.9	3
105	Chua's Table as a Tool for Constructing Dual Networks. , 2019, , .		3
106	All Pinched Hysteresis Loops Generated by (\hat{I}_\pm , \hat{I}^2) Elements: in What Coordinates They May be Observable. IEEE Access, 2020, 8, 199179-199186.	4.2	3
107	Lagrangian and Hamiltonian formalisms for coupled higher-order elements: theory, modeling, simulation. Nonlinear Dynamics, 2021, 104, 3547-3560.	5.2	3
108	Analysis of Multipath Effects on FSO Links. , 2013, , .		3

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109	Modeling of the generic memcapacitors using higher-order multi-ports. Communications in Nonlinear Science and Numerical Simulation, 2022, 113, 106497.	3.3	3
110	Topology Transformations for Symbolic Analysis. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	2
111	Program for multi-domain symbolic analysis. , 2010, , .		2
112	On accuracy of averaging for switched converters. , 2010, , .		2
113	Voltage-mode balanced-outputs quadrature oscillator using FB-VDBAs. , 2010, , .		2
114	Current-input current-output 2 nd -order all-pass filter employing two ZC-CITAs. , 2010, , .		2
115	Efficient procedure for solving circuit algebraic-differential equations with modified sparse LU factorization improving fill-in suppression. , 2011, , .		2
116	Frequency dependent negative resistor based on differential-input buffered and transconductance amplifier. , 2012, , .		2
117	Memristor pinched hysteresis loops: Touching points, Part II. , 2014, , .		2
118	Generalized rule of homothety of ideal memristors and their siblings. , 2015, , .		2
119	Simulation model of correlated FSO channels. , 2015, , .		2
120	Real-World Capacitor as a Memcapacitive Element. , 2018, , .		2
121	RF Single-Pole Double-Throw Switch Based on Memistor. , 2018, , .		2
122	Hamiltonian's Principle for Circuits with Dissipative Elements. Complexity, 2019, 2019, 1-7.	1.6	2
123	Higher-Order Hamiltonian for Circuits with (\hat{I}_\pm, \hat{I}^2) Elements. Entropy, 2020, 22, 412.	2.2	2
124	Optimization of frequency filters via vertex graphs. , 0, , .		1
125	MC flow graphs with hybrid nodes. , 0, , .		1
126	Current-mode universal biquad. , 0, , .		1

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127	Symbolic Analysis Based on Graph Transformations. , 2007, , .		1
128	Nonlinear on-chip capacitor characterization. , 2007, , .		1
129	Simulation model of microturbine unit. , 2011, , .		1
130	Some Regularities of the Spectral Content of the Responses of Memristive Systems to Sinusoidal Excitation. , 2014, , .		1
131	Modular emulators of memristors and other higher-order elements from Chua's periodical table. , 2015, , .		1
132	Techniques for reliable and accurate numerical solutions of memristor models. , 2015, , .		1
133	Charging the capacitor via a (Memory) resistor. , 2016, , .		1
134	Stability testing of hybrid DT+CT systems. , 2016, , .		1
135	Time-domain model for simulating turbulence effects on terrestrial FSO systems. , 2016, , .		1
136	Z-domain Bode plots. , 2016, , .		1
137	Voltage-Current Differential Equations of Extended Memristors with One-Dimensional State. , 2017, , .		1
138	Hardware Implementation of Bio-Inspired Models. , 2018, , .		1
139	Study of Solid-State Photomultiplier for Ranging Applications. , 2019, , .		1
140	Implementation of Logical and Memory Functions with Memristor Cellular Nonlinear Networks. , 2020, , .		1
141	Precise Implementation of CDTA. Advances in Electrical and Electronic Engineering, 2018, 15, .	0.3	1
142	Emulation of Bio-Inspired Networks. Advances in Science, Technology and Engineering Systems, 2019, 4, 21-28.	0.5	1
143	Smoothing Technique for Simulation of Switched-Capacitor Filters Using General-Purpose Circuit Simulation Programs. , 2019, , .		1
144	Semi-Symbolic Transient Analysis of Analog Fractional-Order Systems. , 2022, , .		1

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145	OAHU - Object Analysis Hake Utility. , 0, , .		0
146	An Accurate Sparse-Matrix Semisymbolic Algorithm for Analyzing Distributed Microwave Circuits. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
147	Algebraic Propositions for Analysis of Linear-Phase FIR Filters. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
148	Effective Spice Analysis of Switched Capacitor DC-DC Converters. , 2007, , .		0
149	Modified buffered transconductance amplifier for analog signal processing. , 2009, , .		0
150	Optimization of oversampling Data Recovery. , 2009, , .		0
151	Dragonfly M-C graphs for symbolic analysis of current-conveyor circuits. , 2010, , .		0
152	Accurate time-domain semisymbolic analysis. , 2010, , .		0
153	Statistical analysis of blind-oversampling CDR circuits. , 2012, , .		0
154	Non-stationary statistical simulation of blind-oversampling CDR circuits. , 2013, , .		0
155	Complex Simulation Model of Microturbine Unit. Applied Mechanics and Materials, 0, 278-280, 282-289.	0.2	0
156	Implementation of Symbolic Analysis of Mechatronic Systems. Applied Mechanics and Materials, 0, 278-280, 1910-1917.	0.2	0
157	Program for symbolic analysis of mechatronic systems. , 2013, , .		0
158	Behavioral model for simplified identification of memristor parameters. , 2015, , .		0
159	EU COST action IC1401 "Pushing the frontiers of memristive devices to systems. , 2016, , .		0
160	Analysis of transmitter-blocking technique for terrestrial FSO links. , 2017, , .		0
161	Digitally Emulated Electronic Devices. , 2017, , .		0
162	On Validity of Results of Approximate Symbolic Analysis. , 2018, , .		0

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163	[From the Guest Editors]. IEEE Circuits and Systems Magazine, 2018, 18, 5-6.	2.3	0
164	RF Single-Pole Double-Throw Switch Based on Two-Port Memistor. IOP Conference Series: Materials Science and Engineering, 2019, 524, 012008.	0.6	0
165	Active Electronically-Controlled Circulator Based on Mem-OTAs. , 2019, , .		0
166	Modeling Output Signals of Solid-State Photomultiplier with Capacitive Coupling. , 2020, , .		0
167	X-Controlled Memristive Devices for Automatic Gain Control in RC Oscillators. , 2020, , .		0
168	Modeling of Memcapacitor with Anelastic Dielectric via Two-Port Capacitor. , 2021, , .		0