Dalibor Biolek

List of Publications by Year
in descending order

168 papers	2,554 citations	236925 25 h-index	265206 42 g-index
170 all docs	170 docs citations	170 times ranked	907 citing authors

#	Article	IF	Citations
1	0.3-Volt Rail-to-Rail DDTA and Its Application in a Universal Filter and Quadrature Oscillator. Sensors, 2022, 22, 2655.	3.8	10
2	0.5 V Differential Difference Transconductance Amplifier and Its Application in Voltage-Mode Universal Filter. IEEE Access, 2022, 10, 43209-43220.	4.2	13
3	Modeling of the generic memcapacitors using higher-order multi-ports. Communications in Nonlinear Science and Numerical Simulation, 2022, 113, 106497.	3.3	3
4	Mutual Transformation of Flux-Controlled and Charge-Controlled Memristors. IEEE Access, 2022, 10, 68307-68318.	4.2	7
5	Semi-Symbolic Transient Analysis of Analog Fractional-Order Systems. , 2022, , .		1
6	(V)TEAM for SPICE Simulation of Memristive Devices With Improved Numerical Performance. IEEE Access, 2021, 9, 30242-30255.	4.2	11
7	Lagrangian and Hamiltonian formalisms for coupled higher-order elements: theory, modeling, simulation. Nonlinear Dynamics, 2021, 104, 3547-3560.	5.2	3
8	Modeling of Memcapacitor with Anelastic Dielectric via Two-Port Capacitor. , 2021, , .		0
9	Implementation of Logical and Memory Functions with Memristor Cellular Nonlinear Networks. , 2020, , .		1
10	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
11	Higher-Order Hamiltonian for Circuits with $(\hat{I}\pm, \hat{I}^2)$ Elements. Entropy, 2020, 22, 412.	2.2	2
12	Modeling Output Signals of Solid-State Photomultiplier with Capacitive Coupling. , 2020, , .		0
13	X-Controlled Memristive Devices for Automatic Gain Control in RC Oscillators. , 2020, , .		0
14	CDTA-Based Capacitance Multipliers. Circuits, Systems, and Signal Processing, 2019, 38, 1466-1481.	2.0	29
15	Study of Solid-State Photomultiplier for Ranging Applications. , 2019, , .		1
16	Taxicab geometry in table of higher-order elements. Nonlinear Dynamics, 2019, 98, 623-636.	5.2	8
17	RF Single-Pole Double-Throw Switch Based on Two-Port Memistor. IOP Conference Series: Materials Science and Engineering, 2019, 524, 012008.	0.6	0
18	Active Electronically-Controlled Circulator Based on Mem-OTAs. , 2019, , .		0

#	Article	IF	Citations
19	Chua's Table as a Tool for Constructing Dual Networks. , 2019, , .		3
20	Programmable Emulator of Genuinely Floating Memristive Switching Devices. , 2019, , .		4
21	Hamilton's Principle for Circuits with Dissipative Elements. Complexity, 2019, 2019, 1-7.	1.6	2
22	Lagrangian for Circuits with Higher-Order Elements. Entropy, 2019, 21, 1059.	2.2	5
23	Emulation of Bio-Inspired Networks. Advances in Science, Technology and Engineering Systems, 2019, 4, 21-28.	0.5	1
24	Memristor Emulators. , 2019, , 1137-1159.		4
25	Smoothing Technique for Simulation of Switched-Capacitor Filters Using General-Purpose Circuit Simulation Programs. , 2019, , .		1
26	Predictive Models of Nanodevices. IEEE Nanotechnology Magazine, 2018, 17, 906-913.	2.0	9
27	Modeling and simulation of large memristive networks. International Journal of Circuit Theory and Applications, 2018, 46, 50-65.	2.0	27
28	Reconfigurable microwave filters using memristors. International Journal of Circuit Theory and Applications, 2018, 46, 113-121.	2.0	13
29	About v-i Pinched Hysteresis of Some Non-Memristive Systems. Mathematical Problems in Engineering, 2018, 2018, 1-10.	1.1	10
30	On Validity of Results of Approximate Symbolic Analysis. , 2018, , .		0
31	Hardware Implementation of Bio-Inspired Models. , 2018, , .		1
32	Real-World Capacitor as a Memcapacitive Element. , 2018, , .		2
33	RF Single-Pole Double-Throw Switch Based on Memistor. , 2018, , .		2
34	Duality of Complex Systems Built from Higher-Order Elements. Complexity, 2018, 2018, 1-15.	1.6	11
35	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
36	Coupled memristors, memcapacitors, and meminductors and their fingerprints. AEU - International Journal of Electronics and Communications, 2018, 97, 263-266.	2.9	3

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37	[From the Guest Editors]. IEEE Circuits and Systems Magazine, 2018, 18, 5-6.	2.3	0
38	About Fingerprints of Chua's Memristors. IEEE Circuits and Systems Magazine, 2018, 18, 35-47.	2.3	7
39	Precise Implementation of CDTA. Advances in Electrical and Electronic Engineering, 2018, 15, .	0.3	1
40	Analysis of memristors with nonlinear memristance versus state maps. International Journal of Circuit Theory and Applications, 2017, 45, 1814-1832.	2.0	7
41	RF/Microwave Applications of Memristors. Studies in Computational Intelligence, 2017, , 159-185.	0.9	11
42	Modified MIM model of titanium dioxide memristor for reliable simulations in SPICE. , 2017, , .		7
43	New version of SNAP simulator. , 2017, , .		4
44	Memristive two-ports. , 2017, , .		6
45	Analysis of transmitter-blocking technique for terrestrial FSO links. , 2017, , .		0
46	Euler-Lagrange Equations of Networks with Higher-Order Elements. Radioengineering, 2017, 26, 397-405.	0.6	9
47	Voltage-Current Differential Equations of Extended Memristors with One-Dimensional State. , 2017, , .		1
48	Digitally Emulated Electronic Devices. , 2017, , .		0
49	Memristors and other higher-order elements in generalized through-across domain. , 2016, , .		6
50	Nonlinear inerter in the light of Chua's table of higher-order electrical elements. , 2016, , .		4
51	Charging the capacitor via a (Memory) resistor. , 2016, , .		1
52	Hysteresis versus PSM of ideal memristors, memcapacitors, and meminductors. Electronics Letters, 2016, 52, 1669-1671.	1.0	11
53	Memristor models for SPICE simulation of extremely large memristive networks. , 2016, , .		28
54	Variation of a classical fingerprint of ideal memristor. International Journal of Circuit Theory and Applications, 2016, 44, 1202-1207.	2.0	13

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55	Stability testing of hybrid DT+CT systems. , 2016, , .		1
56	Time-domain model for simulating turbulence effects on terrestrial FSO systems. , 2016, , .		1
57	The simplest memristor in the world. , 2016, , .		7
58	EU COST action IC1401 â€" Pushing the frontiers of memristive devices to systems. , 2016, , .		0
59	Every nonlinear element from Chua's table can generate pinched hysteresis loops: generalised homothety theorem. Electronics Letters, 2016, 52, 1744-1746.	1.0	11
60	Evaluation of memristor models for large crossbar structures. , 2016, , .		6
61	Z-domain Bode plots. , 2016, , .		1
62	Analog Emulator of Genuinely Floating Memcapacitor with Piecewise-Linear Constitutive Relation. Circuits, Systems, and Signal Processing, 2016, 35, 43-62.	2.0	17
63	Utilization of Euler-Lagrange Equations in Circuits with Memory Elements. Radioengineering, 2016, 25, 783-789.	0.6	4
64	Comments on Pinched Hysteresis Loops of Memristive Elements. Radioengineering, 2015, 24, 962-967.	0.6	7
65	Reliable Modeling of Ideal Generic Memristors via State-Space Transformation. Radioengineering, 2015, 24, 393-407.	0.6	39
66	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
67	Generalized rule of homothety of ideal memristors and their siblings. , 2015, , .		2
68	Modular emulators of memristors and other higher-order elements from Chuaâ€™s periodical table. , 2015, , .		1
69	Stability of digitally emulated mem-elements. , 2015, , .		8
70	Simplified SPICE model of TiO2memristor. , 2015, , .		3
71	Behavioral model for simplified identification of memristor parameters. , 2015, , .		0
72	Techniques for reliable and accurate numerical solutions of memristor models. , 2015, , .		1

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73	Memristor model for massively-parallel computations. , 2015, , .		3
74	(Co)content in Circuits With Memristive Elements. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 488-496.	5.4	8
75	Specification of one classical fingerprint of ideal memristor. Microelectronics Journal, 2015, 46, 298-300.	2.0	18
76	Improved Model of TiO2 Memristor. Radioengineering, 2015, 24, 378-383.	0.6	32
77	Differential Equations of Ideal Memristors. Radioengineering, 2015, 24, 369-377.	0.6	14
78	Simulation model of correlated FSO channels. , 2015, , .		2
79	Modeling of TiO$_2$ memristor: from analytic to numerical analyses. Semiconductor Science and Technology, 2014, 29, 125008.	2.0	25
80	Memristor pinched hysteresis loops: Touching points, Part II. , 2014, , .		2
81	Voltage-mode quadrature oscillator using VD-DIBA active elements. , 2014, , .		6
82	On Hybrid Emulation of Mem-Systems. , 2014, , .		5
83	Memristive systems for analog signal processing. , 2014, , .		17
84	Interpreting area of pinched memristor hysteresis loop. Electronics Letters, 2014, 50, 74-75.	1.0	42
85	Memristor pinched hysteresis loops: Touching points, Part I. , 2014, , .		5
86	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
87	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
88	Some Regularities of the Spectral Content of the Responses of Memristive Systems to Sinusoidal Excitation. , 2014, , .		1
89	Fourth Fundamental Circuit Element: SPICE Modeling and Simulation. , 2014, , 105-162.		15
90	Frequency-domain steady-state analysis of circuits with mem-elements. Analog Integrated Circuits and Signal Processing, 2013, 74, 79-89.	1.4	5

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91	New voltage mode universal filter based on promising structure of Voltage Differencing Buffered Amplifier. , 2013, , .		9
92	Non-stationary statistical simulation of blind-oversampling CDR circuits. , 2013, , .		0
93	Some fingerprints of ideal memristors. , 2013, , .		44
94	Program for symbolic analysis of mechatronic systems. , 2013, , .		0
95	Spice models of memristive devices forming a model of Hodgkin-Huxley axon. , 2013, , .		5
96	Analysis of Multipath Effects on FSO Links. , 2013, , .		3
97	Statistical analysis of blind-oversampling CDR circuits. , 2012, , .		0
98	Hybrid FSO/RF test link. , 2012, , .		8
99	Current-input current-output universal biquad employing two bulk-driven VDTAs. , 2012, , .		4
100	Frequency dependent negative resistor based on differential-input buffered and transconductance amplifier. , 2012, , .		2
101	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
102	Differential-input buffered and transconductance amplifier-based all-pass filter and its application in quadrature oscillator. , 2012, , .		6
103	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
104	Hybrid modelling and emulation of mem-systems. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2012, 25, 216-225.	1.9	32
105	Mutators for transforming nonlinear resistor into memristor. , 2011, , .		28
106	Pinched hysteretic loops of ideal memristors, memcapacitors and meminductors must be â€˜self-crossingâ€™. Electronics Letters, 2011, 47, 1385-1387.	1.0	176
107	Low-distortion current-mode quadrature oscillator for low-voltage low-power applications with non-linear non-inertial automatic gain control. , 2011, , .		7
108	Simulation model of microturbine unit. , 2011, , .		1

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109	Realization of electronically tunable voltage-mode/current-mode quadrature sinusoidal oscillator using ZC-CG-CDBA. Microelectronics Journal, 2011, 42, 1116-1123.	2.0	62
110	PSPICE modeling of meminductor. Analog Integrated Circuits and Signal Processing, 2011, 66, 129-137.	1.4	57
111	Bulk-Driven Current Differencing Transconductance Amplifier. Circuits, Systems, and Signal Processing, 2011, 30, 1071-1089.	2.0	44
112	An analogue model of the memristor. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2011, 24, 400-408.	1.9	80
113	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
114	On steady-state analysis of circuits with memristors. , 2011, , .		4
115	Efficient procedure for solving circuit algebraic-differential equations with modified sparse LU factorization improving fill-in suppression. , 2011, , .		2
116	Tolerance-based control mechanism for approximate symbolic analysis. , 2011, , .		3
117	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
118	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
119	Program for multi-domain symbolic analysis. , 2010, , .		2
120	On accuracy of averaging for switched converters. , 2010, , .		2
121	Voltage-mode electronically tunable all-pass filter employing CCCII&#x002B;, One capacitor and differential-input voltage buffer. , 2010, , .		11
122	Shadow filters for orthogonal modification of characteristic frequency and bandwidth. Electronics Letters, 2010, 46, 830.	1.0	29
123	Mutator for transforming memristor into memcapacitor. Electronics Letters, 2010, 46, 1428.	1.0	86
124	Utilizing the Bulk-driven technique in analog circuit design. , 2010, , .		27
125	SPICE modelling of memcapacitor. Electronics Letters, 2010, 46, 520.	1.0	82
126	Mutators simulating memcapacitors and meminductors. , 2010, , .		35

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127	Voltage-mode balanced-outputs quadrature oscillator using FB-VDBAs. , 2010, , .		2
128	Dragonfly M-C graphs for symbolic analysis of current-conveyor circuits. , 2010, , .		0
129	Current-input current-output 2nd-order all-pass filter employing two ZC-CITAs. , 2010, , .		2
130	Accurate time-domain semisymbolic analysis. , 2010, , .		0
131	On accuracy of averaged control-to-output frequency responses of switched DC-DC converters. , 2010, , .		4
132	Implementation of topological circuit reduction. , 2010, , .		3
133	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
134	Parametric reduction of Jacobian matrix for fault analysis. , 2010, , .		7
135	Single-input multi-output resistorless current-mode biquad. , 2009, , .		14
136	Allpass filter employing one grounded capacitor and one active element. Electronics Letters, 2009, 45, 807.	1.0	32
137	SPICE modeling of memristive, memcapacitative and meminductive systems. , 2009, , .		129
138	Modified buffered transconductance amplifier for analog signal processing. , 2009, , .		0
139	Fully Balanced Voltage Differencing Buffered Amplifier and its applications. , 2009, , .		25
140	A new building block for analog signal processing: current follower/inverter buffered transconductance amplifier. , 2009, , .		4
141	Optimization of oversampling Data Recovery. , 2009, , .		0
142	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
143	Universal Current-Mode Gm-C Biquad. , 2008, , .		8
144	Symbolic Analysis Based on Graph Transformations. , 2007, , .		1

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145	Analysis of switching effects in DC-DC converters via bias point computation. , 2007, , .		5
146	Effective Spice Analysis of Switched Capacitor DC-DC Converters. , 2007, , .		0
147	Nonlinear on-chip capacitor characterization. , 2007, , .		1
148	Computer Simulation of Continuous-Time and Switched Circuits: Limitations of SPICE-Family Programs and Pending Issues. , 2007, , .		8
149	SPICE Modeling of Switched DC-DC Converters via Generalized Model of PWM Switch. , 2007, , .		3
150	An Accurate Sparse-Matrix Semisymbolic Algorithm for Analyzing Distributed Microwave Circuits. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
151	On the Design of low-voltage low-power bulk-driven CMOS Current Conveyors. , 2006, , .		7
152	Current-mode KHN filter employing current differencing transconductance amplifiers. AEU - International Journal of Electronics and Communications, 2006, 60, 443-446.	2.9	146
153	Topology Transformations for Symbolic Analysis. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	2
154	Current mode quadrature oscillator using current differencing transconductance amplifiers (CDTA). IET Circuits, Devices and Systems, 2006, 153, 214.	0.6	166
155	Algebraic Propositions for Analysis of Linear-Phase FIR Filters. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
156	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
157	Novel signal flow graphs of current conveyors. , 0, , .		5
158	Generalized Pascal matrix of first order S-Z transforms. , 0, , .		11
159	Optimization of frequency filters via vertex graphs. , 0, , .		1
160	Algorithmic s-z transformations for continuous-time to discrete-time filter conversion. , 0, , .		3
161	OAHU - Object Analysis Hake Utility. , 0, , .		0
162	MC flow graphs with hybrid nodes. , 0, , .		1

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163	Current-mode universal biquad. , 0, , .		1
164	Adjoint voltage-current mode transformation for circuits based on modern current conveyors. , 0, , .		9
165	Modeling of switched DC-DC converters by mixed s-z description. , 0, , .		4
166	Complex Simulation Model of Microturbine Unit. Applied Mechanics and Materials, 0, 278-280, 282-289.	0.2	0
167	Implementation of Symbolic Analysis of Mechatronic Systems. Applied Mechanics and Materials, 0, 278-280, 1910-1917.	0.2	0
168	Computing Areas of Pinched Hysteresis Loops of Mem-Systems in OrCAD PSPICE. Applied Mechanics and Materials, 0, 278-280, 1081-1090.	0.2	7