

Dalibor Biolek

List of Publications by Year in descending order

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168
papers

2,554
citations

236612

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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.	2.1	10
2	0.5 V Differential Difference Transconductance Amplifier and Its Application in Voltage-Mode Universal Filter. IEEE Access, 2022, 10, 43209-43220.	2.6	13
3	Modeling of the generic memcapacitors using higher-order multi-ports. Communications in Nonlinear Science and Numerical Simulation, 2022, 113, 106497.	1.7	3
4	Mutual Transformation of Flux-Controlled and Charge-Controlled Memristors. IEEE Access, 2022, 10, 68307-68318.	2.6	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.	2.6	11
7	Lagrangian and Hamiltonian formalisms for coupled higher-order elements: theory, modeling, simulation. Nonlinear Dynamics, 2021, 104, 3547-3560.	2.7	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.	2.6	3
11	Higher-Order Hamiltonian for Circuits with $(\hat{I}_{\pm}, \hat{I}^2)$ Elements. Entropy, 2020, 22, 412.	1.1	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.	1.2	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.	2.7	8
17	RF Single-Pole Double-Throw Switch Based on Two-Port Memistor. IOP Conference Series: Materials Science and Engineering, 2019, 524, 012008.	0.3	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.	0.9	2
22	Lagrangian for Circuits with Higher-Order Elements. Entropy, 2019, 21, 1059.	1.1	5
23	Emulation of Bio-Inspired Networks. Advances in Science, Technology and Engineering Systems, 2019, 4, 21-28.	0.4	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.	1.1	9
27	Modeling and simulation of large memristive networks. International Journal of Circuit Theory and Applications, 2018, 46, 50-65.	1.3	27
28	Reconfigurable microwave filters using memristors. International Journal of Circuit Theory and Applications, 2018, 46, 113-121.	1.3	13
29	About $v-i$ Pinched Hysteresis of Some Non-Memristive Systems. Mathematical Problems in Engineering, 2018, 2018, 1-10.	0.6	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.	0.9	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.	3.4	3
36	Coupled memristors, memcapacitors, and meminductors and their fingerprints. AEU - International Journal of Electronics and Communications, 2018, 97, 263-266.	1.7	3

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37	[From the Guest Editors]. IEEE Circuits and Systems Magazine, 2018, 18, 5-6.	2.6	0
38	About Fingerprints of Chua's Memristors. IEEE Circuits and Systems Magazine, 2018, 18, 35-47.	2.6	7
39	Precise Implementation of CDTA. Advances in Electrical and Electronic Engineering, 2018, 15, .	0.2	1
40	Analysis of memristors with nonlinear memristance versus state maps. International Journal of Circuit Theory and Applications, 2017, 45, 1814-1832.	1.3	7
41	RF/Microwave Applications of Memristors. Studies in Computational Intelligence, 2017, , 159-185.	0.7	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.	0.3	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.	0.5	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.	1.3	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 "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.	0.5	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.	1.2	17
63	Utilization of Euler-Lagrange Equations in Circuits with Memory Elements. Radioengineering, 2016, 25, 783-789.	0.3	4
64	Comments on Pinched Hysteresis Loops of Memristive Elements. Radioengineering, 2015, 24, 962-967.	0.3	7
65	Reliable Modeling of Ideal Generic Memristors via State-Space Transformation. Radioengineering, 2015, 24, 393-407.	0.3	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.	2.7	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 Chua's periodical table. , 2015, , .		1
69	Stability of digitally emulated mem-elements. , 2015, , .		8
70	Simplified SPICE model of TiO ₂ memristor. , 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.	3.5	8
75	Specification of one classical fingerprint of ideal memristor. Microelectronics Journal, 2015, 46, 298-300.	1.1	18
76	Improved Model of TiO ₂ Memristor. Radioengineering, 2015, 24, 378-383.	0.3	32
77	Differential Equations of Ideal Memristors. Radioengineering, 2015, 24, 369-377.	0.3	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.	1.0	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.	0.5	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.	1.7	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.	2.2	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.	0.9	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.	3.5	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.	2.2	62
104	Hybrid modelling and emulation of memristive systems. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2012, 25, 216-225.	1.2	32
105	Mutators for transforming nonlinear resistor into memristor. , 2011, , .		28
106	Pinched hysteretic loops of ideal memristors, memcapacitors and meminductors must be "self-crossing". Electronics Letters, 2011, 47, 1385-1387.	0.5	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. <i>Microelectronics Journal</i> , 2011, 42, 1116-1123.	1.1	62
110	PSPICE modeling of meminductor. <i>Analog Integrated Circuits and Signal Processing</i> , 2011, 66, 129-137.	0.9	57
111	Bulk-Driven Current Differencing Transconductance Amplifier. <i>Circuits, Systems, and Signal Processing</i> , 2011, 30, 1071-1089.	1.2	44
112	An analogue model of the memristor. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2011, 24, 400-408.	1.2	80
113	Z Copyâ€Controlled Gainâ€Current Differencing Buffered Amplifier and its applications. <i>International Journal of Circuit Theory and Applications</i> , 2011, 39, 257-274.	1.3	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. <i>Analog Integrated Circuits and Signal Processing</i> , 2010, 65, 123-129.	0.9	69
118	Grounded capacitor current mode single resistance-controlled oscillator using single modified current differencing transconductance amplifier. <i>IET Circuits, Devices and Systems</i> , 2010, 4, 496.	0.9	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+, One capacitor and differential-input voltage buffer. , 2010, , .		11
122	Shadow filters for orthogonal modification of characteristic frequency and bandwidth. <i>Electronics Letters</i> , 2010, 46, 830.	0.5	29
123	Mutator for transforming memristor into memcapacitor. <i>Electronics Letters</i> , 2010, 46, 1428.	0.5	86
124	Utilizing the Bulk-driven technique in analog circuit design. , 2010, , .		27
125	SPICE modelling of memcapacitor. <i>Electronics Letters</i> , 2010, 46, 520.	0.5	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 2 nd -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.	0.9	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.	0.5	32
137	SPICE modeling of memristive, memcapacitive 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.	1.7	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.	1.7	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