Ahmed S Elwakil

List of Publications by Year in Descending Order

502 papers	9,111 citations	47 h-index	73 g-index
568 ext. papers	10,986 ext. citations	2.7 avg, IF	7.09 L-index

#	Paper	IF	Citations
502	Fractional-order oscillators based on a single Op-Amp **2022**, 411-439		
501	A survey on memristor active emulation circuits in the fractional-order domain **2022**, 375-410		0
500	MOS realizations of fractional-order elements **2022**, 1-33		0
499	A collection of interdisciplinary applications of fractional-order circuits **2022**, 35-69		1
498	Second-order cascode-based filters. *The Integration VLSI Journal*, **2022**, 84, 111-121	1.4	
497	Discrete fractional-order Caputo method to overcome trapping in local optima: Manta Ray Foraging Optimizer as a case study. *Expert Systems With Applications*, **2022**, 192, 116355	7.8	1
496	Extended Instantaneous Spectral Analysis (E-ISA) for Advanced Signal Processing. *IEEE Transactions on Instrumentation and Measurement*, **2022**, 1-1	5.2	1
495	Time-Frequency Design of a Multi-Sine Excitation With Random Phase and Controllable Amplitude for (Bio) Impedance Measurements. *IEEE Access*, **2022**, 10, 31641-31648	3.5	0
494	Electronically Controlled Power-Law Filters Realizations. *Fractal and Fractional*, **2022**, 6, 111	3	1
493	Versatile Field-Programmable Analog Array Realizations of Power-Law Filters. *Electronics (Switzerland)*, **2022**, 11, 692	2.6	2
492	Modified fractional-order model for biomass degradation in an up-flow anaerobic sludge blanket reactor at Zenein Wastewater Treatment Plant.. *Environmental Science and Pollution Research*, **2022**, 29, 25980	5.1	0
491	Plant stem tissue modeling and parameter identification using metaheuristic optimization algorithms.. *Scientific Reports*, **2022**, 12, 3992	4.9	1
490	Generalizing the Warburg Impedance to a Warburg Impedance Matrix. *AEU - International Journal of Electronics and Communications*, **2022**, 154202	2.8	
489	FPGA Implementation of Reconfigurable CORDIC Algorithm and a Memristive Chaotic System With Transcendental Nonlinearities. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2022**, 1-8	3.9	4
488	CNTFET-Based Ternary Multiply-and-Accumulate Unit. *Electronics (Switzerland)*, **2022**, 11, 1455	2.6	0
487	Time-Domain and Frequency-Domain Mappings of Voltage-to-Charge and Charge-to-Voltage in Capacitive Devices. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2022**, 1-1	3.5	
486	Approximation of Fractional-Order Controllers for Mechatronic Applications **2022**, 131-147		

485	FPAA-Based Realization of Filters with Fractional Laplace Operators of Different Orders. *Fractal and Fractional*, **2021**, 5, 218	3	3
484	. *IEEE Access*, **2021**, 9, 145977-145987	3.5	3
483	Pinched hysteresis loops in non-linear resonators. *IET Circuits, Devices and Systems*, **2021**, 15, 88-93	1.1	2
482	Passive approximations of double-exponent fractional-order impedance functions. *International Journal of Circuit Theory and Applications*, **2021**, 49, 1274-1284	2	3
481	Ultra-low-power compact single-transistor all-pass filter with tunable delay capability. *AEU - International Journal of Electronics and Communications*, **2021**, 132, 153645	2.8	1
480	A Modified Differentiator Circuit for Extracting Cole-Impedance Model Parameters Using Meta-heuristic Optimization Algorithms. *Arabian Journal for Science and Engineering*, **2021**, 46, 9945-9951	2.5	0
479	Highlighting a Common Confusion in the Computation of Capacitance of Electrochemical Energy Storage Devices. *Journal of Physical Chemistry C*, **2021**, 125, 9591-9592	3.8	4
478	Design of Low-Voltage FO-[PD] Controller for Motion Systems. *Journal of Low Power Electronics and Applications*, **2021**, 11, 26	1.7	1
477	Extending the double-dispersion Cole-Cole, Cole-Davidson and Havriliak-Negami electrochemical impedance spectroscopy models. *European Biophysics Journal*, **2021**, 50, 915-926	1.9	3
476	Power-Law Compensator Design for Plants with Uncertainties: Experimental Verification. *Electronics (Switzerland)*, **2021**, 10, 1305	2.6	4
475	Decoupling the magnitude and phase in a constant phase element. *Journal of Electroanalytical Chemistry*, **2021**, 888, 115153	4.1	5
474	Delay-Tunable Compact RC-Only All-Pass Filter. *IEEE Microwave and Wireless Components Letters*, **2021**, 31, 461-464	2.6	0
473	Revisiting the Time-Domain and Frequency-Domain Definitions of Capacitance. *IEEE Transactions on Electron Devices*, **2021**, 68, 2912-2916	2.9	10
472	Optimal fractional-order PI with DC-DC converter and PV system. *Ain Shams Engineering Journal*, **2021**, 12, 1895-1906	4.4	4
471	Novel Double-Dispersion Models Based on Power-Law Filters. *Circuits, Systems, and Signal Processing*, **2021**, 40, 5799-5812	2.2	2
470	Possibility of information encoding/decoding using the memory effect in fractional-order capacitive devices. *Scientific Reports*, **2021**, 11, 13306	4.9	5
469	Modelling and implementation of soft bio-mimetic turtle using echo state network and soft pneumatic actuators. *Scientific Reports*, **2021**, 11, 12076	4.9	5
468	A Comparative Study of Different Human Skin Impedance Models **2021**,		1

467	Hardware realization of a secure and enhanced s-box based speech encryption engine. *Analog Integrated Circuits and Signal Processing*, **2021**, 106, 385-397	1.2	4
466	Two implementations of fractional-order relaxation oscillators. *Analog Integrated Circuits and Signal Processing*, **2021**, 106, 421-432	1.2	4
465	Power law filters: A new class of fractional-order filters without a fractional-order Laplacian operator. *AEU - International Journal of Electronics and Communications*, **2021**, 129, 153537	2.8	18
464	Trajectory control and image encryption using affine transformation of lorenz system. *Egyptian Informatics Journal*, **2021**, 22, 155-166	3.1	5
463	A switched chaotic encryption scheme using multi-mode generalized modified transition map. *Multimedia Tools and Applications*, **2021**, 80, 5373-5402	2.5	2
462	A Grunwald□etnikov based Manta ray foraging optimizer for global optimization and image segmentation. *Engineering Applications of Artificial Intelligence*, **2021**, 98, 104105	7.2	19
461	Programmable constant phase element realization with crossbar arrays. *Journal of Advanced Research*, **2021**, 29, 137-145	13	1
460	Double Exponent Fractional-Order Filters: Approximation Methods and Realization. *Circuits, Systems, and Signal Processing*, **2021**, 40, 993-1004	2.2	13
459	Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 1-1	3.5	5
458	On-the-Fly Parallel Processing IP-Core for Image Blur Detection, Compression, and Chaotic Encryption Based on FPGA. *IEEE Access*, **2021**, 9, 82726-82746	3.5	2
457	Fractional-Order Bio-Impedance Modeling for Interdisciplinary Applications: A Review. *IEEE Access*, **2021**, 9, 33158-33168	3.5	9
456	Tactile sensing biohybrid soft E-skin based on bioimpedance using aloe vera pulp tissues. *Scientific Reports*, **2021**, 11, 3054	4.9	4
455	Fractional-Order Edge Detection Masks for Diabetic Retinopathy Diagnosis as a Case Study. *Computers*, **2021**, 10, 30	1.9	4
454	Simple implementations of fractional-order driving-point impedances: Application to biological tissue models. *AEU - International Journal of Electronics and Communications*, **2021**, 137, 153784	2.8	3
453	Active emulation circuits of fractional-order memristive elements and its applications. *AEU - International Journal of Electronics and Communications*, **2021**, 138, 153855	2.8	1
452	Cancellable face recognition based on fractional-order Lorenz chaotic system and Haar wavelet fusion **2021**, 116, 103103		6
451	Realizations of fractional-order PID loop-shaping controller for mechatronic applications. *The Integration VLSI Journal*, **2021**, 80, 5-12	1.4	5
450	Electrochemical stability analysis of red phosphorus-based anode for lithium-ion batteries. *Electrochimica Acta*, **2021**, 395, 139149	6.7	2

449	FPGA Realizations of Chaotic Epidemic and Disease Models Including Covid-19. *IEEE Access*, **2021**, 9, 21085-21093	3.5	3
448	Fractional-Order Inductor: Design, Simulation, and Implementation. *IEEE Access*, **2021**, 9, 73695-73702	3.5	7
447	Memristive Bio-Impedance Modeling of Fruits and Vegetables. *IEEE Access*, **2021**, 9, 21498-21506	3.5	1
446	On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 1-1	3.5	1
445	Analog Circuit Design Using Symbolic Math Toolboxes: Demonstrative Examples. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, **2021**, 1-11	2.6	
444	Electrical Impedance Spectroscopy in Plant Biology. *Sustainable Agriculture Reviews*, **2021**, 395-416	1.3	1
443	. *IEEE Access*, **2021**, 9, 89376-89389	3.5	8
442	Software and Hardware Implementation Sensitivity of Chaotic Systems and Impact on Encryption Applications. *Circuits, Systems, and Signal Processing*, **2020**, 39, 5638-5655	2.2	10
441	Identifying the Parameters of Cole Impedance Model Using Magnitude Only and Complex Impedance Measurements: A Metaheuristic Optimization Approach. *Arabian Journal for Science and Engineering*, **2020**, 45, 6541-6558	2.5	10
440	Fractional chaos maps with flower pollination algorithm for chaotic systems parameters identification. *Neural Computing and Applications*, **2020**, 32, 16291-16327	4.8	5
439	Numerical Simulations and FPGA Implementations of Fractional-Order Systems Based on Product Integration Rules. *IEEE Access*, **2020**, 8, 102093-102105	3.5	17
438	Implementation of a Fractional-Order Electronically Reconfigurable Lung Impedance Emulator of the Human Respiratory Tree. *Journal of Low Power Electronics and Applications*, **2020**, 10, 18	1.7	5
437	Generalized switched synchronization and dependent image encryption using dynamically rotating fractional-order chaotic systems. *AEU - International Journal of Electronics and Communications*, **2020**, 123, 153268	2.8	19
436	Active circuit model of low-frequency behavior in perovskite solar cells. *Organic Electronics*, **2020**, 85, 105804	3.5	3
435	A generic impedance modeling technique. *AEU - International Journal of Electronics and Communications*, **2020**, 123, 153301	2.8	2
434	FPGA implementation of a chaotic oscillator with odd/even symmetry and its application. *The Integration VLSI Journal*, **2020**, 72, 163-170	1.4	8
433	Extraction of bioimpedance phase information from its magnitude using a non-uniform Kramers-Kronig transform. *European Biophysics Journal*, **2020**, 49, 207-213	1.9	4
432	Reduced Active Components Count Electronically Adjustable Fractional-Order Controllers: Two Design Examples. *Electronics (Switzerland)*, **2020**, 9, 63	2.6	6

431	Enhanced FPGA realization of the fractional-order derivative and application to a variable-order chaotic system. *Nonlinear Dynamics*, **2020**, 99, 3143-3154	5	9
430	Nonlinear charge-voltage relationship in constant phase element. *AEU - International Journal of Electronics and Communications*, **2020**, 117, 153104	2.8	13
429	Wideband third-order single-transistor all-pass filter. *International Journal of Circuit Theory and Applications*, **2020**, 48, 1201-1208	2	6
428	A study of the nonlinear dynamics of human behavior and its digital hardware implementation. *Journal of Advanced Research*, **2020**, 25, 111-123	13	16
427	Fast Spectral Impedance Measurement Method Using a Structured Random Excitation. *IEEE Sensors Journal*, **2020**, 20, 8637-8642	4	4
426	Employment of the Padé approximation for implementing fractional-order lead/lag compensators. *AEU - International Journal of Electronics and Communications*, **2020**, 120, 153203	2.8	11
425	Communication—The Ragone Plot of Supercapacitors Under Different Loading Conditions. *Journal of the Electrochemical Society*, **2020**, 167, 020533	3.9	6
424	FPGA Implementation of Integer/Fractional Chaotic Systems. *Studies in Computational Intelligence*, **2020**, 199-229	0.8	2
423	Chaotic Clock Driven Cryptographic Chip: Towards a DPA Resistant AES Processor. *IEEE Transactions on Emerging Topics in Computing*, **2020**, 1-1	4.1	3
422	Two-Port Network Analysis of Equal Fractional-order Wireless Power Transfer Circuit **2020**,		2
421	Quantification of memory in fractional-order capacitors. *Journal Physics D: Applied Physics*, **2020**, 53, 02LT03	3	14
420	Fractional-order electric double-layer capacitors with tunable low-frequency impedance phase angle and energy storage capabilities. *Applied Physics Letters*, **2020**, 116, 013902	3.4	13
419	Single transistor RC-only second-order allpass filters. *International Journal of Circuit Theory and Applications*, **2020**, 48, 162-169	2	7
418	Design and Implementation of an Optimized Artificial Human Eardrum Model. *Circuits, Systems, and Signal Processing*, **2020**, 39, 3219-3233	2.2	8
417	Fractional-Order Complementary Filters for Sensor Applications **2020**,		1
416	A general emulator for fractional-order memristive elements with multiple pinched points and application. *AEU - International Journal of Electronics and Communications*, **2020**, 124, 153338	2.8	10
415	Fractional derivative modeling of double-diffusive free convection with von Neumann stability analysis. *International Journal of Modelling and Simulation*, **2020**, 1-12	1.5	1
414	Optimized Edge Detection Technique for Brain Tumor Detection in MR Images. *IEEE Access*, **2020**, 8, 136243-136259	3.5	62

413	Enhanced hardware implementation of a mixed-order nonlinear chaotic system and speech encryption application. *AEU - International Journal of Electronics and Communications*, **2020**, 125, 153347	2.8	18
412	Implementation and analysis of tunable fractional-order band-pass filter of order 2 *AEU - International Journal of Electronics and Communications*, **2020**, 124, 153343	2.8	6
411	On chip 0.5 V 2 GHz four-output quadrature-phase oscillator. *AEU - International Journal of Electronics and Communications*, **2020**, 126, 153393	2.8	2
410	Extracting Optimized Bio-Impedance Model Parameters Using Different Topologies of Oscillators. *IEEE Sensors Journal*, **2020**, 20, 9947-9954	4	18
409	. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 4348-4360	4.1	6
408	Parallel random bitstreams from a single source of entropy based on nonthermal electrochemical microplasma. *Plasma Processes and Polymers*, **2020**, 17, 2000123	3.4	3
407	Low-Power Single-Transistor Voltage-Mode Third-Order All-pass Filter in 65-nm CMOS **2020**,		2
406	Atmospheric pressure air microplasma current time series for true random bit generation. *Scientific Reports*, **2020**, 10, 20971	4.9	0
405	Chaotic Dynamics and FPGA Implementation of a Fractional-Order Chaotic System With Time Delay. *IEEE Open Journal of Circuits and Systems*, **2020**, 1, 255-262	1.7	3
404	Self-Reproducing Hidden Attractors in Fractional-Order Chaotic Systems Using Affine Transformations. *IEEE Open Journal of Circuits and Systems*, **2020**, 1, 243-254	1.7	2
403	Simple Implementations of the Cole-Cole Models **2020**,		1
402	Realization of Cole Davidson Function-Based Impedance Models: Application on Plant Tissues. *Fractal and Fractional*, **2020**, 4, 54	3	5
401	Automatic Generation of Differential-Input Differential-Output Second-Order Filters Based on a Differential Pair. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 1258-1271	2.5	7
400	On the Approximations of CFOA-Based Fractional-Order Inverse Filters. *Circuits, Systems, and Signal Processing*, **2020**, 39, 2-29	2.2	21
399	Generalized Fully Adjustable Structure for Emulating Fractional-Order Capacitors and Inductors of Orders less than Two. *Circuits, Systems, and Signal Processing*, **2020**, 39, 1797-1814	2.2	14
398	Multiplierless chaotic Pseudo random number generators. *AEU - International Journal of Electronics and Communications*, **2020**, 113, 152947	2.8	17
397	A novel image encryption system merging fractional-order edge detection and generalized chaotic maps. *Signal Processing*, **2020**, 167, 107280	4.4	57
396	Toward Portable Bio-impedance devices **2019**,		5

395	Cole Bio-Impedance Model Variations in $Daucus~Carota~Sativus$ Under Heating and Freezing Conditions. *IEEE Access*, **2019**, 1-1	3.5	16
394	Simple Multi-Function Fractional-Order Filter Designs **2019**,		5
393	Fractional-Order MihalasNiebur Neuron Model Implementation Using Current-Mirrors **2019**,		1
392	Fractional order Chebyshev-like low-pass filters based on integer order poles. *Microelectronics Journal*, **2019**, 90, 72-81	1.8	7
391	Realizations of simple fractional-order capacitor emulators with electronically-tunable capacitance. *The Integration VLSI Journal*, **2019**, 69, 225-233	1.4	7
390	Ternary Functions Design Using Memristive Threshold Logic. *IEEE Access*, **2019**, 7, 48371-48381	3.5	15
389	Multiple Pinch-Off Points in Memristive Equations: Analysis and Experiments. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 3052-3063	3.9	11
388	Synchronization and FPGA realization of fractional-order Izhikevich neuron model. *Microelectronics Journal*, **2019**, 89, 56-69	1.8	26
387	Low-voltage and low-power fractional-order parallel tunable resonator. *Microelectronics Journal*, **2019**, 88, 108-116	1.8	5
386	FPGA implementation of sound encryption system based on fractional-order chaotic systems. *Microelectronics Journal*, **2019**, 90, 323-335	1.8	21
385	Single transistor fractional-order filter using a multi-walled carbon nanotube device. *Analog Integrated Circuits and Signal Processing*, **2019**, 100, 215-219	1.2	3
384	Simple MOS Transistor-Based Realization of Fractional-Order Capacitors **2019**,		1
383	A Wideband Delay-Tunable Fully Differential Allpass Filter in 65-nm CMOS Technology **2019**,		10
382	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 2606-2614	3.9	7
381	In-Direct Impedance Measurement: Phase Extraction Algorithm **2019**, 33-49		
380	In-Direct Impedance Measurement: Design and Implementation **2019**, 51-80		
379	One-terminal electronically controlled fractional-order capacitor and inductor emulator. *AEU - International Journal of Electronics and Communications*, **2019**, 103, 32-45	2.8	16
378	Modulating the energy storage of supercapacitors by mixing close-to-ideal and far-from-ideal capacitive carbon nanofibers. *Electrochimica Acta*, **2019**, 301, 465-471	6.7	5

377	The minimax approach for a class of variable order fractional differential equation. *Mathematical Methods in the Applied Sciences*, **2019**, 42, 2734-2745	2.3	0
376	Generalized two-port network based fractional order filters. *AEU - International Journal of Electronics and Communications*, **2019**, 104, 128-146	2.8	30
375	On the modeling of dispersive transient photocurrent response of organic solar cells. *Organic Electronics*, **2019**, 70, 42-47	3.5	13
374	Comprehensive comparison based on meta-heuristic algorithms for approximation of the fractional-order Laplacian s as a weighted sum of first-order high-pass filters. *Microelectronics Journal*, **2019**, 87, 110-120	1.8	21
373	Two-Dimensional Rotation of Chaotic Attractors: Demonstrative Examples and FPGA Realization. *Circuits, Systems, and Signal Processing*, **2019**, 38, 4890-4903	2.2	11
372	Design and Implementation of Portable Impedance Analyzers **2019**,		8
371	Partial fraction expansion based realizations of fractional-order differentiators and integrators using active filters. *International Journal of Circuit Theory and Applications*, **2019**, 47, 513-531	2	30
370	Hardware Optimized FPGA Implementations of High-Speed True Random Bit Generators Based on Switching-Type Chaotic Oscillators. *Circuits, Systems, and Signal Processing*, **2019**, 38, 1342-1359	2.2	17
369	Electronically tunable fractional-order highpass filter for phantom electroencephalographic system model implementation. *AEU - International Journal of Electronics and Communications*, **2019**, 110, 152850	2.8	11
368	Commercial supercapacitor parameter estimation from step voltage excitation. *International Journal of Circuit Theory and Applications*, **2019**, 47, 1705-1712	2	1
367	Cole-Cole Bio-Impedance Parameters Extraction From a Single Time-Domain Measurement **2019**,		2
366	Log-Domain Implementation of Fractional-Order Element Emulators **2019**,		1
365	Design of Fractional-Order Differentiator-Lowpass Filters for Extracting the R peaks in ECG Signals **2019**,		1
364	Center pulse width modulation implementation based on memristor. *AEU - International Journal of Electronics and Communications*, **2019**, 111, 152843	2.8	
363	Supercapacitor discharge under constant resistance, constant current and constant power loads. *Journal of Power Sources*, **2019**, 435, 226829	8.9	21
362	Stability analysis of fractional-order Colpitts oscillators. *Analog Integrated Circuits and Signal Processing*, **2019**, 101, 267-279	1.2	7
361	Communication Convolution-Based Estimation of Supercapacitor Parameters under Periodic Voltage Excitations. *Journal of the Electrochemical Society*, **2019**, 166, A2267-A2269	3.9	8
360	Fractional X-shape controllable multi-scroll attractor with parameter effect and FPGA automatic design tool software. *Chaos, Solitons and Fractals*, **2019**, 126, 292-307	9.3	31

359	Frequency-Dependent Effective Capacitance of Supercapacitors Using Electrospun Cobalt-Carbon Composite Nanofibers. *Journal of the Electrochemical Society*, **2019**, 166, A2403-A2408	3.9	5
358	On the mechanism of creating pinched hysteresis loops using a commercial memristor device. *AEU - International Journal of Electronics and Communications*, **2019**, 111, 152923	2.8	10
357	Speech Encryption on FPGA Using a Chaotic Generator and S-Box Table **2019**,		2
356	Single-Transistor Second-Order Allpass Filters **2019**,		6
355	Bio-Impedance Measurement and Applications **2019**, 1-14		1
354	All Possible Topologies of the Fractional-Order Wien Oscillator Family Using Different Approximation Techniques. *Circuits, Systems, and Signal Processing*, **2019**, 38, 3931-3951	2.2	32
353	Realization of fractional-order capacitor based on passive symmetric network. *Journal of Advanced Research*, **2019**, 18, 147-159	13	25
352	Enhancing the improved Howland circuit. *International Journal of Circuit Theory and Applications*, **2019**, 47, 532-541	2	3
351	N-digits Ternary Carry Lookahead Adder Design **2019**,		2
350	8-GHz Low-Power Voltage-Mode Second-Order Allpass Filter in 65-nm CMOS **2019**,		4
349	On the Implementation of a Rotated Chaotic Lorenz System on FPGA **2019**,		2
348	Multifunction Fractional Inverse Filter Based on OTRA **2019**,		3
347	Using Meta-heuristic Optimization to Extract Bio-impedance Parameters from an Oscillator Circuit **2019**,		3
346	Fractional Derivative Modeling of Free Convective Flow over a Vertical Plate with Stability Analysis **2019**,		1
345	Third-order tunable-phase asymmetric cross-coupled oscillator. *IET Circuits, Devices and Systems*, **2019**, 13, 929-933	1.1	1
344	A Universal Fractional-Order Memelement Emulation Circuit **2019**,		2
343	Analysis and Design of Fractional-order Low-pass Filter with Three Elements of Independent Orders **2019**,		3
342	Fully Electronically Tunable Inverse Fractional-Order Filter Designs **2019**,		1

341	All-Dynamic Synchronization of Rotating Fractional-Order Chaotic Systems **2019**,		1
340	An Ultra-Low Power Wide-Band Single-Transistor Second-Order Allpass Filter in 65nm CMOS **2019**,		4
339	Banana Ripening and Corresponding Variations in Bio-Impedance and Glucose Levels **2019**,		2
338	Fractional-order Nonminimum-phase Filter Design **2019**,		1
337	A Simple BJT Inverse Memristor Emulator and Its Application in Chaotic Oscillators **2019**,		3
336	Design of FOPID Controller for a DC Motor Using Approximation Techniques **2019**,		4
335	OTA-C Implementation of Fractional-Order Lead/Lag Compensators **2019**,		1
334	A Digital Hardware Implementation for A new Mixed-Order Nonlinear 3-D Chaotic System **2019**,		1
333	Tunable Fractional-Order Band-pass Filter of order 2 **2019**,		2
332	Minimum MOS Transistor Count Fractional-Order Voltage-Mode and Current-Mode Filters. *Technologies*, **2019**, 7, 85	2.4	2
331	Digital Emulation of a Versatile Memristor With Speech Encryption Application. *IEEE Access*, **2019**, 7, 174280-174297	3.5	4
330	Fractional-Order Oscillators Based on Double Op-Amp **2019**,		2
329	Novel two-measurements-only Cole-Cole bio-impedance parameters extraction technique. *Measurement: Journal of the International Measurement Confederation*, **2019**, 131, 394-399	4.6	13
328	A voltage tunable CMOS differential active resistor and its application. *International Journal of Circuit Theory and Applications*, **2019**, 47, 175-185	2	1
327	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 1484-1495	3.9	34
326	Chaotic Flower Pollination and Grey Wolf Algorithms for parameter extraction of bio-impedance models. *Applied Soft Computing Journal*, **2019**, 75, 750-774	7.5	41
325	Memristor FPGA IP Core Implementation for Analog and Digital Applications. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2019**, 66, 1381-1385	3.5	14
324	Parameter identification of fractional-order chaotic systems using different Meta-heuristic Optimization Algorithms. *Nonlinear Dynamics*, **2019**, 95, 2491-2542	5	30

323	Reconfigurable chaotic pseudo random number generator based on FPGA. *AEU - International Journal of Electronics and Communications*, **2019**, 98, 174-180	2.8	45
322	Rates and Effects of Local Minima on Fractional-Order Circuit Model Parameters Extracted from Supercapacitor Discharging Using Least Squares Optimization. *Circuits, Systems, and Signal Processing*, **2019**, 38, 1907-1922	2.2	4
321	Fractional order integrator/differentiator: FPGA implementation and FOPID controller application. *AEU - International Journal of Electronics and Communications*, **2019**, 98, 220-229	2.8	28
320	FPGA realization of a speech encryption system based on a generalized modified chaotic transition map and bit permutation. *Multimedia Tools and Applications*, **2019**, 78, 16097-16127	2.5	21
319	Design and application examples of CMOS fractional-order differentiators and integrators. *Microelectronics Journal*, **2019**, 83, 155-167	1.8	18
318	Approximation of the Fractional-Order Laplacian s^alpha As a Weighted Sum of First-Order High-Pass Filters. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2018**, 65, 1114-1118	3.5	43
317	A four-quadrant current multiplier/divider cell with four transistors. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 173-179	1.2	8
316	Simple MOS-based circuit designed to show pinched hysteresis behavior. *International Journal of Circuit Theory and Applications*, **2018**, 46, 1123-1128	2	9
315	Fractional-Order Model (FOM) for high-strength substrate biodegradation in conventional UASB reactor. *Biochemical Engineering Journal*, **2018**, 133, 39-46	4.2	4
314	Generalized double-humped logistic map-based medical image encryption. *Journal of Advanced Research*, **2018**, 10, 85-98	13	62
313	Capacitive behavior and stored energy in supercapacitors at power line frequencies. *Journal of Power Sources*, **2018**, 390, 142-147	8.9	37
312	FPGA realizations of high-speed switching-type chaotic oscillators using compact VHDL codes. *Nonlinear Dynamics*, **2018**, 93, 819-833	5	17
311	On the Analysis and Design of Fractional-Order Chebyshev Complex Filter. *Circuits, Systems, and Signal Processing*, **2018**, 37, 915-938	2.2	17
310	Electronically Tunable Fully Integrated Fractional-Order Resonator. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2018**, 65, 166-170	3.5	59
309	Wide-range grounded non-linear transconductor and its application as a frequency doubler. *International Journal of Electronics Letters*, **2018**, 6, 214-219	0.6	
308	Transient and Steady-State Response of a Fractional-Order Dynamic PV Model Under Different Loads. *Journal of Circuits, Systems and Computers*, **2018**, 27, 1850023	0.9	12
307	Modeling and analysis of fractional order DC-DC converter. *ISA Transactions*, **2018**, 82, 184-199	5.5	47
306	High-Frequency Capacitorless Fractional-Order CPE and FI Emulator. *Circuits, Systems, and Signal Processing*, **2018**, 37, 2694-2713	2.2	18

305	Design and Implementation of a Bio-Impedance Analyzer Based on the Kramers-Kronig Transform **2018**,		1
304	Study of fractional flux-controlled memristor emulator connections **2018**,		4
303	Conditions and Emulation of Double Pinch-off Points in Fractional-order Memristor **2018**,		7
302	Fractional-Order Differentiators and Integrators with Reduced Circuit Complexity **2018**,		3
301	Supercapacitor Fractional-Order Model Discharging from Polynomial Time-Varying Currents **2018**,		1
300	Review of fractional-order electrical characterization of supercapacitors. *Journal of Power Sources*, **2018**, 400, 457-467	8.9	92
299	Fractional-Order Multiphase Sinusoidal Oscillator Design Using Current-Mirrors **2018**,		5
298	Two topologies of fractional-order oscillators based on CFOA and RC networks **2018**,		1
297	FPGA implementation of fractional-order Chua's chaotic system **2018**,		3
296	Fractional-Order Model of a Commercial Ear Simulator **2018**,		3
295	A generalized family of memristor-based voltage controlled relaxation oscillator. *International Journal of Circuit Theory and Applications*, **2018**, 46, 1311-1327	2	14
294	Nonlinear Fractional Order Boundary-Value Problems With Multiple Solutions **2018**, 37-74		1
293	On the Fractional Order Generalized Discrete Maps **2018**, 375-408		2
292	Applications of Continuous-time Fractional Order Chaotic Systems **2018**, 409-449		8
291	Chaotic Properties of Various Types of Hidden Attractors in Integer and Fractional Order Domains **2018**, 503-528		2
290	Chaos-based hardware speech encryption scheme using modified tent map and bit permutation **2018**,		7
289	Chaos and Bifurcation in Controllable Jerk-Based Self-Excited Attractors. *Studies in Systems, Decision and Control*, **2018**, 45-70	0.8	5
288	Self-Excited Attractors in Jerk Systems: Overview and Numerical Investigation of Chaos Production. *Studies in Systems, Decision and Control*, **2018**, 71-86	0.8	1

287	Extraction of Phase Information from Magnitude-Only Bio-impedance Measurements Using a Modified Kramers-Kronig Transform. *Circuits, Systems, and Signal Processing*, **2018**, 37, 3635-3650	2.2	19
286	Fractional-Order Relaxation Oscillators Based on Op-Amp and OTRA **2018**,		3
285	Memristor-CNTFET based Ternary Comparator unit **2018**,		1
284	FPGA Speech Encryption Realization Based on Variable S-Box and Memristor Chaotic Circuit **2018**,		4
283	Hardware Speech Encryption Using a Chaotic Generator, Dynamic Shift and Bit Permutation **2018**,		5
282	Bio-impedance Measurements with Phase Extraction using the Kramers-Kronig transform: Application to Strawberry Aging **2018**,		6
281	Incremental Grounded Voltage Controlled Memristor Emulator **2018**,		3
280	On a Class of Quadrature Phase Oscillators using Differential pairs **2018**,		1
279	A 28 GHz Q-Tunable Fully Differential Bandpass Filter in 65-nm CMOS Technology **2018**,		3
278	Synthesis of a Family of Differential Cross-coupled Oscillators and Design Application **2018**,		1
277	An Automated Lightweight UVM Tool **2018**,		1
276	Experimental Verification of Triple Lobes Generation in Fractional Memristive Circuits. *IEEE Access*, **2018**, 6, 75169-75180	3.5	7
275	Short-term memory in electric double-layer capacitors. *Applied Physics Letters*, **2018**, 113, 253901	3.4	26
274	Single active element implementation of fractional-order differentiators and integrators. *AEU - International Journal of Electronics and Communications*, **2018**, 97, 6-15	2.8	24
273	Biologically Inspired Optimization Algorithms for Fractional-Order Bioimpedance Models Parameters Extraction **2018**, 125-162		9
272	Fractional-Order Integrated Circuits in Control Applications and Biological Modeling **2018**, 163-204		
271	On the Approximation of Fractional-Order Circuit Design **2018**, 239-270		6
270	Survey on Two-Port Network-Based Fractional-Order Oscillators **2018**, 305-327		7

269	Fractional-Order Filter Design **2018**, 357-382		4
268	Comparison between three approximation methods on oscillator circuits. *Microelectronics Journal*, **2018**, 81, 162-178	1.8	20
267	Band-Pass Filter and Relaxation Oscillator using Electric Double-Layer Capacitor. *ChemElectroChem*, **2018**, 5, 3793-3798	4.3	8
266	Aluminum influence on Calotropis procera seedling growth, nutrient accumulation and electrochemical attributes. *Flora: Morphology, Distribution, Functional Ecology of Plants*, **2018**, 248, 34-42	1.9	7
265	True random bit generators based on current time series of contact glow discharge electrolysis. *Journal of Applied Physics*, **2018**, 123, 203301	2.5	5
264	Minimization of Spread of Time-Constants and Scaling Factors in Fractional-Order Differentiator and Integrator Realizations. *Circuits, Systems, and Signal Processing*, **2018**, 37, 5647-5663	2.2	10
263	Effect of Different Approximation Techniques on Fractional-Order KHN Filter Design. *Circuits, Systems, and Signal Processing*, **2018**, 37, 5222-5252	2.2	31
262	FPGA Implementation of X- and Heart-shapes Controllable Multi-Scroll Attractors **2018**,		4
261	Experimental behavior evaluation of series and parallel connected constant phase elements. *AEU - International Journal of Electronics and Communications*, **2017**, 74, 5-12	2.8	20
260	On the pinched hysteresis behavior in a state-controlled resistor. *AEU - International Journal of Electronics and Communications*, **2017**, 74, 171-175	2.8	11
259	Variability of Cole-model bioimpedance parameters using magnitude-only measurements of apples from a two-electrode configuration. *International Journal of Food Properties*, **2017**, 20, S507-S519	3	14
258	Minimal two-transistor multifunction filter design. *International Journal of Circuit Theory and Applications*, **2017**, 45, 1449-1466	2	8
257	Experimental Verification of Fractional-Order Filters Using a Reconfigurable Fractional-Order Impedance Emulator. *Journal of Circuits, Systems and Computers*, **2017**, 26, 1750142	0.9	21
256	A Study on Coexistence of Different Types of Synchronization Between Different Dimensional Fractional Chaotic Systems. *Studies in Computational Intelligence*, **2017**, 637-669	0.8	12
255	Control and Synchronization of Fractional-Order Chaotic Systems. *Studies in Computational Intelligence*, **2017**, 325-355	0.8	3
254	Generalized Synchronization of Different Dimensional Integer-Order and Fractional Order Chaotic Systems. *Studies in Computational Intelligence*, **2017**, 671-697	0.8	17
253	Memristor and Inverse Memristor: Modeling, Implementation and Experiments. *Studies in Computational Intelligence*, **2017**, 371-392	0.8	7
252	The common-base differential amplifier and applications revisited. *Microelectronics Journal*, **2017**, 63, 8-19	1.8	3

251	Generalized Smooth Transition Map Between Tent and Logistic Maps. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2017**, 27, 1730004	2	9
250	Experimental demonstration of fractional-order oscillators of orders 2.6 and 2.7. *Chaos, Solitons and Fractals*, **2017**, 96, 160-164	9.3	32
249	Further experimental evidence of the fractional-order energy equation in supercapacitors. *AEU - International Journal of Electronics and Communications*, **2017**, 78, 209-212	2.8	34
248	Design of CMOS Analog Integrated Fractional-Order Circuits. *Springer Briefs in Electrical and Computer Engineering*, **2017**,	0.4	38
247	Procedure for Designing Fractional-Order Filters. *Springer Briefs in Electrical and Computer Engineering*, **2017**, 13-39	0.4	1
246	Current-Mode Fractional-Order Filters. *Springer Briefs in Electrical and Computer Engineering*, **2017**, 41-54	0.4	1
245	Voltage-Mode Fractional-Order Filters. *Springer Briefs in Electrical and Computer Engineering*, **2017**, 55-63	0.4	
244	Emulation of Fractional-Order Capacitors (CPEs) and Inductors (FOIs). *Springer Briefs in Electrical and Computer Engineering*, **2017**, 65-86	0.4	1
243	Applications of Fractional-Order Circuits. *Springer Briefs in Electrical and Computer Engineering*, **2017**, 87-112	0.4	2
242	All-Solid-State Double-Layer Capacitors Using Binderless Reduced Graphene Oxide Thin Films Prepared by Bipolar Electrochemistry. *ChemElectroChem*, **2017**, 4, 2084-2090	4.3	21
241	Biological inspired optimization algorithms for cole-impedance parameters identification. *AEU - International Journal of Electronics and Communications*, **2017**, 78, 79-89	2.8	67
240	FPGA implementation of two fractional order chaotic systems. *AEU - International Journal of Electronics and Communications*, **2017**, 78, 162-172	2.8	129
239	Fractional-order impedance transformation based on three port mutators. *AEU - International Journal of Electronics and Communications*, **2017**, 81, 12-22	2.8	7
238	Low-voltage commercial super-capacitor response to periodic linear-with-time current excitation: a case study. *IET Circuits, Devices and Systems*, **2017**, 11, 189-195	1.1	15
237	Experimental comparison of integer/fractional-order electrical models of plant. *AEU - International Journal of Electronics and Communications*, **2017**, 80, 1-9	2.8	65
236	Dead-beat synchronization control in discrete-time chaotic systems **2017**,		27
235	Chaos synchronisation of continuous systems via scalar signal **2017**,		32
234	Chaotic systems based on jerk equation and discrete maps with scaling parameters **2017**,		4

233	FPGA realization of Caputo and Grünwald-Letnikov operators **2017**,		16
232	Fractional controllable multi-scroll V-shape attractor with parameters effect **2017**,		32
231	Fractional order four-phase oscillator based on double integrator topology **2017**,		4
230	Three Fractional-Order-Capacitors-Based Oscillators with Controllable Phase and Frequency. *Journal of Circuits, Systems and Computers*, **2017**, 26, 1750160	0.9	52
229	Controlled Picard Method for Solving Nonlinear Fractional Reaction□Diffusion Models in Porous Catalysts. *Chemical Engineering Communications*, **2017**, 204, 635-647	2.2	8
228	Finite Precision Logistic Map between Computational Efficiency and Accuracy with Encryption Applications. *Complexity*, **2017**, 2017, 1-21	1.6	18
227	Generalized Dynamic Switched Synchronization between Combinations of Fractional-Order Chaotic Systems. *Complexity*, **2017**, 2017, 1-17	1.6	14
226	New Trends on Modeling, Design, and Control of Chaotic Systems. *Mathematical Problems in Engineering*, **2017**, 2017, 1-3	1.1	3
225	A Novel Chaotic System without Equilibrium: Dynamics, Synchronization, and Circuit Realization. *Complexity*, **2017**, 2017, 1-11	1.6	68
224	Variability of supercapacitor fractional-order parameters extracted from discharging behavior using least squares optimization **2017**,		5
223	DC and AC Performance of Graphite Films Supercapacitors Prepared by Contact Glow Discharge Electrolysis. *Journal of the Electrochemical Society*, **2017**, 164, A2539-A2546	3.9	17
222	Ferroelectric Fractional-Order Capacitors. *ChemElectroChem*, **2017**, 4, 2807-2813	4.3	26
221	Single and dual solutions of fractional order differential equations based on controlled Picard□s method with Simpson rulePeer review under responsibility of University of Bahrain.View all notes. *Journal of the Association of Arab Universities for Basic and Applied Sciences*, **2017**, 24, 247-253		2
220	Supercapacitor reciprocity and response to linear current and voltage ramps. *Electrochimica Acta*, **2017**, 258, 1081-1085	6.7	20
219	Generalized fractional logistic map encryption system based on FPGA. *AEU - International Journal of Electronics and Communications*, **2017**, 80, 114-126	2.8	63
218	Current-mode capacitorless integrators and differentiators for implementing emulators of fractional-order elements. *AEU - International Journal of Electronics and Communications*, **2017**, 80, 94-103	2.8	14
217	Fractional-order electronically controlled generalized filters. *International Journal of Circuit Theory and Applications*, **2017**, 45, 595-612	2	49
216	**2017**,		6

215	Design of a wood tissue impedance emulator in monolithic form **2017**,		2
214	Elmore delay in the fractional order domain **2017**,		1
213	Analysis and experimental verification of a fractional-order Hartley oscillator **2017**,		5
212	All-Pass Filter Based Synthesis of Multifunctional Microwave Active Circuits **2017**,		4
211	Oscillator with tunable phase capability. *Electronics Letters*, **2017**, 53, 1516-1518	1.1	3
210	FPGA implementation of fractional-order integrator and differentiator based on Grünwald Letnikov's definition **2017**,		5
209	Fractional-Order and Memristive Nonlinear Systems: Advances and Applications. *Complexity*, **2017**, 2017, 1-2	1.6	17
208	CMOS Realization of All-Positive Pinched Hysteresis Loops. *Complexity*, **2017**, 2017, 1-15	1.6	3
207	Design of a Portable Low-Cost Impedance Analyzer **2017**,		17
206	Switched-Capacitor Fractional-Step Butterworth Filter Design. *Circuits, Systems, and Signal Processing*, **2016**, 35, 1377-1393	2.2	33
205	Symmetric encryption algorithms using chaotic and non-chaotic generators: A review. *Journal of Advanced Research*, **2016**, 7, 193-208	13	61
204	Switched-current fractional-order filter designs **2016**,		2
203	Experimental verification of on-chip CMOS fractional-order capacitor emulators. *Electronics Letters*, **2016**, 52, 1298-1300	1.1	49
202	Spectral Capacitance of Series and Parallel Combinations of Supercapacitors. *ChemElectroChem*, **2016**, 3, 1429-1436	4.3	39
201	Emulation of current excited fractional-order capacitors and inductors using OTA topologies. *Microelectronics Journal*, **2016**, 55, 70-81	1.8	30
200	Reduced Graphene Oxide Thin Film on Conductive Substrates by Bipolar Electrochemistry. *Scientific Reports*, **2016**, 6, 21282	4.9	23
199	On a class of cross coupled fully differential filters. *International Journal of Circuit Theory and Applications*, **2016**, 44, 1425-1436	2	7
198	Power and energy analysis of fractional-order electrical energy storage devices. *Energy*, **2016**, 111, 785-793	4.9	78

197	Fractional-order mutual inductance: analysis and design. *International Journal of Circuit Theory and Applications*, **2016**, 44, 85-97	2	42
196	Calculating output impedance in linear networks without source nulling or load disconnect: the instantaneous output impedance. *International Journal of Circuit Theory and Applications*, **2016**, 44, 98-108	2	3
195	On The Optimization of Fractional Order Low-Pass Filters. *Circuits, Systems, and Signal Processing*, **2016**, 35, 2017-2039	2.2	73
194	An optimal linear system approximation of nonlinear fractional-order memristor-capacitor charging circuit. *Microelectronics Journal*, **2016**, 51, 58-66	1.8	14
193	Approximated Fractional-Order Inverse Chebyshev Lowpass Filters. *Circuits, Systems, and Signal Processing*, **2016**, 35, 1973-1982	2.2	54
192	Fractional Order Oscillator Design Based on Two-Port Network. *Circuits, Systems, and Signal Processing*, **2016**, 35, 3086-3112	2.2	38
191	Indirect Realization of the Imaginary Resistor jR. *Circuits, Systems, and Signal Processing*, **2016**, 35, 2610-2615	2.2	4
190	A New Second-Order All-Pass Filter in 130-nm CMOS. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2016**, 63, 249-253	3.5	36
189	Compact Wide Frequency Range Fractional-Order Models of Human Body Impedance against Contact Currents. *Mathematical Problems in Engineering*, **2016**, 2016, 1-10	1.1	16
188	Fractional-Order Two-Port Networks. *Mathematical Problems in Engineering*, **2016**, 2016, 1-5	1.1	13
187	Analysis and realization of a switched fractional-order-capacitor integrator. *International Journal of Circuit Theory and Applications*, **2016**, 44, 2035-2040	2	15
186	Fundamentals of fractional-order LTI circuits and systems: number of poles, stability, time and frequency responses. *International Journal of Circuit Theory and Applications*, **2016**, 44, 2114-2133	2	18
185	Two-port two impedances fractional order oscillators. *Microelectronics Journal*, **2016**, 55, 40-52	1.8	41
184	**2016**,		6
183	CFOA-based fractional order simulated inductor **2016**,		4
182	**2016**,		3
181	On inverse problem of generalized synchronization between different dimensional integer-order and fractional-order chaotic systems **2016**,		38
180	Improved method to determine supercapacitor metrics from highpass filter response **2016**,		2

179	Determination of supercapacitor metrics using a magnitude-only method **2016**,		2
178	Reevaluation of Performance of Electric Double-layer Capacitors from Constant-current Charge/Discharge and Cyclic Voltammetry. *Scientific Reports*, **2016**, 6, 38568	4.9	108
177	Experimental verification of filters using fractional-order capacitor and inductor emulators **2016**,		10
176	Fractional-order inverting and non-inverting filters based on CFOA **2016**,		11
175	Fractional-order oscillator based on single CCII **2016**,		8
174	A fractional-order dynamic PV model **2016**,		7
173	Factors impacting accurate Cole-impedance extractions from magnitude-only measurements **2016**,		3
172	Nonlinear time-series analysis of current signal in cathodic contact glow discharge electrolysis. *Journal of Applied Physics*, **2016**, 119, 203303	2.5	13
171	A low frequency oscillator using a super-capacitor. *AEU - International Journal of Electronics and Communications*, **2016**, 70, 970-973	2.8	56
170	Fractional-order multi-phase oscillators design and analysis suitable for higher-order PSK applications. *Analog Integrated Circuits and Signal Processing*, **2016**, 87, 301-312	1.2	27
169	Aging effect on apples bio-impedance using AD5933 **2016**,		10
168	On the N-shaped Conductance and Hysteresis Behavior of Contact Glow Discharge Electrolysis. *Electrochimica Acta*, **2015**, 168, 173-177	6.7	10
167	Memristor Mathematical Models and Emulators. *Studies in Systems, Decision and Control*, **2015**, 51-84	0.8	3
166	Second order bandstop and bandpass filters using transformers. *Microelectronics Journal*, **2015**, 46, 690-697	1.8	3
165	Meminductor: Modeling, Analysis, and Emulators. *Studies in Systems, Decision and Control*, **2015**, 207-227	0.8	
164	Pinched hysteresis with inverse-memristor frequency characteristics in some nonlinear circuit elements. *Microelectronics Journal*, **2015**, 46, 834-838	1.8	30
163	Fractional-order models of supercapacitors, batteries and fuel cells: a survey. *Materials for Renewable and Sustainable Energy*, **2015**, 4, 1	4.7	107
162	On the Mathematical Modeling of Memristor, Memcapacitor, and Meminductor. *Studies in Systems, Decision and Control*, **2015**,	0.8	58

161	Fractional order oscillators based on operational transresistance amplifiers. *AEU - International Journal of Electronics and Communications*, **2015**, 69, 988-1003	2.8	61
160	Emulation of a constant phase element using operational transconductance amplifiers. *Analog Integrated Circuits and Signal Processing*, **2015**, 85, 413-423	1.2	60
159	Memristor-Based Relaxation Oscillator Circuits. *Studies in Systems, Decision and Control*, **2015**, 85-119	0.8	
158	Digitally programmed fractional-order Chebyshev filters realizations using current-mirrors **2015**,		15
157	Simple non-impedance-based measuring technique for supercapacitors. *Electronics Letters*, **2015**, 51, 1699-1701	1.1	17
156	Neuron Model with Simplified Memristive Ionic Channels. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2015**, 25, 1530017	2	10
155	Extracting the parameters of the single-dispersion Cole bioimpedance model using a magnitude-only method. *Computers and Electronics in Agriculture*, **2015**, 119, 153-157	6.5	31
154	Resistive-less memcapacitor-based relaxation oscillator. *International Journal of Circuit Theory and Applications*, **2015**, 43, 959-965	2	17
153	Fractional-order Memristor Response Under DC and Periodic Signals. *Circuits, Systems, and Signal Processing*, **2015**, 34, 961-970	2.2	37
152	Generalized chaotic maps and elementary functions between analysis and implementation **2015**,		1
151	Series and parallel circuit models containing memristors and inverse memristors **2015**,		4
150	Low pass filter design based on fractional power chebyshev polynomial **2015**,		2
149	Review of the missing mechanical element: Memdamper **2015**,		2
148	Design of Positive, Negative, and Alternating Sign Generalized Logistic Maps. *Discrete Dynamics in Nature and Society*, **2015**, 2015, 1-23	1.1	20
147	Approximated Fractional Order Chebyshev Lowpass Filters. *Mathematical Problems in Engineering*, **2015**, 2015, 1-7	1.1	54
146	Design of a generalized bidirectional tent map suitable for encryption applications **2015**,		10
145	Fractional order oscillators with single non-zero transmission matrix element **2015**,		4
144	Generalized fractional logistic map suitable for data encryption **2015**,		10

143	Boundary Dynamics of Memcapacitor in Voltage-Excited Circuits and Relaxation Oscillators. *Circuits, Systems, and Signal Processing*, **2015**, 34, 2765-2783	2.2	7
142	Fractional Order Sallen-Key and KHN Filters: Stability and Poles Allocation. *Circuits, Systems, and Signal Processing*, **2015**, 34, 1461-1480	2.2	72
141	Mapping of circuit variables into two-port network variables in basic amplifier structures: identifying new topologies. *International Journal of Circuit Theory and Applications*, **2014**, 42, 1203-1208	2	2
140	Memcapacitor response under step and sinusoidal voltage excitations. *Microelectronics Journal*, **2014**, 45, 1372-1379	1.8	13
139	Single Transistor Active Filters: What is Possible and What is Not. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2014**, 61, 2517-2524	3.9	15
138	Extracting the parameters of the double-dispersion Cole bioimpedance model from magnitude response measurements. *Medical and Biological Engineering and Computing*, **2014**, 52, 749-58	3.1	60
137	MOS-only allpass filters with extended operating frequency range. *Analog Integrated Circuits and Signal Processing*, **2014**, 81, 17-22	1.2	15
136	Hardware stream cipher with controllable chaos generator for colour image encryption. *IET Image Processing*, **2014**, 8, 33-43	1.7	47
135	Clock-Driven Chaotic Pulse-Width Generators: An Overview and Demonstration of Power Supply Attack. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2014**, 24, 1450079	2	2
134	Memristor-less current- and voltage-controlled meminductor emulators **2014**,		11
133	Multi-phase oscillator for higher-order PSK applications **2014**,		4
132	Chaos-Fractals Theories and Applications. *Mathematical Problems in Engineering*, **2014**, 2014, 1-1	1.1	
131	Current feedback operational amplifier (CFOA) based fractional order oscillators **2014**,		3
130	Fractional order two port network oscillator with equal order **2014**,		2
129	A chess-based chaotic block cipher **2014**,		7
128	A fractal-based image encryption system. *IET Image Processing*, **2014**, 8, 742-752	1.7	43
127	The effect of multi-scrolls distribution on image encryption **2014**,		4
126	Fractional order oscillator with independent control of phase and frequency **2014**,		8

125	An image encryption system based on generalized discrete maps **2014**,		12
124	CCII based fractional filters of different orders. *Journal of Advanced Research*, **2014**, 5, 157-64	13	54
123	Meminductor Response Under Periodic Current Excitations. *Circuits, Systems, and Signal Processing*, **2014**, 33, 1573-1583	2.2	17
122	Measurement of Supercapacitor Fractional-Order Model Parameters From Voltage-Excited Step Response. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2013**, 3, 367-376	5.2	119
121	Optimization of Fractional-Order RLC Filters. *Circuits, Systems, and Signal Processing*, **2013**, 32, 2097-2118	1.2	85
120	A Simple Model of Double-Loop Hysteresis Behavior in Memristive Elements. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2013**, 60, 487-491	3.5	83
119	Cole impedance extractions from the step-response of a current excited fruit sample. *Computers and Electronics in Agriculture*, **2013**, 98, 100-108	6.5	42
118	Design of pseudo random keystream generator using fractals **2013**,		3
117	On some generalized discrete logistic maps. *Journal of Advanced Research*, **2013**, 4, 163-71	13	48
116	Fractional Step Analog Filter Design. *Lecture Notes in Electrical Engineering*, **2013**, 243-267	0.2	3
115	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2013**, 60, 2701-2708	3.9	37
114	. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2013**, 3, 297-300	5.2	11
113	Utilizing LFSR and Feistel networks in image encryption **2013**,		3
112	Image encryption using generalized tent map **2013**,		22
111	Fractional Resonance-BasedRLCFilters. *Mathematical Problems in Engineering*, **2013**, 2013, 1-10	1.1	36
110	General procedure for two integrator loops fractional order oscillators with controlled phase difference **2013**,		4
109	**2013**,		8
108	Accurate time domain extraction of supercapacitor fractional-order model parameters **2013**,		6

107	CCII based KHN fractional order filter **2013**,		4
106	Generalized Hardware Post-processing Technique for Chaos-Based Pseudorandom Number Generators. *ETRI Journal*, **2013**, 35, 448-458	1.4	45
105	An expression for the voltage response of a current-excited fractance device based on fractional-order trigonometric identities. *International Journal of Circuit Theory and Applications*, **2012**, 40, 533-538	2	19
104	On the Realization of Multiphase Oscillators Using Fractional-Order Allpass Filters. *Circuits, Systems, and Signal Processing*, **2012**, 31, 3-17	2.2	31
103	Extracting single dispersion Cole□Cole impedance model parameters using an integrator setup. *Analog Integrated Circuits and Signal Processing*, **2012**, 71, 107-110	1.2	34
102	Fractional-step Tow-Thomas biquad filters. *Nonlinear Theory and Its Applications IEICE*, **2012**, 3, 357-374	0.6	39
101	High-quality factor asymmetric-slope band-pass filters: a fractional-order capacitor approach. *IET Circuits, Devices and Systems*, **2012**, 6, 187	1.1	74
100	Fully digital 1-D, 2-D and 3-D multiscroll chaos as hardware pseudo random number generators **2012**,		4
99	Image encryption in the fractional-order domain **2012**,		16
98	Improved Cole-Cole parameter extraction from frequency response using least squares fitting **2012** ,		6
97	Transient-Time Fractional-Space Trigonometry and Application. *Lecture Notes in Computer Science*, **2012**, 40-47	0.9	4
96	Least squares estimation technique of Cole-Cole parameters from step response. *Electronics Letters*, **2012**, 48, 752	1.1	22
95	Numerical extraction of Cole-Cole impedance parameters from step response. *Nonlinear Theory and Its Applications IEICE*, **2011**, 2, 548-561	0.6	15
94	All possible second-order four-impedance two-stage Colpitts oscillators. *IET Circuits, Devices and Systems*, **2011**, 5, 196	1.1	10
93	Ring oscillator structures with explicitly separated nonlinearity. *International Journal of Circuit Theory and Applications*, **2011**, 39, 1079-1086	2	3
92	On the practical realization of higher-order filters with fractional stepping. *Signal Processing*, **2011**, 91, 484-491	4.4	100
91	**2011**,		2
90	Band-pass filters with high quality factors and asymmetric-slope characteristics **2011**,		4

89	HIGHER DIMENSIONAL MODELS OF CROSS-COUPLED OSCILLATORS AND APPLICATION TO DESIGN. *Journal of Circuits, Systems and Computers*, **2010**, 19, 787-799	0.9	6
88	**2010**,		7
87	All possible canonical second-order three-impedance class-A and class-B oscillators. *Electronics Letters*, **2010**, 46, 748	1.1	5
86	Motivating Two-Port Network Analysis through Elementary and Advanced Examples. *International Journal of Electrical Engineering and Education*, **2010**, 47, 404-415	0.6	4
85	Extracting the Cole-Cole impedance model parameters without direct impedance measurement. *Electronics Letters*, **2010**, 46, 1367	1.1	52
84	**2010**,		19
83	A NON-CONSERVATIVE MODEL OF SECOND-ORDER RC SINUSOIDAL OSCILLATORS. *Journal of Circuits, Systems and Computers*, **2010**, 19, 871-877	0.9	
82	Fractional-order circuits and systems: An emerging interdisciplinary research area. *IEEE Circuits and Systems Magazine*, **2010**, 10, 40-50	3.2	349
81	IMPLEMENTATION OF AN ENCRYPTED WIRELESS COMMUNICATION SYSTEM USING NESTED CHAOTIC MAPS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2010**, 20, 4087-4096	2	4
80	On a multivibrator that employs a fractional capacitor. *Analog Integrated Circuits and Signal Processing*, **2010**, 62, 99-103	1.2	48
79	Design of non-balanced cross-coupled oscillators with no matching requirements. *IET Circuits, Devices and Systems*, **2010**, 4, 365	1.1	14
78	Field programmable analogue array implementation of fractional step filters. *IET Circuits, Devices and Systems*, **2010**, 4, 514	1.1	135
77	Sinusoidal oscillators with lower gain requirements at higher frequencies based on an explicit tanh(x) nonlinearity. *International Journal of Circuit Theory and Applications*, **2010**, 38, 747-760	2	3
76	On the two-port network analysis of common amplifier topologies. *International Journal of Circuit Theory and Applications*, **2010**, 38, 1087-1100	2	15
75	Implementation of a Chaotically Encrypted Wireless Communication System **2009**,		4
74	ON THE GENERALIZATION OF SECOND-ORDER FILTERS TO THE FRACTIONAL-ORDER DOMAIN. *Journal of Circuits, Systems and Computers*, **2009**, 18, 361-386	0.9	167
73	ON THE NONLINEAR MODELING OF RING OSCILLATORS. *Journal of Circuits, Systems and Computers* , **2009**, 18, 681-696	0.9	0
72	On the two-port network classification of Colpitts oscillators. *IET Circuits, Devices and Systems*, **2009** , 3, 223-232	1.1	16

71	On the stability of linear systems with fractional-order elements. *Chaos, Solitons and Fractals*, **2009**, 40, 2317-2328	9.3	225
70	A low frequency oscillator structure **2009**,		9
69	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2008**, 55, 2051-2063	3.9	205
68	FIRST-ORDER FILTERS GENERALIZED TO THE FRACTIONAL DOMAIN. *Journal of Circuits, Systems and Computers*, **2008**, 17, 55-66	0.9	172
67	A SYSTEM AND CIRCUIT FOR GENERATING "MULTI-BUTTERFLIES". *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2008**, 18, 841-844	2	12
66	Monitoring of global cerebral ischemia using instantaneous phase variation plots. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2008**, 2008, 4182-5	0.9	
65	A Study of Equilibrium Points and Stability in a Nonlinear Model of a Phase-Compensated Operational Amplifier. *Circuits, Systems, and Signal Processing*, **2008**, 27, 781-798	2.2	
64	Design equations for fractional-order sinusoidal oscillators: Four practical circuit examples. *International Journal of Circuit Theory and Applications*, **2008**, 36, 473-492	2	102
63	**2007**,		9
62	1-D DIGITALLY-CONTROLLED MULTISCROLL CHAOS GENERATOR. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2007**, 17, 227-242	2	43
61	Cross-coupled chaotic oscillators and application to random bit generation. *IET Circuits, Devices and Systems*, **2006**, 153, 506		30
60	Explaining Hysteresis in Electronic Circuits. *International Journal of Electrical Engineering and Education*, **2006**, 43, 252-260	0.6	3
59	Multiscroll Chaotic Oscillators: The Nonautonomous Approach. *IEEE Transactions on Circuits and Systems Part 2: Express Briefs*, **2006**, 53, 862-866		32
58	. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2006**, 53, 1521-1532		7
57	Novel Approximate Square-Root Domain All-Pass Filter with Application to Multiphase Oscillators. *Analog Integrated Circuits and Signal Processing*, **2006**, 46, 297-301	1.2	13
56	Explaining and eliminating latchup in a classical Wien oscillator via nonlinear design. *Analog Integrated Circuits and Signal Processing*, **2006**, 48, 239-245	1.2	10
55	A GENERIC MODEL FOR VOLTAGE-CONTROLLED SECOND-ORDER RC SINUSOIDAL OSCILLATORS. *Journal of Circuits, Systems and Computers*, **2005**, 14, 297-305	0.9	3
54	PULSE-EXCITED RC NONAUTONOMOUS CHAOTIC OSCILLATOR STRUCTURES. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2005**, 15, 2257-2261	2	1

53	Integrator-based circuit-independent chaotic oscillator structure. *Chaos*, **2004**, 14, 364-9	3.3	7
52	LOW-VOLTAGE MOS CHAOTIC OSCILLATOR BASED ON THE NONLINEARITY OF Gm. *Journal of Circuits, Systems and Computers*, **2004**, 13, 101-120	0.9	2
51	Research-oriented junior/senior design projects: an analog circuit design example. *IEEE Transactions on Education*, **2004**, 47, 93-99	2.1	3
50	On the realization of circuit-independent nonautonomous pulse-excited chaotic oscillator circuits. *IEEE Transactions on Circuits and Systems Part 2: Express Briefs*, **2004**, 51, 552-556		18
49	A FOUR-WING BUTTERFLY ATTRACTOR FROM A FULLY AUTONOMOUS SYSTEM. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2003**, 13, 3093-3098	2	39
48	Chaos in pulse-excited resonator with self feedback. *Electronics Letters*, **2003**, 39, 831	1.1	21
47	MOS Realization of the Conjectured Simplest Chaotic Equation. *Circuits, Systems, and Signal Processing*, **2003**, 22, 277	2.2	3
46	An inductorless CMOS realization of Chua□ circuit. *Chaos, Solitons and Fractals*, **2003**, 18, 149-158	9.3	42
45	Nonautonomous pulse-driven chaotic oscillator based on Chua's circuit. *Microelectronics Journal*, **2002**, 33, 479-486	1.8	26
44	EXPERIMENTAL VERIFICATION OF THE BUTTERFLY ATTRACTOR IN A MODIFIED LORENZ SYSTEM. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2002**, 12, 1627-1632	2	48
43	AN EQUATION FOR GENERATING CHAOS AND ITS MONOLITHIC IMPLEMENTATION. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2002**, 12, 2885-2895	2	38
42	Design Methodology for Autonomous Chaotic Oscillators. *World Scientific Series on Nonlinear Science, Series B*, **2002**, 23-50	0.3	1
41	n-scroll chaos generator using nonlinear transconductor. *Electronics Letters*, **2002**, 38, 685	1.1	57
40	. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2002**, 49, 527-530		90
39	On the necessary and sufficient conditions for latch-up in sinusoidal oscillators. *International Journal of Electronics*, **2002**, 89, 197-206	1.2	21
38	Fractional-order Wien-bridge oscillator. *Electronics Letters*, **2001**, 37, 1110	1.1	104
37	Construction of classes of circuit-independent chaotic oscillators using passive-only nonlinear devices. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2001**, 48, 289-307		168
36	Chaotic oscillator configuration using a frequency dependent negative resistor. *International Journal of Circuit Theory and Applications*, **2000**, 28, 69-76	2	15

35	Systematic realization of a class of hysteresis chaotic oscillators. *International Journal of Circuit Theory and Applications*, **2000**, 28, 319-334	2	20
34	Chua's circuit decomposition: a systematic design approach for chaotic oscillators. *Journal of the Franklin Institute*, **2000**, 337, 251-265	4	33
33	A low-voltage, low-power, chaotic oscillator, derived from a relaxation oscillator. *Microelectronics Journal*, **2000**, 31, 459-468	1.8	10
32	Chaotic Oscillators Derived from Sinusoidal Oscillators Based on the Current Feedback Op Amp. *Analog Integrated Circuits and Signal Processing*, **2000**, 24, 239-251	1.2	15
31	Low-voltage relaxation oscillator. *Electronics Letters*, **2000**, 36, 1256	1.1	15
30	A semi-systematic procedure for producing chaos from sinusoidal oscillators using diode-inductor and FET-capacitor composites. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2000**, 47, 582-590		28
29	Novel chaotic oscillator configuration using a diode-inductor composite. *International Journal of Electronics*, **2000**, 87, 397-406	1.2	13
28	GENERIC RC REALIZATIONS OF CHUA'S CIRCUIT. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2000**, 10, 1981-1985	2	14
27	Improved implementation of Chua's chaotic oscillator using current feedback op amp. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2000**, 47, 76-79		88
26	GENERIC RC REALIZATIONS OF CHUA'S CIRCUIT **2000**,		3
25	CHAOTIC OSCILLATOR CONFIGURATION USING A FREQUENCY DEPENDENT NEGATIVE RESISTOR. *Journal of Circuits, Systems and Computers*, **1999**, 09, 229-242	0.9	17
24	CMOS current feedback op amp-based chaos generators using novel active nonlinear voltage controlled resistors with odd symmetrical characteristics. *International Journal of Electronics*, **1999**, 86, 1441-1451	1.2	6
23	Wien oscillators using current conveyors. *Computers and Electrical Engineering*, **1999**, 25, 45-55	4.3	29
22	Inductorless hyperchaos generator. *Microelectronics Journal*, **1999**, 30, 739-743	1.8	20
21	Three-phase oscillator modified for chaos. *Microelectronics Journal*, **1999**, 30, 863-867	1.8	8
20	Mathematical Models of the Twin-T, Wien-bridgeand Family of Minimum Component Electronic ChaosGenerators with Demonstrative Recurrence Plots. *Chaos, Solitons and Fractals*, **1999**, 10, 1399-1412	2.3	21
19	A family of Colpitts-like chaotic oscillators. *Journal of the Franklin Institute*, **1999**, 336, 687-700	4	26
18	Current conveyor chaos generators. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **1999**, 46, 393-398		27

17	Two Twin-T based op amp oscillators modified for chaos. *Journal of the Franklin Institute*, **1998**, 335, 771-787	4	18
16	Systematic realization of low-frequency oscillators using composite passive-active resistors. *IEEE Transactions on Instrumentation and Measurement*, **1998**, 47, 584-586	5.2	17
15	High frequency Wien-type chaotic oscillator. *Electronics Letters*, **1998**, 34, 1161	1.1	33
14	Two Modified for Chaos Negative Impedance Converter Op Amp Oscillators with Symmetrical and Antisymmetrical Nonlinearities. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1998**, 08, 1335-1346	2	14
13	Current mode chaos generator. *Electronics Letters*, **1997**, 33, 1661	1.1	14
12	Chaos from two modified oscillator configurations using a current feedback op amp. *Chaos, Solitons and Fractals*, **1997**, 8, 389-410	9.3	11
11	Chaos from a family of minimum-component oscillators. *Chaos, Solitons and Fractals*, **1997**, 8, 335-356	9.3	7
10	New chaos generators. *Chaos, Solitons and Fractals*, **1997**, 8, 1921-1932	9.3	5
9	A family of Wien-type oscillators modified for chaos. *International Journal of Circuit Theory and Applications*, **1997**, 25, 561-579	2	40
8	2D scroll grid attractors from pulse-excited nonautonomous circuits		2
7	Generation of n-scroll chaos using nonlinear transconductors		7
6	A new method for the realization of non-autonomous chaotic oscillators		2
5	Pulse-excited RC nonautonomous chaotic oscillator structures		1
4	An integrated circuit chaotic oscillator and its application for high speed random bit generation		6
3	A system for chaos generation and its implementation in monolithic form		18
2	Chaotic oscillator configuration using a frequency dependent negative resistor		2
1	FPGA REALIZATION OF COMPLEX LOGISTIC MAP FRACTAL BEHAVIOR. *Fractals*,	3.2	1