

Karabi Biswas

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

78
papers

1,400
citations

21
h-index

35
g-index

91
ext. papers

1,694
ext. citations

2.6
avg, IF

5.17
L-index

#	Paper	IF	Citations
78	Fabrication of a Fractional Order Capacitor With Desired Specifications: A Study on Process Identification and Characterization. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 4067-4073	2.9	124
77	Experimental studies on realization of fractional inductors and fractional-order bandpass filters. <i>International Journal of Circuit Theory and Applications</i> , 2015 , 43, 1183-1196	2	108
76	Practical Realization of Tunable Fractional Order Parallel Resonator and Fractional Order Filters. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016 , 63, 1142-1151	3.9	74
75	Performance study of fractional order integrator using single-component fractional order element. <i>IET Circuits, Devices and Systems</i> , 2011 , 5, 334	1.1	73
74	A Design Example of a Fractional-Order Kerwin-Buylsman-Newcomb Biquad Filter with Two Fractional Capacitors of Different Order. <i>Circuits, Systems, and Signal Processing</i> , 2013 , 32, 1523-1536	2.2	69
73	Solid-state fractional capacitor using MWCNT-epoxy nanocomposite. <i>Applied Physics Letters</i> , 2017 , 110, 163504	3.4	62
72	Packaging of Single-Component Fractional Order Element. <i>IEEE Transactions on Device and Materials Reliability</i> , 2013 , 13, 73-80	1.6	56
71	Design and Performance Study of Dynamic Fractors in Any of the Four Quadrants. <i>Circuits, Systems, and Signal Processing</i> , 2016 , 35, 1909-1932	2.2	51
70	Performance study of a constant phase angle based impedance sensor to detect milk adulteration. <i>Sensors and Actuators A: Physical</i> , 2011 , 167, 273-278	3.9	51
69	A survey of single and multi-component Fractional-Order Elements (FOEs) and their applications. <i>Microelectronics Journal</i> , 2019 , 84, 9-25	1.8	48
68	A constant phase element sensor for monitoring microbial growth. <i>Sensors and Actuators B: Chemical</i> , 2006 , 119, 186-191	8.5	44
67	Design and performance study of phase-locked loop using fractional-order loop filter. <i>International Journal of Circuit Theory and Applications</i> , 2015 , 43, 776-792	2	39
66	A microfluidic device for continuous manipulation of biological cells using dielectrophoresis. <i>Medical Engineering and Physics</i> , 2014 , 36, 726-31	2.4	36
65	Modeling of a capacitive probe in a polarizable medium. <i>Sensors and Actuators A: Physical</i> , 2005 , 120, 115-122	3.9	29
64	Fractional-Order Devices. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2017 ,	0.4	27
63	Realization of a carbon nanotube based electrochemical fractor 2015 ,		25
62	Evaluation of single cell electrical parameters from bioimpedance of a cell suspension. <i>RSC Advances</i> , 2014 , 4, 18178-18185	3.7	25

61	Fabrication and performance study of BST/Teflon nanocomposite thin film for low voltage electrowetting devices. <i>Sensors and Actuators A: Physical</i> , 2016 , 238, 122-132	3.9	24
60	Milk Adulteration and Detection: A Review. <i>Sensor Letters</i> , 2016 , 14, 4-18	0.9	24
59	Realization of Fractional Order Elements. <i>INAE Letters</i> , 2017 , 2, 41-47	0.7	23
58	Design and Hardware Realization of a Tunable Fractional-Order Series Resonator with High Quality Factor. <i>Circuits, Systems, and Signal Processing</i> , 2017 , 36, 3457-3476	2.2	21
57	MEMS Capacitive Accelerometers. <i>Sensor Letters</i> , 2007 , 5, 471-484	0.9	21
56	Electrical equivalent circuit modelling of solid state fractional capacitor. <i>AEU - International Journal of Electronics and Communications</i> , 2017 , 78, 258-264	2.8	19
55	Limit of Detection for Five Common Adulterants in Milk: A Study With Different Fat Percent. <i>IEEE Sensors Journal</i> , 2018 , 18, 2395-2403	4	19
54	A low cost instrumentation system to analyze different types of milk adulteration. <i>ISA Transactions</i> , 2015 , 56, 268-75	5.5	19
53	Bioimpedimetric analysis in conjunction with growth dynamics to differentiate aggressiveness of cancer cells. <i>Scientific Reports</i> , 2018 , 8, 783	4.9	18
52	Rational Approximation and Analog Realization of Fractional Order Transfer Function with Multiple Fractional Powered Terms. <i>Asian Journal of Control</i> , 2013 , 15, 723-735	1.7	16
51	Realization and characterization of carbon black based fractional order element. <i>Microelectronics Journal</i> , 2018 , 82, 22-28	1.8	16
50	Realization of Foster Structure-Based Ladder Fractor with Phase Band Specification. <i>Circuits, Systems, and Signal Processing</i> , 2020 , 39, 2272-2292	2.2	15
49	Reduced Order Approximation of MIMO Fractional Order Systems. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2013 , 3, 451-458	5.2	14
48	Use of squared magnitude function in approximation and hardware implementation of SISO fractional order system. <i>Journal of the Franklin Institute</i> , 2013 , 350, 1753-1767	4	12
47	Impedance Behaviour of a Microporous PMMA-Film 'Coated Constant Phase Element' based Chemical Sensor. <i>International Journal on Smart Sensing and Intelligent Systems</i> , 2008 , 1, 922-939	0.4	12
46	Fragmental Frequency Analysis Method to Estimate Electrical Cell Parameters From Bioimpedance Study. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2014 , 63, 1991-2000	5.2	11
45	Modelling and performance improvement of phase-angle-based conductivity sensor 2016 ,		10
44	Rational approximation of fractional operator Γ A comparative study 2010 ,		9

43	2016,			9
42	PMMA-Coated Capacitive Type Soil Moisture Sensor: Design, Fabrication, and Testing. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2019 , 68, 189-196		5.2	8
41	Wavelet-based multiscale analysis of bioimpedance data measured by electric cell-substrate impedance sensing for classification of cancerous and normal cells. <i>Physical Review E</i> , 2015 , 92, 062702		2.4	8
40	An Impedimetric Cu-Polymer Sensor-Based Conductivity Meter for Precision Agriculture and Aquaculture Applications. <i>IEEE Sensors Journal</i> , 2019 , 19, 12087-12095		4	7
39	Nanocomposite Material Characterization of a Solid-State Fractional Capacitor. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 1136-1142		2.9	7
38	. <i>IEEE Sensors Journal</i> , 2017 , 17, 6850-6858		4	6
37	Dynamic Sensing of Liquid Droplet in Electrowetting Devices. <i>Sensor Letters</i> , 2015 , 13, 721-734		0.9	6
36	Milk Tester: Simultaneous Detection of Fat Content and Adulteration. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020 , 69, 2468-2476		5.2	6
35	Performance Analysis of Solid-State Fractional Capacitor-Based Analog ($\{PI\}^{\lambda}$ $\{D\}^{\mu}$) Controller. <i>Circuits, Systems, and Signal Processing</i> , 2020 , 39, 1815-1830		2.2	6
34	Hardware Platform to Detect Fat Percent in Milk Using a Lipase Immobilized PMMA-Coated Sensor. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2019 , 68, 4526-4534		5.2	5
33	Electrical equivalent model of a PMMA-urease based aqueous urea sensor 2018 ,			5
32	A comparative study of polymer coated capacitive sensors for soil moisture sensing 2017 ,			4
31	Effect of electrode geometry on voltage reduction in EWOD based devices 2010 ,			4
30	Performance of a constant phase element (CPE) sensor to detect adulteration in cow-milk with whey 2009 ,			4
29	A Fractional Order Notch Filter to Compensate the Attenuation-Loss Due to Change in Order of the Circuit. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 655-666		3.9	4
28	Fractional-Order Filter Design 2018 , 357-382			4
27	Single transistor fractional-order filter using a multi-walled carbon nanotube device. <i>Analog Integrated Circuits and Signal Processing</i> , 2019 , 100, 215-219		1.2	3
26	Study of electrical equivalent model of the PMMA coated probe dipped in milk and milk adulterated with tap water 2010 ,			3

25	Study of Electrical Equivalent Model of the PMMA Coated Probe Dipped in Milk and Milk Adulterated with Urea 2011 ,		3
24	Introduction to Fractional-Order Elements and Devices. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2017 , 1-20	0.4	2
23	Devices. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2017 , 21-53	0.4	2
22	Fractional-Order Models of Vegetable Tissues. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2017 , 73-92	0.4	2
21	Performance study of a two-electrode type aqueous conductivity sensor for smart farming 2019 ,		2
20	Analysis of disturbance rejection by PI λ controller using solid state fractional capacitor 2018 ,		2
19	Study of PDMS as Dielectric Layer in Electrowetting Devices. <i>Environmental Science and Engineering</i> , 2014 , 487-490	0.2	2
18	Electrical characterization of suspended HeLa cells using ECIS based biosensor 2012 ,		2
17	Optimisation of effective parameters of multiwalled carbon nanotube-based solid-state fractional capacitor for evaluation of fractional exponent. <i>IET Circuits, Devices and Systems</i> , 2020 , 14, 148-154	1.1	2
16	Multifractal Texture Analysis of Salivary Fern Pattern for Oral Pre-Cancers and Cancer Assessment. <i>IEEE Sensors Journal</i> , 2021 , 21, 9333-9340	4	2
15	A statistical study of detergent and shampoo adulterated milk detection system 2016 ,		2
14	Hand-held soil moisture meter using polymer coated sensor. <i>IEEE Instrumentation and Measurement Magazine</i> , 2019 , 22, 24-29	1.4	1
13	Electrical Model for Lipase Immobilized PMMA Coated Sensor to Detect Fat Content in Milk 2019 ,		1
12	Dielectrophoresis based microfluidic chip for continuous label-free separation of cells 2015 ,		1
11	A novel approach for droplet position sensing in electrowetting devices 2013 ,		1
10	Detection of Formaldehyde by A RGO/PMMA Coated Sensor 2020 ,		1
9	Jigsaw electrode design for electrowetting devices. <i>Micro and Nano Letters</i> , 2019 , 14, 1046-1051	0.9	1
8	Study of threshold voltage for different electrode shapes in electrowetting device. <i>Materials Research Express</i> , 2019 , 6, 046414	1.7	1

7	Low-Noise Potentiostat Circuit for Electrochemical Detection of Heavy Metals or Metalloids. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022 , 1-1	5.2	1
6	A review on the realization of fractional-order devices to use as sensors and circuit elements for experimental studies and research 2022 , 287-340		0
5	Hardware Implementation and Performance Study of Analog PID Controllers on DC Motor. <i>Fractal and Fractional</i> , 2020 , 4, 34	3	0
4	Fabricating Solid State Fractional Capacitor in the Frequency Range of mHz to kHz. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2021 , 1-1	1.7	0
3	Demonstrations and Applications of Fractional-Order Devices. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2017 , 55-72		0.4
2	Design guidelines for fabrication of MWCNT-polymer based solid-state fractional capacitor 2022 , 485-522		
1	New class of fractal elements with log-periodic corrections: Confirmation on experimental data. <i>Chaos, Solitons and Fractals</i> , 2021 , 153, 111519	9.3	