Todd J Freeborn

List of Publications by Year
in descending order

83	2,733	236925 25	182427 51
papers	citations	h-index	g-index

84	84	84	1635
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electrical impedance myography: A critical review and outlook. Clinical Neurophysiology, 2021, 132, 338-344.	1.5	30
2	Cole-Impedance Model Representations of Right-Side Segmental Arm, Leg, and Full-Body Bioimpedances of Healthy Adults: Comparison of Fractional-Order. Fractal and Fractional, 2021, 5, 13.	3.3	13
3	Localized Bioimpedance Measurements with the MAX3000x Integrated Circuit: Characterization and Demonstration. Sensors, 2021, 21, 3013.	3.8	14
4	Analysis of localized bioimpedance from healthy young adults during activities of the vocal folds using Cole-impedance model representation. Biomedical Signal Processing and Control, 2021, 68, 102665.	5.7	2
5	Flexible PCB Failures From Dynamic Activity and Their Impacts on Bioimpedance Measurements: A Wearable Case Study. IEEE Open Journal of Circuits and Systems, 2021, 2, 732-742.	1.9	5
6	Experimental Validation of CT-Snubber for Multichip SiC MOSFET Power Module. , 2020, , .		0
7	Multi-Site Impedance Measurement System based on MAX30001 Integrated-Circuit. , 2020, , .		9
8	Short-Term Evaluation of Dry Electrodes Fabricated using Flexible Printed Circuits Processes for Bioimpedance Measurements. , 2020, , .		1
9	A Comparative Study of Two Fractional-Order Equivalent Electrical Circuits for Modeling the Electrical Impedance of Dental Tissues. Entropy, 2020, 22, 1117.	2.2	11
10	Cole-impedance parameters representing biceps tissue bioimpedance in healthy adults and their alterations following eccentric exercise. Journal of Advanced Research, 2020, 25, 285-293.	9.5	29
11	Modeling and experimental validation of parasitic capacitance effects on emulated bioimpedance measurements with highâ€impedance residuals. International Journal of Circuit Theory and Applications, 2020, 48, 1057-1069.	2.0	3
12	Localized Bicep Tissue Bioimpedance Alterations Following Eccentric Exercise in Healthy Young Adults. IEEE Access, 2020, 8, 23100-23109.	4.2	20
13	Throwing Event Detection using Acceleration Magnitude collected with Wrist-Worn Sensors. , 2020, , .		1
14	Modeling and Validation of Fixture-Induced Error for Impedance Measurements. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 129-137.	4.7	9
15	Introducing electrical engineering through characterization of a handheld moisture meter: A research experience case study. International Journal of Electrical Engineering and Education, 2019, 56, 24-37.	0.8	7
16	Agreement between supine and standing bioimpedance spectroscopy devices and dualâ€energy Xâ€ray absorptiometry for body composition determination. Clinical Physiology and Functional Imaging, 2019, 39, 355-361.	1.2	16
17	Transfer Functions of Fractional-Order Band-Pass Filter with Arbitrary Magnitude Slope in Stopband. , 2019, , .		3
18	Time-course bicep tissue bio-impedance changes throughout a fatiguing exercise protocol. Medical Engineering and Physics, 2019, 69, 109-115.	1.7	12

#	Article	IF	Citations
19	Performance evaluation of raspberry Pi platform for bioimpedance analysis using least squares optimization. Personal and Ubiquitous Computing, 2019, 23, 279-285.	2.8	10
20	Fractional-order band-pass filter design using fractional-characteristic specimen functions. Microelectronics Journal, 2019, 86, 77-86.	2.0	37
21	Electrical Equivalent Network Modeling of Forearm Tissue Bioimpedance. , 2019, , .		3
22	Analysis of Parasitic Capacitances Impact on Estimating Cole-Model Impedances using Tetrapolar Measurements. , 2019, , .		1
23	Biceps Tissue Electrical Resistance and Circumference Changes Following an Eccentric Exercise Protocol. , 2019, , .		1
24	Contraction Artifacts on Biceps Tissue Bioimpedance Collected using Stepped-Sine Excitations. , 2019, , .		7
25	Residual impedance effect on emulated bioimpedance measurements using Keysight E4990A precision impedance analyzer. Measurement: Journal of the International Measurement Confederation, 2019, 134, 468-479.	5.0	24
26	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.	2.0	6
27	Biceps tissue bioimpedance changes from isotonic exercise-induced fatigue at different intensities. Biomedical Physics and Engineering Express, 2018, 4, 025037.	1.2	32
28	Authorsâ€™ reply to Medeiros et al.: Make it easier! Evaluation of the â€˜vagal-sympathetic effectâ€™ in different conditions with Râ€“R intervals monitoring. European Journal of Applied Physiology, 2018, 118, 1289-1290.	2.5	1
29	Hook artifact correction of localized electrical bioimpedance for improved agreement between different device measurements. Biomedical Physics and Engineering Express, 2018, 4, 015016.	1.2	13
30	(1+ Î±) Fractional-order transfer functions to approximate low-pass magnitude responses with arbitrary quality factor. AEU - International Journal of Electronics and Communications, 2018, 83, 570-578.	2.9	35
31	Extraction of Phase Information from Magnitude-Only Bio-impedance Measurements Using a Modified Kramersâ€“Kronig Transform. Circuits, Systems, and Signal Processing, 2018, 37, 3635-3650.	2.0	20
32	Ultra-shortened time-domain HRV parameters at rest and following exercise in athletes: an alternative to frequency computation of sympathovagal balance. European Journal of Applied Physiology, 2018, 118, 175-184.	2.5	46
33	Fatigue-Induced Cole Electrical Impedance Model Changes of Biceps Tissue Bioimpedance. Fractal and Fractional, 2018, 2, 27.	3.3	26
34	Performance Analysis of Oustaloup Approximation for the Design of Fractional-Order Analogue Circuits. , 2018, , .		1
35	Estimating Localized Bio-impedance with Measures from Multiple Redundant Electrode Configurations. , 2018, 2018, 4351-4354.		1
36	Validation of Fractional-Order Lowpass Elliptic Responses of (1 + Î±)-Order Analog Filters. Applied Sciences (Switzerland), 2018, 8, 2603.	2.5	18

#	Article	IF	Citations
37	Evaluation of ImpediMed SFB7 BIS device for low-impedance measurements. Measurement: Journal of the International Measurement Confederation, 2018, 129, 20-30.	5.0	8
38	Supercapacitor Fractional-Order Model Discharging from Polynomial Time-Varying Currents. , 2018, , .		6
39	Review of fractional-order electrical characterization of supercapacitors. Journal of Power Sources, 2018, 400, 457-467.	7.8	125
40	Fractional-order Lowpass Elliptic Responses of (1+Î±)-order Transfer Functions. , 2018, , .		6
41	Changes of Fractional-Order Model Parameters in Biceps Tissue from Fatiguing Exercise. , 2018, , .		7
42	Evaluation of (1 + Î±) Fractional-Order Approximated Butterworth High-Pass and Band-Pass Filter Transfer Functions. Elektronika Ir Elektrotechnika, 2018, 24, .	0.8	16
43	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.	3.0	18
44	Further experimental evidence of the fractional-order energy equation in supercapacitors. AEU - International Journal of Electronics and Communications, 2017, 78, 209-212.	2.9	35
45	Comparison of Bioimpedance and Underwater Weighing Body Fat Percentage Before and Acutely After Exercise at Varying Intensities. Journal of Strength and Conditioning Research, 2017, 31, 1395-1402.	2.1	12
46	Lowâ€voltage commercial superâ€capacitor response to periodic linearâ€withâ€time current excitation: a case study. IET Circuits, Devices and Systems, 2017, 11, 189-195.	1.4	19
47	Emulation of an electrical-analogue of a fractional-order human respiratory mechanical impedance model using OTA topologies. AEU - International Journal of Electronics and Communications, 2017, 78, 201-208.	2.9	39
48	Supercapacitor reciprocity and response to linear current and voltage ramps. Electrochimica Acta, 2017, 258, 1081-1085.	5.2	22
49	Modelling supercapacitors leakage behaviour using a fractional-order model. , 2017, , .		9
50	Design of a wood tissue impedance emulator in monolithic form. , 2017, , .		4
51	Variability of supercapacitor fractional-order parameters extracted from discharging behavior using least squares optimization. , 2017, , .		5
52	Compact Wide Frequency Range Fractional-Order Models of Human Body Impedance against Contact Currents. Mathematical Problems in Engineering, 2016, 2016, 1-10.	1.1	18
53	Electrode location impact on cole-impedance parameters using magnitude-only measurements. , 2016, , .		8
54	Analysis of a rectifier circuit realized with a fractional-order capacitor. , 2016, , .		3

#	Article	IF	Citations
55	Improved method to determine supercapacitor metrics from highpass filter response. , 2016, , .		3
56	Determination of supercapacitor metrics using a magnitude-only method. , 2016, , .		3
57	Reevaluation of Performance of Electric Double-layer Capacitors from Constant-current Charge/Discharge and Cyclic Voltammetry. Scientific Reports, 2016, 6, 38568.	3.3	144
58	Factors impacting accurate Cole-impedance extractions from magnitude-only measurements. , 2016, , .		4
59	Fixturing impacts on highâ€frequency lowâ€resistance, lowâ€inductance impedance measurements. Electronics Letters, 2016, 52, 1772-1774.	1.0	10
60	Estimating supercapacitor performance for embedded applications using fractionalâ€order models. Electronics Letters, 2016, 52, 1478-1480.	1.0	19
61	Spectral Capacitance of Series and Parallel Combinations of Supercapacitors. ChemElectroChem, 2016, 3, 1429-1436.	3.4	46
62	Emulation of current excited fractional-order capacitors and inductors using OTA topologies. Microelectronics Journal, 2016, 55, 70-81.	2.0	34
63	Comparison of $$(1+alpha)$$ (1 + Î±) Fractional-Order Transfer Functions to Approximate Lowpass Butterworth Magnitude Responses. Circuits, Systems, and Signal Processing, 2016, 35, 1983-2002.	2.0	65
64	Approximated Fractional-Order Inverse Chebyshev Lowpass Filters. Circuits, Systems, and Signal Processing, 2016, 35, 1973-1982.	2.0	67
65	Approximated Fractional Order Chebyshev Lowpass Filters. Mathematical Problems in Engineering, 2015, 2015, 1-7.	1.1	75
66	Fractional-order models of supercapacitors, batteries and fuel cells: a survey. Materials for Renewable and Sustainable Energy, 2015, 4, 1.	3.6	149
67	Extracting the parameters of the double-dispersion Cole bioimpedance model from magnitude response measurements. Medical and Biological Engineering and Computing, 2014, 52, 749-758.	2.8	69
68	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.	3.6	158
69	Cole impedance extractions from the step-response of a current excited fruit sample. Computers and Electronics in Agriculture, 2013, 98, 100-108.	7.7	46
70	A Survey of Fractional-Order Circuit Models for Biology and Biomedicine. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2013, 3, 416-424.	3.6	536
71	Fractional Step Analog Filter Design. Lecture Notes in Electrical Engineering, 2013, , 243-267.	0.4	6
72	Fractional Resonance-Based<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:msub><mml:mi>RL</mml:mi><mml:mi>Î²</mml:mi></mml:msub><mml:msub><mml:mi>C</mml:mi><mml:mi>Î±</mml Mathematical Problems in Engineering, 2013, 2013, 1-10.	1.1	46

#	Article	IF	Citations
73	Incorporating FPAAs into Laboratory Exercises for Analogue Filter Design. International Journal of Electrical Engineering and Education, 2013, 50, 188-200.	0.8	3
74	Accurate time domain extraction of supercapacitor fractional-order model parameters. , 2013, , .		8
75	Simplifying Cole-impedance extraction from the current-excited step response. , 2013, , .		1
76	Least squares estimation technique of Cole-Cole parameters from step response. Electronics Letters, 2012, 48, 752.	1.0	26
77	Fractional-step Tow-Thomas biquad filters. Nonlinear Theory and Its Applications IEICE, 2012, 3, 357-374.	0.6	45
78	Improved Cole-Cole parameter extraction from frequency response using least squares fitting. , 2012, , .		6
79	Numerical extraction of Cole-Cole impedance parameters from step response. Nonlinear Theory and Its Applications IEICE, 2011, 2, 548-561.	0.6	19
80	On the practical realization of higher-order filters with fractional stepping. Signal Processing, 2011, 91, 484-491.	3.7	127
81	Field programmable analogue array implementation of fractional step filters. IET Circuits, Devices and Systems, 2010, 4, 514.	1.4	154
82	Second order approximation of the fractional laplacian operator for equal-ripple response. , 2010, , .		9
83	Towards the realization of fractional step filters. , 2010, , .		26