

# Brent J Maundy

## List of Publications by Year in descending order

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Version: 2024-02-01

127  
papers

2,310  
citations

279487

23  
h-index

253896

43  
g-index

131  
all docs

131  
docs citations

131  
times ranked

1355  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | 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.       | 2.7 | 158       |
| 2  | Fractional-order models of supercapacitors, batteries and fuel cells: a survey. Materials for Renewable and Sustainable Energy, 2015, 4, 1.   | 1.5 | 149       |
| 3  | Reevaluation of Performance of Electric Double-layer Capacitors from Constant-current Charge/Discharge and Cyclic Voltammetry. Scientific Reports, 2016, 6, 38568.                                | 1.6 | 144       |
| 4  | Review of fractional-order electrical characterization of supercapacitors. Journal of Power Sources, 2018, 400, 457-467.  | 4.0 | 125       |
| 5  | Approximated Fractional Order Chebyshev Lowpass Filters. Mathematical Problems in Engineering, 2015, 2015, 1-7.   | 0.6 | 75        |
| 6  | Extracting the parameters of the double-dispersion Cole bioimpedance model from magnitude response measurements. Medical and Biological Engineering and Computing, 2014, 52, 749-758.             | 1.6 | 69        |
| 7  | Approximated Fractional-Order Inverse Chebyshev Lowpass Filters. Circuits, Systems, and Signal Processing, 2016, 35, 1973-1982.   | 1.2 | 67        |
| 8  | A low frequency oscillator using a super-capacitor. AEU - International Journal of Electronics and Communications, 2016, 70, 970-973.   | 1.7 | 65        |
| 9  | On a multivibrator that employs a fractional capacitor. Analog Integrated Circuits and Signal Processing, 2010, 62, 99-103.   | 0.9 | 55        |
| 10 | 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. | 2.2 | 53        |
| 11 | Versatile Precision Full-Wave Rectifiers for Instrumentation and Measurements. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 1703-1710.   | 2.4 | 52        |
| 12 | Chaotic Flower Pollination and Grey Wolf Algorithms for parameter extraction of bio-impedance models. Applied Soft Computing Journal, 2019, 75, 750-774.  | 4.1 | 52        |
| 13 | Cole impedance extractions from the step-response of a current excited fruit sample. Computers and Electronics in Agriculture, 2013, 98, 100-108.   | 3.7 | 46        |
| 14 | Fractional Resonance-Based $RL^2C$ Mathematical Problems in Engineering, 2013, 2013, 1-10.  | 0.6 | 46        |
| 15 | Spectral Capacitance of Series and Parallel Combinations of Supercapacitors. ChemElectroChem, 2016, 3, 1429-1436.   | 1.7 | 46        |
| 16 | Parameter identification of fractional-order chaotic systems using different Meta-heuristic Optimization Algorithms. Nonlinear Dynamics, 2019, 95, 2491-2542.                                     | 2.7 | 46        |
| 17 | Fractional-step Tow-Thomas biquad filters. Nonlinear Theory and Its Applications IEICE, 2012, 3, 357-374.   | 0.4 | 45        |
| 18 | A New Second-Order All-Pass Filter in 130-nm CMOS. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 249-253.   | 2.2 | 45        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 19 | On the Realization of Multiphase Oscillators Using Fractional-Order Allpass Filters. <i>Circuits, Systems, and Signal Processing</i> , 2012, 31, 3-17.   | 1.2 | 44        |
| 20 | Partial fraction expansion-based realizations of fractional-order differentiators and integrators using active filters. <i>International Journal of Circuit Theory and Applications</i> , 2019, 47, 513-531. | 1.3 | 44        |
| 21 | Extracting single dispersion Cole-Cole impedance model parameters using an integrator setup. <i>Analog Integrated Circuits and Signal Processing</i> , 2012, 71, 107-110.                                    | 0.9 | 41        |
| 22 | Extracting the parameters of the single-dispersion Cole bioimpedance model using a magnitude-only method. <i>Computers and Electronics in Agriculture</i> , 2015, 119, 153-157.                              | 3.7 | 36        |
| 23 | High-performance current-mode instrumentation amplifier circuit. <i>International Journal of Electronics</i> , 2007, 94, 1015-1024.  | 0.9 | 27        |
| 24 | Towards the realization of fractional step filters. , 2010, , .  |     | 26        |
| 25 | A novel CMOS first-order all-pass filter. <i>International Journal of Electronics</i> , 2002, 89, 739-743.   | 0.9 | 23        |
| 26 | Design of a Portable Low-Cost Impedance Analyzer. , 2017, , .  |     | 22        |
| 27 | Alternative Realizations of CMOS Current Feedback Amplifiers for Low Voltage Applications. <i>Analog Integrated Circuits and Signal Processing</i> , 2002, 32, 157-168.                                      | 0.9 | 21        |
| 28 | Strain Gauge Amplifier Circuits. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013, 62, 693-700.  | 2.4 | 20        |
| 29 | Single Transistor Active Filters: What is Possible and What is Not. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2014, 61, 2517-2524.  | 3.5 | 20        |
| 30 | Analysis and realization of a switched fractional-order capacitor integrator. <i>International Journal of Circuit Theory and Applications</i> , 2016, 44, 2035-2040.   | 1.3 | 20        |
| 31 | Extraction of Phase Information from Magnitude-Only Bio-impedance Measurements Using a Modified Kramers-Kronig Transform. <i>Circuits, Systems, and Signal Processing</i> , 2018, 37, 3635-3650.             | 1.2 | 20        |
| 32 | Numerical extraction of Cole-Cole impedance parameters from step response. <i>Nonlinear Theory and Its Applications IEICE</i> , 2011, 2, 548-561.  | 0.4 | 19        |
| 33 | Low-voltage commercial supercapacitor response to periodic linear with time current excitation: a case study. <i>IET Circuits, Devices and Systems</i> , 2017, 11, 189-195.                                  | 0.9 | 19        |
| 34 | Compact Wide Frequency Range Fractional-Order Models of Human Body Impedance against Contact Currents. <i>Mathematical Problems in Engineering</i> , 2016, 2016, 1-10.                                       | 0.6 | 18        |
| 35 | Variability of Cole-model bioimpedance parameters using magnitude-only measurements of apples from a two-electrode configuration. <i>International Journal of Food Properties</i> , 2017, 20, S507-S519.     | 1.3 | 18        |
| 36 | Current-mode capacitorless integrators and differentiators for implementing emulators of fractional-order elements. <i>AEU - International Journal of Electronics and Communications</i> , 2017, 80, 94-103. | 1.7 | 16        |

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|----|---|-----|-----------|
| 37 | Fractional-Order Two-Port Networks. <i>Mathematical Problems in Engineering</i> , 2016, 2016, 1-5.  | 0.6 | 15        |
| 38 | On the mechanism of creating pinched hysteresis loops using a commercial memristor device. <i>AEU - International Journal of Electronics and Communications</i> , 2019, 111, 152923.                                | 1.7 | 15        |
| 39 | Differential Time Signaling Data-Link Architecture. <i>Journal of Signal Processing Systems</i> , 2013, 70, 21-37.  | 1.4 | 13        |
| 40 | A novel circuit element and its application in signal amplification. <i>International Journal of Circuit Theory and Applications</i> , 2008, 36, 219-231.   | 1.3 | 12        |
| 41 | A new time-based architecture for serial communication links. , 2009, , .   |     | 12        |
| 42 | Active grounded inductor circuit. <i>International Journal of Electronics</i> , 2011, 98, 555-567.  | 0.9 | 12        |
| 43 | Guest Editorial Fractional-Order Circuits and Systems. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2013, 3, 297-300.  | 2.7 | 12        |
| 44 | Minimal two-transistor multifunction filter design. <i>International Journal of Circuit Theory and Applications</i> , 2017, 45, 1449-1466.  | 1.3 | 12        |
| 45 | A Wideband Delay-Tunable Fully Differential Allpass Filter in 65-nm CMOS Technology. , 2019, , .  |     | 12        |
| 46 | Synthesis of Wideband High-Quality Factor Delay- Tunable Fully Differential All-Pass Filters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020, 68, 4348-4360.                                    | 2.9 | 12        |
| 47 | A low power and high speed PPM design for ultra wideband communications. <i>Canadian Conference on Electrical and Computer Engineering</i> , 2008, , .  | 0.0 | 11        |
| 48 | Data link design using a time-based approach. , 2010, , .   |     | 11        |
| 49 | Design of fractional notch filter with asymmetric slopes and large values of notch magnitude. , 2013, , .   |     | 11        |
| 50 | Correlation Between the Theory of Lissajous Figures and the Generation of Pinched Hysteresis Loops in Nonlinear Circuits. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019, 66, 2606-2614. | 3.5 | 11        |
| 51 | Wideband third-order single-transistor all-pass filter. <i>International Journal of Circuit Theory and Applications</i> , 2020, 48, 1201-1208.  | 1.3 | 11        |
| 52 | Analysis and experimental verification of a fractional-order Hartley oscillator. , 2017, , .  |     | 10        |
| 53 | Simple MOS-based circuit designed to show pinched hysteresis behavior. <i>International Journal of Circuit Theory and Applications</i> , 2018, 46, 1123-1128.   | 1.3 | 10        |
| 54 | Single transistor RC-only second-order allpass filters. <i>International Journal of Circuit Theory and Applications</i> , 2020, 48, 162-169.  | 1.3 | 10        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | Constant bandwidth current feedback amplifier from two operational amplifiers. International Journal of Electronics, 2007, 94, 605-615.   | 0.9 | 9         |
| 56 | Second order approximation of the fractional laplacian operator for equal-ripple response. , 2010, , .  |     | 9         |
| 57 | On a class of cross coupled fully differential filters. International Journal of Circuit Theory and Applications, 2016, 44, 1425-1436.  | 1.3 | 9         |
| 58 | A four-quadrant current multiplier/divider cell with four transistors. Analog Integrated Circuits and Signal Processing, 2018, 95, 173-179.   | 0.9 | 9         |
| 59 | Fractional-Order Multiphase Sinusoidal Oscillator Design Using Current-Mirrors. , 2018, , .   |     | 9         |
| 60 | Accurate time domain extraction of supercapacitor fractional-order model parameters. , 2013, , .  |     | 8         |
| 61 | Electrode location impact on cole-impedance parameters using magnitude-only measurements. , 2016, , .   |     | 8         |
| 62 | 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. | 1.9 | 8         |
| 63 | Versatile composite amplifier configuration. International Journal of Electronics, 2015, 102, 993-1006.   | 0.9 | 7         |
| 64 | Single-Transistor Second-Order Allpass Filters. , 2019, , .   |     | 7         |
| 65 | Enhancing the improved Howland circuit. International Journal of Circuit Theory and Applications, 2019, 47, 532-541.  | 1.3 | 7         |
| 66 | A generic impedance modeling technique. AEU - International Journal of Electronics and Communications, 2020, 123, 153301.   | 1.7 | 7         |
| 67 | Extending the double-dispersion Coleâ€“Coleâ€“Davidson and Havriliakâ€“Negami electrochemical impedance spectroscopy models. European Biophysics Journal, 2021, 50, 915-926.  | 1.2 | 7         |
| 68 | A Novel Hybrid Active Inductor. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2007, 54, 663-667.  | 2.3 | 6         |
| 69 | An improved pseudo-exponential, pseudo-logarithmic circuit. Canadian Journal of Electrical and Computer Engineering, 2007, 32, 145-150.   | 1.5 | 6         |
| 70 | 84-dB Range Logarithmic Digital-to-Analog Converter in CMOS 0.18- $\mu\text{m}$ Technology. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 279-283.  | 2.2 | 6         |
| 71 | Improved Cole-Cole parameter extraction from frequency response using least squares fitting. , 2012, , .  |     | 6         |
| 72 | Fractional Step Analog Filter Design. Lecture Notes in Electrical Engineering, 2013, , 243-267.   | 0.3 | 6         |

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|----|--|-----|-----------|
| 73 | Indirect Realization of the Imaginary Resistor $jR$ . Circuits, Systems, and Signal Processing, 2016, 35, 2610-2615.   | 1.2 | 6         |
| 74 | The common-base differential amplifier and applications revisited. Microelectronics Journal, 2017, 63, 8-19.   | 1.1 | 6         |
| 75 | Oscillator with tunable phase capability. Electronics Letters, 2017, 53, 1516-1518.  | 0.5 | 6         |
| 76 | Synthesis and analysis of fully differential filters using two port networks. , 2017, , .  |     | 6         |
| 77 | Simple Multi-Function Fractional-Order Filter Designs. , 2019, , .   |     | 6         |
| 78 | A practical near constant bandwidth amplifier. International Journal of Circuit Theory and Applications, 2010, 38, 577-590.                                    | 1.3 | 5         |
| 79 | Band-pass filters with high quality factors and asymmetric-slope characteristics. , 2011, , .  |     | 5         |
| 80 | Multiple-Valued Time-Based Architecture for Serial Communication Links. , 2012, , .  |     | 5         |
| 81 | Second order bandstop and bandpass filters using transformers. Microelectronics Journal, 2015, 46, 690-697.  | 1.1 | 5         |
| 82 | 8-GHz Low-Power Voltage-Mode Second-Order Allpass Filter in 65-nm CMOS. , 2019, , .  |     | 5         |
| 83 | An Ultra-Low Power Wide-Band Single-Transistor Second-Order Allpass Filter in 65nm CMOS. , 2019, , .   |     | 5         |
| 84 | On chip 0.5V 2GHz four-output quadrature-phase oscillator. AEU - International Journal of Electronics and Communications, 2020, 126, 153393.                   | 1.7 | 5         |
| 85 | Extraction of bioimpedance phase information from its magnitude using a non-uniform Kramersâ€Kronig transform. European Biophysics Journal, 2020, 49, 207-213. | 1.2 | 5         |
| 86 | Ultra Low Power Transceiver for Wireless Patient Vital Sign Monitoring. , 2007, , .  |     | 4         |
| 87 | Realization of a GIC using hybrid current conveyor/operational amplifier circuits. Midwest Symposium on Circuits and Systems, 2007, , .                        | 1.0 | 4         |
| 88 | A new 90NM CMOS current feedback operational amplifier. , 2009, , .  |     | 4         |
| 89 | Improved dynamic range, digitally-controlled linear-in-dB CMOS variable gain amplifier. , 2011, , .  |     | 4         |
| 90 | Factors impacting accurate Cole-impedance extractions from magnitude-only measurements. , 2016, , .  |     | 4         |

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|-----|--|-----|-----------|
| 91  | Calculating output impedance in linear networks without source nulling or load disconnect: the instantaneous output impedance. <i>International Journal of Circuit Theory and Applications</i> , 2016, 44, 98-108. | 1.3 | 4         |
| 92  | An improved multiphase sinusoidal oscillator using current feedback amplifiers. <i>International Journal of Electronics Letters</i> , 2016, 4, 177-187.  | 0.7 | 4         |
| 93  | All-Pass Filter Based Synthesis of Multifunctional Microwave Active Circuits. , 2017, , .  |     | 4         |
| 94  | Third-order tunable phase asymmetric cross-coupled oscillator. <i>IET Circuits, Devices and Systems</i> , 2019, 13, 929-933.   | 0.9 | 4         |
| 95  | Ultra-low-power compact single-transistor all-pass filter with tunable delay capability. <i>AEU - International Journal of Electronics and Communications</i> , 2021, 132, 153645.                                 | 1.7 | 4         |
| 96  | A novel Q-tuning scheme for continuous time filters. <i>International Journal of Electronics</i> , 2002, 89, 477-491.  | 0.9 | 3         |
| 97  | High-performance active bandpass filter using current-feedback amplifiers. <i>International Journal of Electronics</i> , 2004, 91, 563-570.  | 0.9 | 3         |
| 98  | A useful pseudo-logarithmic circuit. <i>Microelectronics International</i> , 2007, 24, 35-45.  | 0.4 | 3         |
| 99  | 4-Bit Parallel-Input Exponential Digital-to-Analog Converter in CMOS 0.18 $\mu$ m Technology. <i>Circuits, Systems, and Signal Processing</i> , 2012, 31, 413-433.   | 1.2 | 3         |
| 100 | Incorporating FPAs into Laboratory Exercises for Analogue Filter Design. <i>International Journal of Electrical Engineering and Education</i> , 2013, 50, 188-200.   | 0.4 | 3         |
| 101 | Improved method to determine supercapacitor metrics from highpass filter response. , 2016, , .   |     | 3         |
| 102 | Determination of supercapacitor metrics using a magnitude-only method. , 2016, , .   |     | 3         |
| 103 | CMOS Realization of All-Positive Pinched Hysteresis Loops. <i>Complexity</i> , 2017, 2017, 1-15.   | 0.9 | 3         |
| 104 | A 28 GHz Q-Tunable Fully Differential Bandpass Filter in 65-nm CMOS Technology. , 2018, , .  |     | 3         |
| 105 | Low-Power Single-Transistor Voltage-Mode Third-Order All-pass Filter in 65-nm CMOS. , 2020, , .  |     | 3         |
| 106 | Delay-Tunable Compact RC-Only All-Pass Filter. <i>IEEE Microwave and Wireless Components Letters</i> , 2021, 31, 461-464.  | 2.0 | 3         |
| 107 | On a class of pseudo-logarithmic amplifiers suitable for use with digitally switched resistors. <i>International Journal of Circuit Theory and Applications</i> , 2008, 36, 81-108.                                | 1.3 | 2         |
| 108 | Design and Implementation of a Bio-Impedance Analyzer Based on the Kramers-Kronig Transform. , 2018, , .   |     | 2         |

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|-----|---|-----|-----------|
| 109 | Minimum MOS Transistor Count Fractional-Order Voltage-Mode and Current-Mode Filters. Technologies, 2019, 7, 85.   | 3.0 | 2         |
| 110 | New topology for implementing bandpass, bandstop and allpass filters with CFAs. International Journal of Electronics, 2007, 94, 1025-1035.                | 0.9 | 1         |
| 111 | A novel wide-band 5.3 GHz ESD protected input and output matched low noise amplifier. Midwest Symposium on Circuits and Systems, 2007, , .                | 1.0 | 1         |
| 112 | A power-efficient, high data rate chaos-based Transceiver design. , 2009, , .   |     | 1         |
| 113 | Simplifying Cole-impedance extraction from the current-excited step response. , 2013, , .   |     | 1         |
| 114 | On a Class of Quadrature Phase Oscillators using Differential pairs. , 2018, , .  |     | 1         |
| 115 | Synthesis of a Family of Differential Cross-coupled Oscillators and Design Application. , 2018, , .   |     | 1         |
| 116 | A voltage tunable CMOS differential active resistor and its application. International Journal of Circuit Theory and Applications, 2019, 47, 175-185.     | 1.3 | 1         |
| 117 | Second-order cascode-based filters. The Integration VLSI Journal, 2022, 84, 111-121.  | 1.3 | 1         |
| 118 | Designing with programmable logic arrays. Microprocessors and Microsystems, 1987, 11, 475-486.  | 1.8 | 0         |
| 119 | Complete automatic Q tuning system on a chip. The Integration VLSI Journal, 2005, 38, 399-415.  | 1.3 | 0         |
| 120 | Generalized CFA filter topology based on gain blocks. Midwest Symposium on Circuits and Systems, 2007, , .  | 1.0 | 0         |
| 121 | A D/A converter based on a pseudo-exponential function. International Journal of Electronics Letters, 2015, 3, 187-200.                                   | 0.7 | 0         |
| 122 | Wide-range grounded non-linear transconductor and its application as a frequency doubler. International Journal of Electronics Letters, 2018, 6, 214-219. | 0.7 | 0         |
| 123 | In-Direct Impedance Measurement: Phase Extraction Algorithm. , 2019, , 33-49.   |     | 0         |
| 124 | In-Direct Impedance Measurement: Design and Implementation. , 2019, , 51-80.  |     | 0         |
| 125 | A Wideband 24-29 GHz Differential All-Pass Filter in 65-nm CMOS. , 2021, , .  |     | 0         |
| 126 | Estimating phase error using a Hilbert transform-based time-domain technique. International Journal of Circuit Theory and Applications, 2022, 50, 72-82.  | 1.3 | 0         |



| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 127 | Analog Circuit Design Using Symbolic Math Toolboxes: Demonstrative Examples. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, , 1-11. | 2.1 | 0         |