

Benjamin Sanchez

List of Publications by Year in Descending Order

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Version: 2024-04-28

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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.

86

papers

1,126

citations

20

h-index

29

g-index

90

ext. papers

1,345

ext. citations

3.6

avg, IF

4.97

L-index

#	Paper	IF	Citations
86	Electrical Characterization of Basal Cell Carcinoma Using a Handheld Electrical Impedance Dermography Device.. <i>JID Innovations</i> , 2022 , 2, 100075		0
85	Modeling and simulation of needle electrical impedance myography in nonhomogeneous isotropic skeletal muscle.. <i>IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology</i> , 2022 , 6, 103-110	2.8	1
84	Altered electrical properties in skeletal muscle of mice with glycogen storage disease type II.. <i>Scientific Reports</i> , 2022 , 12, 5327	4.9	0
83	Design and pilot testing of a 26-gauge impedance-electromyography needle in wild type and ALS mice.. <i>Muscle and Nerve</i> , 2022 ,	3.4	1
82	On the measurement of skeletal muscle anisotropic permittivity property with a single cross-shaped needle insertion.. <i>Scientific Reports</i> , 2022 , 12, 8494	4.9	
81	Nonhomogeneous volume conduction effects affecting needle electromyography: an analytical and simulation study. <i>Physiological Measurement</i> , 2021 ,	2.9	1
80	A Bioimpedance-Based Device to Assess the Volume Conduction Properties of the Tongue in Neurological Disorders Affecting Bulbar function.. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021 , 2, 278-285	5.9	0
79	Relationships between in vivo surface and ex vivo electrical impedance myography measurements in three different neuromuscular disorder mouse models. <i>PLoS ONE</i> , 2021 , 16, e0259071	3.7	0
78	Skin Electrical Resistance as a Diagnostic and Therapeutic Biomarker of Breast Cancer Measuring Lymphatic Regions. <i>IEEE Access</i> , 2021 , 9, 152322-152332	3.5	0
77	Reply to "Putting the patient first: The validity and value of surface-based electrical impedance myography techniques". <i>Clinical Neurophysiology</i> , 2021 , 132, 1754-1755	4.3	
76	Estimating myofiber cross-sectional area and connective tissue deposition with electrical impedance myography: A study in D2-mdx mice. <i>Muscle and Nerve</i> , 2021 , 63, 941-950	3.4	4
75	muscle volume conduction study validates measurement of tongue volume conduction properties using a user tongue array depressor. <i>Physiological Measurement</i> , 2021 , 42,	2.9	2
74	A framework for modeling bioimpedance measurements of nonhomogeneous tissues: a theoretical and simulation study. <i>Physiological Measurement</i> , 2021 , 42,	2.9	1
73	A novel method for estimating the fractional Cole impedance model using single-frequency DC-biased sinusoidal excitation. <i>Circuits, Systems, and Signal Processing</i> , 2021 , 40, 543-558	2.2	2
72	Predicting myofiber cross-sectional area and triglyceride content with electrical impedance myography: A study in db/db mice. <i>Muscle and Nerve</i> , 2021 , 63, 127-140	3.4	5
71	Electrical impedance myography: A critical review and outlook. <i>Clinical Neurophysiology</i> , 2021 , 132, 338-344	4.5	17
70	In vivo muscle conduction study of the tongue using a multi-electrode tongue depressor. <i>Clinical Neurophysiology</i> , 2021 , 132, 683-687	4.3	5

69	Modeling and Reproducibility of Twin Concentric Electrical Impedance Myography. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 3068-3077	5	6
68	Altered muscle electrical tissue properties in a mouse model of premature aging. <i>Muscle and Nerve</i> , 2019 , 60, 801-810	3.4	6
67	Permittivity of ex vivo healthy and diseased murine skeletal muscle from 10 kHz to 1 MHz. <i>Scientific Data</i> , 2019 , 6, 37	8.2	18
66	Three-harmonic optimal multisine input power spectrum for bioimpedance identification. <i>Physiological Measurement</i> , 2019 , 40, 05NT02	2.9	1
65	New electrical impedance methods for the in situ measurement of the complex permittivity of anisotropic skeletal muscle using multipolar needles. <i>Scientific Reports</i> , 2019 , 9, 3145	4.9	15
64	Quantitative muscle ultrasound in upper extremity mononeuropathies. <i>Muscle and Nerve</i> , 2019 , 60, 67-74	3.4	1
63	Separation of Subcutaneous Fat From Muscle in Surface Electrical Impedance Myography Measurements Using Model Component Analysis. <i>IEEE Transactions on Biomedical Engineering</i> , 2019 , 66, 354-364	5	13
62	Approximate complex electrical potential distribution in the monodomain model with unequal conductivity and relative permittivity anisotropy ratios. <i>Physiological Measurement</i> , 2019 , 40, 085008	2.9	6
61	Standalone IoT Bioimpedance Device Supporting Real-Time Online Data Access. <i>IEEE Internet of Things Journal</i> , 2019 , 6, 9545-9554	10.7	6
60	Numerical estimation of Fricke-Morse impedance model parameters using single-frequency sinusoidal excitation. <i>Physiological Measurement</i> , 2019 , 40, 09NT01	2.9	3
59	Functional Mixed-Effects Modeling of Longitudinal Duchenne Muscular Dystrophy Electrical Impedance Myography Data Using State-Space Approach. <i>IEEE Transactions on Biomedical Engineering</i> , 2019 , 66, 1761-1768	5	7
58	Electrical Impedance Methods in Neuromuscular Assessment: An Overview. <i>Cold Spring Harbor Perspectives in Medicine</i> , 2019 , 9,	5.4	19
57	Predicting myofiber size with electrical impedance myography: A study in immature mice. <i>Muscle and Nerve</i> , 2018 , 58, 106	3.4	18
56	Reply to Comment on Wn the correct use of stepped-sine excitations for the measurement and identification of time-varying bioimpedance. <i>Physiological Measurement</i> , 2018 , 39, 028002	2.9	
55	Electrical impedance myography as a biomarker of myostatin inhibition with ActRIIB-mFc: a study in wild-type mice. <i>Future Science OA</i> , 2018 , 4, FSO308	2.7	13
54	Estimating Myofiber Size With Electrical Impedance Myography: a Study In Amyotrophic Lateral Sclerosis MICE. <i>Muscle and Nerve</i> , 2018 , 58, 713-717	3.4	18
53	Electrical impedance imaging of human muscle at the microscopic scale using a multi-electrode needle device: A simulation study. <i>Clinical Neurophysiology</i> , 2018 , 129, 1704-1708	4.3	8
52	Recording characteristics of electrical impedance-electromyography needle electrodes. <i>Physiological Measurement</i> , 2018 , 39, 055005	2.9	16

51	An open source microcontroller based flume for evaluating swimming performance of larval, juvenile, and adult zebrafish. <i>PLoS ONE</i> , 2018 , 13, e0199712	3-7	7
50	Non-invasive assessment of muscle injury in healthy and dystrophic animals with electrical impedance myography. <i>Muscle and Nerve</i> , 2017 , 56, E85-E94	3-4	17
49	Sensitivity distribution simulations of surface electrode configurations for electrical impedance myography. <i>Muscle and Nerve</i> , 2017 , 56, 887-895	3-4	21
48	On the correct use of stepped-sine excitations for the measurement of time-varying bioimpedance. <i>Physiological Measurement</i> , 2017 , 38, N73-N80	2-9	12
47	Bioimpedance technology for detection of thoracic injury. <i>Physiological Measurement</i> , 2017 , 38, 2000-2014		5
46	New electrical impedance methods for the in situ measurement of the complex permittivity of anisotropic biological tissues. <i>Physics in Medicine and Biology</i> , 2017 , 62, 8616-8633	3-8	21
45	Present Uses, Future Applications, and Technical Underpinnings of Electrical Impedance Myography. <i>Current Neurology and Neuroscience Reports</i> , 2017 , 17, 86	6-6	35
44	Recording characteristics of electrical impedance myography needle electrodes. <i>Physiological Measurement</i> , 2017 , 38, 1748-1765	2-9	16
43	Structural changes of <i>Arthrospira</i> sp. after low energy sonication treatment for microalgae harvesting: Elucidating key parameters to detect the rupture of gas vesicles. <i>Bioresource Technology</i> , 2017 , 223, 98-104	11	3
42	Electromechanical Conditioning of Adult Progenitor Cells Improves Recovery of Cardiac Function After Myocardial Infarction. <i>Stem Cells Translational Medicine</i> , 2017 , 6, 970-981	6-9	21
41	Electrical Impedance Myography and Its Applications in Neuromuscular Disorders. <i>Neurotherapeutics</i> , 2017 , 14, 107-118	6-4	63
40	Electrical impedance myography detects age-related muscle change in mice. <i>PLoS ONE</i> , 2017 , 12, e0185614	5-14	16
39	Impedance Alterations in Healthy and Diseased Mice During Electrically Induced Muscle Contraction. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 1602-12	5	20
38	Guidelines to electrode positioning for human and animal electrical impedance myography research. <i>Scientific Reports</i> , 2016 , 6, 32615	4-9	32
37	Electrical Impedance Myography to Detect the Effects of Electrical Muscle Stimulation in Wild Type and Mdx Mice. <i>PLoS ONE</i> , 2016 , 11, e0151415	3-7	9
36	Muscle dysfunction in a zebrafish model of Duchenne muscular dystrophy. <i>Physiological Genomics</i> , 2016 , 48, 850-860	3-6	17
35	The neuromuscular impact of symptomatic SMN restoration in a mouse model of spinal muscular atrophy. <i>Neurobiology of Disease</i> , 2016 , 87, 116-23	7-5	39
34	Single and modeled multifrequency electrical impedance myography parameters and their relationship to force production in the ALS SOD1G93A mouse. <i>Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration</i> , 2016 , 17, 397-403	3-6	14

33	Time-invariant measurement of time-varying bioimpedance using vector impedance analysis. <i>Physiological Measurement</i> , 2015 , 36, 595-620	2.9	18
32	An improved crest factor minimization algorithm to synthesize multisines with arbitrary spectrum. <i>Physiological Measurement</i> , 2015 , 36, 895-910	2.9	21
31	Circular motion analysis of time-varying bioimpedance. <i>Physiological Measurement</i> , 2015 , 36, 2353-67	2.9	
30	Electrical stimulation of cardiac adipose tissue-derived progenitor cells modulates cell phenotype and genetic machinery. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2015 , 9, E76-83	4.4	32
29	Evaluation of Electrical Impedance as a Biomarker of Myostatin Inhibition in Wild Type and Muscular Dystrophy Mice. <i>PLoS ONE</i> , 2015 , 10, e0140521	3.7	20
28	Development of Bioactive Patch for Maintenance of Implanted Cells at the Myocardial Infarcted Site. <i>Journal of Nanomaterials</i> , 2015 , 2015, 1-14	3.2	5
27	Simultaneous monitoring of Staphylococcus aureus growth in a multi-parametric microfluidic platform using microscopy and impedance spectroscopy. <i>Bioelectrochemistry</i> , 2015 , 105, 56-64	5.6	12
26	Electrical Impedance Measurements on Electropermeabilized Cells Attached to Microelectrodes. <i>IFMBE Proceedings</i> , 2015 , 553-556	0.2	2
25	Differentiation of the intracellular structure of slow- versus fast-twitch muscle fibers through evaluation of the dielectric properties of tissue. <i>Physics in Medicine and Biology</i> , 2014 , 59, 2369-80	3.8	21
24	Time-frequency analysis of time-varying in vivo myocardial impedance. <i>Measurement: Journal of the International Measurement Confederation</i> , 2014 , 56, 19-29	4.6	5
23	Development and impedimetric evaluation of a magnetic interdigitated microelectrode. <i>Sensors and Actuators B: Chemical</i> , 2014 , 203, 444-451	8.5	3
22	An FPGA-based frequency response analyzer for multisine and stepped sine measurements on stationary and time-varying impedance. <i>Measurement Science and Technology</i> , 2014 , 25, 015501	2	17
21	Online monitoring of myocardial bioprosthesis for cardiac repair. <i>International Journal of Cardiology</i> , 2014 , 174, 654-61	3.2	28
20	Robust excitation power spectrum design for broadband impedance spectroscopy. <i>Measurement Science and Technology</i> , 2014 , 25, 065501	2	3
19	Propagation of Measurement Errors Through Body Composition Equations for Body Impedance Analysis. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2014 , 63, 1535-1544	5.2	17
18	A pilot spectroscopy study on time-varying bioimpedance during electrically-induced muscle contraction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 3739-42	0.9	3
17	The effect of profound dehydration on electrical impedance of mouseskeletal muscle. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 514-7	0.9	4
16	Physiological conditioning by electric field stimulation promotes cardiomyogenic gene expression in human cardiomyocyte progenitor cells. <i>Stem Cell Research and Therapy</i> , 2014 , 5, 93	8.3	19

15	Novel approach of processing electrical bioimpedance data using differential impedance analysis. <i>Medical Engineering and Physics</i> , 2013 , 35, 1349-57	2.4	28
14	In vivo electrical bioimpedance characterization of human lung tissue during the bronchoscopy procedure. A feasibility study. <i>Medical Engineering and Physics</i> , 2013 , 35, 949-57	2.4	29
13	A new measuring and identification approach for time-varying bioimpedance using multisine electrical impedance spectroscopy. <i>Physiological Measurement</i> , 2013 , 34, 339-57	2.9	55
12	Minimal implementation of an AFE4300-based spectrometer for electrical impedance spectroscopy measurements. <i>Journal of Physics: Conference Series</i> , 2013 , 434, 012014	0.3	7
11	Towards an accurate bioimpedance identification. <i>Journal of Physics: Conference Series</i> , 2013 , 434, 012002	2.3	1
10	Harmonic impedance spectra identification from time-varying bioimpedance: theory and validation. <i>Physiological Measurement</i> , 2013 , 34, 1217-38	2.9	20
9	Effect of a cell-based bioactive smart patch after myocardial infarction in swine. <i>European Heart Journal</i> , 2013 , 34, P1469-P1469	9.5	
8	Basics of broadband impedance spectroscopy measurements using periodic excitations. <i>Measurement Science and Technology</i> , 2012 , 23, 105501	2	49
7	Minimally invasive in vivo human lung tissue bioimpedance measurements during the bronchoscopy procedure. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 130-3	0.9	2
6	On the calculation of the D-optimal multisine excitation power spectrum for broadband impedance spectroscopy measurements. <i>Measurement Science and Technology</i> , 2012 , 23, 085702	2	19
5	Influence of electrical stimulation on 3D-cultures of adipose tissue derived progenitor cells (ATDPCs) behavior. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 5658-61	0.9	4
4	Novel estimation of the electrical bioimpedance using the local polynomial method. Application to in vivo real-time myocardium tissue impedance characterization during the cardiac cycle. <i>IEEE Transactions on Biomedical Engineering</i> , 2011 , 58, 3376-85	5	44
3	Optimal multisine excitation design for broadband electrical impedance spectroscopy. <i>Measurement Science and Technology</i> , 2011 , 22, 115601	2	48
2	In-cycle myocardium tissue electrical impedance monitoring using broadband impedance spectroscopy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 3975-8	0.9	3
1	Influence of the multisine excitation amplitude design for biomedical applications using Impedance Spectroscopy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 3975-8	0.9	6