David Holder

List of Publications by Year
in descending order

98 papers	2,763 citations	196777 29 h-index	242451 47 g-index
103 all docs	103 docs citations	103 times ranked	1570 citing authors

#	Article	IF	Citations
1	Simplifying the hardware requirements for fast neural EIT of peripheral nerves. Physiological Measurement, 2022, 43, 015004.	1.2	2
2	Overcoming temporal dispersion for measurement of activity-related impedance changes in unmyelinated nerves. Journal of Neural Engineering, 2022, , .	1.8	0
3	Fascicular Organisation and Neuroanatomy of the Porcine and Human Vagus Nerves: Allowing for Spatially Selective Vagus Nerve Stimulation. FASEB Journal, 2022, 36, .	0.2	1
4	Imaging slow brain activity during neocortical and hippocampal epileptiform events with electrical impedance tomography. Physiological Measurement, 2021, 42, 014001.	1.2	11
5	Model-based geometrical optimisation and in vivo validation of a spatially selective multielectrode cuff array for vagus nerve neuromodulation. Journal of Neuroscience Methods, 2021, 352, 109079.	1.3	42
6	Selective Vagus Nerve Stimulation as a Therapeutic Approach for the Treatment of ARDS: A Rationale for Neuro-Immunomodulation in COVID-19 Disease. Frontiers in Neuroscience, 2021, 15, 667036.	1.4	23
7	Fascicle localisation within peripheral nerves through evoked activity recordings: A comparison between electrical impedance tomography and multi-electrode arrays. Journal of Neuroscience Methods, 2021, 358, 109140.	1.3	13
8	Imaging of focal seizures with Electrical Impedance Tomography and depth electrodes in real time. NeuroImage, 2021, 234, 117972.	2.1	13
9	In vivo imaging of deep neural activity from the cortical surface during hippocampal epileptiform events in the rat brain using electrical impedance tomography. NeuroImage, 2020, 209, 116525.	2.1	20
10	Optimised induction of on-demand focal hippocampal and neocortical seizures by electrical stimulation. Journal of Neuroscience Methods, 2020, 346, 108911.	1.3	6
11	A 10 nV/rt Hz noise level 32-channel neural impedance sensing ASIC for local activation imaging on nerve section. , 2020, 2020, 4012-4015.		1
12	Self-Abrading Servo Electrode Helmet for Electrical Impedance Tomography. Sensors, 2020, 20, 7058.	2.1	0
13	Imaging fascicular organization of rat sciatic nerves with fast neural electrical impedance tomography. Nature Communications, 2020, 11, 6241.	5.8	24
14	MicroCT optimisation for imaging fascicular anatomy in peripheral nerves. Journal of Neuroscience Methods, 2020, 338, 108652.	1.3	29
15	SPARC: Method for Overcoming Temporal Dispersion in Unmyelinated Nerves for Imaging C Fibres with Electrical Impedance Tomography (EIT). FASEB Journal, 2020, 34, 1-1.	0.2	2
16	EIT-MESHER â€“ Segmented FEM Mesh Generation and Refinement. Journal of Open Research Software, 2020, 8, 27.	2.7	1
17	Determining the Fascicular Anatomy of the Porcine Vagus Nerve with MicroCT. FASEB Journal, 2020, 34, 1-1.	0.2	1
18	Model of Impedance Changes in Unmyelinated Nerve Fibers. IEEE Transactions on Biomedical Engineering, 2019, 66, 471-484.	2.5	20

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19	Simulation of impedance changes with a FEM model of a myelinated nerve fibre. Journal of Neural Engineering, 2019, 16, 056026.	1.8	9
20	Avoiding off-target effects in electrical stimulation of the cervical vagus nerve: Neuroanatomical tracing techniques to study fascicular anatomy of the vagus nerve. Journal of Neuroscience Methods, 2019, 325, 108325.	1.3	61
21	Optimisation of bioimpedance measurements of neuronal activity with an ex vivo preparation of Cancer pagurus peripheral nerves. Journal of Neuroscience Methods, 2019, 327, 108322.	1.3	6
22	Optimization of the electrode drive pattern for imaging fascicular compound action potentials in peripheral nerve with fast neural electrical impedance tomography. Physiological Measurement, 2019, 40, 115007.	1.2	16
23	Simultaneous EIT and EEG using frequency division multiplexing. Physiological Measurement, 2019, 40, 034007.	1.2	15
24	Investigating the safety of fast neural electrical impedance tomography in the rat brain. Physiological Measurement, 2019, 40, 034003.	1.2	10
25	Effect of dispersion in nerve on compound action potential and impedance change: a modelling study. Physiological Measurement, 2019, 40, 034001.	1.2	8
26	Electrode fabrication and interface optimization for imaging of evoked peripheral nervous system activity with electrical impedance tomography (EIT). Journal of Neural Engineering, 2019, 16, 016001.	1.8	23
27	Feasibility of imaging epileptic seizure onset with EIT and depth electrodes. NeuroImage, 2018, 173, 311-321.	2.1	25
28	Characterising the frequency response of impedance changes during evoked physiological activity in the rat brain. Physiological Measurement, 2018, 39, 034007.	1.2	16
29	Imaging fast electrical activity in the brain during ictal epileptiform discharges with electrical impedance tomography. NeuroImage: Clinical, 2018, 20, 674-684.	1.4	22
30	T16. Imaging propagation of ictal spike-and-wave activity in the cerebral cortex over milliseconds with fast neural electrical impedance tomography. Clinical Neurophysiology, 2018, 129, e7.	0.7	0
31	F36. Imaging fascicle traffic in peripheral nerve using fast neural EIT. Clinical Neurophysiology, 2018, 129, e80.	0.7	1
32	Multi-frequency electrical impedance tomography and neuroimaging data in stroke patients. Scientific Data, 2018, 5, 180112.	2.4	51
33	Feasibility of imaging evoked activity throughout the rat brain using electrical impedance tomography. NeuroImage, 2018, 178, 1-10.	2.1	26
34	Frequency-dependent characterisation of impedance changes during epileptiform activity in a rat model of epilepsy. Physiological Measurement, 2018, 39, 085003.	1.2	13
35	Imaging fast neural traffic at fascicular level with electrical impedance tomography: proof of principle in rat sciatic nerve. Journal of Neural Engineering, 2018, 15, 056025.	1.8	40
36	Reproducible 3D printed head tanks for electrical impedance tomography with realistic shape and conductivity distribution. Physiological Measurement, 2017, 38, 1116-1131.	1.2	19

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37	Optimisation of current injection protocol based on a region of interest. Physiological Measurement, 2017, 38, 1158-1175.	1.2	14
38	Feasibility study of imaging fast neural activity in retinal tissue using Electrical Impedance Tomography. , 2017, 2017, 529-532.		0
39	A Versatile and Reproducible Multi-Frequency Electrical Impedance Tomography System. Sensors, 2017, 17, 280.	2.1	80
40	In vivobioimpedance changes during haemorrhagic and ischaemic stroke in rats: towards 3D stroke imaging using electrical impedance tomography. Physiological Measurement, 2016, 37, 765-784.	1.2	31
41	Are patient specific meshes required for EIT head imaging?. Physiological Measurement, 2016, 37, 879-892.	1.2	16
42	Correction of electrode modelling errors in multi-frequency EIT imaging. Physiological Measurement, 2016, 37, 893-903.	1.2	11
43	Characterisation and imaging of cortical impedance changes during interictal and ictal activity in the anaesthetised rat. NeuroImage, 2016, 124, 813-823.	2.1	32
44	Imaging fast electrical activity in the brain with electrical impedance tomography. NeuroImage, 2016, 124, 204-213.	2.1	121
45	Correcting electrode modelling errors in EIT on realistic 3D head models. Physiological Measurement, 2015, 36, 2423-2442.	1.2	24
46	In vivobioimpedance measurement of healthy and ischaemic rat brain: implications for stroke imaging using electrical impedance tomography. Physiological Measurement, 2015, 36, 1273-1282.	1.2	54
47	A Fast Parallel Solver for the Forward Problem in Electrical Impedance Tomography. IEEE Transactions on Biomedical Engineering, 2015, 62, 126-137.	2.5	52
48	Investigation of potential artefactual changes in measurements of impedance changes during evoked activity: implications to electrical impedance tomography of brain function. Physiological Measurement, 2015, 36, 1245-1259.	1.2	17
49	Comparison of total variation algorithms for electrical impedance tomography. Physiological Measurement, 2015, 36, 1193-1209.	1.2	42
50	A Reconstruction-Classification Method for Multifrequency Electrical Impedance Tomography. IEEE Transactions on Medical Imaging, 2015, 34, 1486-1497.	5.4	32
51	Multifrequency electrical impedance tomography with total variation regularization. Physiological Measurement, 2015, 36, 1943-1961.	1.2	11
52	Parallel, multi frequency EIT measurement, suitable for recording impedance changes during epilepsy. Journal of Electrical Bioimpedance, 2015, 6, 37-43.	0.5	16
53	The factorization method for three dimensional electrical impedance tomography. Inverse Problems, 2014, 30, 045005.	1.0	10
54	A method for reconstructing tomographic images of evoked neural activity with electrical impedance tomography using intracranial planar arrays. Physiological Measurement, 2014, 35, 1095-1109.	1.2	57

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55	Multifrequency Electrical Impedance Tomography Using Spectral Constraints. IEEE Transactions on Medical Imaging, 2014, 33, 340-350.	5.4	82
56	Stroke type differentiation using spectrally constrained multifrequency EIT: evaluation of feasibility in a realistic head model. Physiological Measurement, 2014, 35, 1051-1066.	1.2	61
57	Mapping cortical haemodynamics during neonatal seizures using diffuse optical tomography: A case study. NeuroImage: Clinical, 2014, 5, 256-265.	1.4	43
58	Design for a three-dimensional printed laryngoscope blade for the intubation of rats. Lab Animal, 2014, 43, 140-142.	0.2	10
59	A method for rapid production of subject specific finite element meshes for electrical impedance tomography of the human head. Physiological Measurement, 2012, 33, 801-816.	1.2	13
60	Comparison of frequency difference reconstruction algorithms for the detection of acute stroke using EIT in a realistic head-shaped tank. Physiological Measurement, 2012, 33, 767-786.	1.2	45
61	Valedictory editorial from the Chairman of the IFMBE Journal Committee on the occasion of a change of Editors. Medical and Biological Engineering and Computing, 2012, 50, 1187-1188.	1.6	0
62	A cable theory based biophysical model of resistance change in crab peripheral nerve and human cerebral cortex during neuronal depolarisation: implications for electrical impedance tomography of fast neural activity in the brain. Medical and Biological Engineering and Computing, 2012, 50, 425-437.	1.6	29
63	A novel method for recording neuronal depolarization with recording at 125â€“825ÂHz: implications for imaging fast neural activity in the brain with electrical impedance tomography. Medical and Biological Engineering and Computing, 2011, 49, 593-604.	1.6	47
64	Electrical impedance tomography in anisotropic media with known eigenvectors. Inverse Problems, 2011, 27, 065004.	1.0	12
65	Nonconvulsive Status Epilepticus and Leucoencephalopathy After High-Dose Methotrexate. Journal of Clinical Oncology, 2011, 29, e459-e461.	0.8	5
66	A method for removing artefacts from continuous EEG recordings during functional electrical impedance tomography for the detection of epileptic seizures. Physiological Measurement, 2010, 31, S57-S72.	1.2	11
67	Frequency-difference electrical impedance tomography: Phantom imaging experiments. Journal of Physics: Conference Series, 2010, 224, 012152.	0.3	14
68	Frequency-difference EIT (fdEIT) using weighted difference and equivalent homogeneous admittivity: validation by simulation and tank experiment. Physiological Measurement, 2009, 30, 1087-1099.	1.2	62
69	An electrode addressing protocol for imaging brain function with electrical impedance tomography using a 16-channel semi-parallel system. Physiological Measurement, 2009, 30, S85-S101.	1.2	28
70	A modelling study to inform specification and optimal electrode placement for imaging of neuronal depolarization during visual evoked responses by electrical and magnetic detection impedance tomography. Physiological Measurement, 2009, 30, S201-S224.	1.2	12
71	Imaging cerebral haemorrhage with magnetic induction tomography: numerical modelling. Physiological Measurement, 2009, 30, S187-S200.	1.2	71
72	A method for recording resistance changes non-invasively during neuronal depolarization with a view to imaging brain activity with electrical impedance tomography. Journal of Neuroscience Methods, 2009, 180, 87-96.	1.3	17

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73	A comparison of two EIT systems suitable for imaging impedance changes in epilepsy. Physiological Measurement, 2009, 30, S103-S120.	1.2	25
74	Impedance changes recorded with scalp electrodes during visual evoked responses: Implications for Electrical Impedance Tomography of fast neural activity. NeuroImage, 2009, 47, 514-522.	2.1	42
75	Code-Division-Multiplexed Electrical Impedance Tomography Spectroscopy. IEEE Transactions on Biomedical Circuits and Systems, 2009, 3, 332-338.	2.7	20
76	A novel method for automated classification of epileptiform activity in the human electroencephalogram-based on independent component analysis. Medical and Biological Engineering and Computing, 2008, 46, 263-272.	1.6	54
77	Use of anisotropic modelling in electrical impedance tomography; Description of method and preliminary assessment of utility in imaging brain function in the adult human head. NeuroImage, 2008, 43, 258-268.	2.1	105
78	Comparison of methods for optimal choice of the regularization parameter for linear electrical impedance tomography of brain function. Physiological Measurement, 2008, 29, 1319-1334.	1.2	25
79	Validation of a finite-element solution for electrical impedance tomography in an anisotropic medium. Physiological Measurement, 2007, 28, S129-S140.	1.2	18
80	A review of errors in multi-frequency EIT instrumentation. Physiological Measurement, 2007, 28, S197-S215.	1.2	119
81	Analysis of resting noise characteristics of three EIT systems in order to compare suitability for time difference imaging with scalp electrodes during epileptic seizures. Physiological Measurement, 2007, 28, S217-S236.	1.2	19
82	Use of statistical parametric mapping (SPM) to enhance electrical impedance tomography (EIT) image sets. Physiological Measurement, 2007, 28, S141-S151.	1.2	5
83	Multi-frequency EIT system with radially symmetric architecture: KHU Mark1. Physiological Measurement, 2007, 28, S183-S196.	1.2	86
84	Calibration methods for a multi-channel multi-frequency EIT system. Physiological Measurement, 2007, 28, 1175-1188.	1.2	49
85	Electrode Circuits for Frequency- and Code-Division Multiplexed Impedance Tomography. , 2007, , .		4
86	Design of electrodes and current limits for low frequency electrical impedance tomography of the brain. Medical and Biological Engineering and Computing, 2007, 45, 621-633.	1.6	51
87	Multi-frequency electrical impedance tomography (EIT) of the adult human head: initial findings in brain tumours, arteriovenous malformations and chronic stroke, development of an analysis method and calibration. Physiological Measurement, 2006, 27, S147-S161.	1.2	113
88	P04.6 Detection of spikes in EEG recordings using features derived from ICA. Clinical Neurophysiology, 2006, 117, 139-140.	0.7	0
89	Singularity Characteristics of Needle EMG IP Signals. IEEE Transactions on Biomedical Engineering, 2006, 53, 219-225.	2.5	27
90	Factors limiting the application of electrical impedance tomography for identification of regional conductivity changes using scalp electrodes during epileptic seizures in humans. Physiological Measurement, 2006, 27, S163-S174.	1.2	67

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91	Design and calibration of a compact multi-frequency EIT system for acute stroke imaging. Physiological Measurement, 2006, 27, S199-S210.	1.2	102
92	Identification of a suitable current waveform for acute stroke imaging. Physiological Measurement, 2006, 27, S211-S219.	1.2	18
93	Using the GRID to improve the computation speed of electrical impedance tomography (EIT) reconstruction algorithms. Physiological Measurement, 2005, 26, S209-S215.	1.2	16
94	The spatial resolution improvement of EIT images by GVSPM-FOCUSS algorithm. Physiological Measurement, 2004, 25, 209-225.	1.2	3
95	Tele-EEG in epilepsy: review and initial experience with software to enable EEG review over a telephone link. Seizure: the Journal of the British Epilepsy Association, 2003, 12, 85-91.	0.9	14
96	The application of the generalized vector sample pattern matching method for EIT image reconstruction. Physiological Measurement, 2003, 24, 449-466.	1.2	9
97	Experimental Assessment of Phase Magnitude Imaging in Multifrequency EIT by Simulation and Saline Tank Studies. Annals of the New York Academy of Sciences, 1999, 873, 381-387.	1.8	3
98	Development of a Reconstruction Algorithm for Imaging Impedance Changes in the Human Head. Annals of the New York Academy of Sciences, 1999, 873, 482-492.	1.8	4