Alexander J Casson

List of Publications by Year
in descending order

85 papers	3,091 citations	257101 24 h-index	205818 48 g-index
89 all docs	89 docs citations	89 times ranked	3433 citing authors

#	Article	IF	Citations
1	Machine learning algorithm validation with a limited sample size. PLoS ONE, 2019, 14, e0224365.	1.1	771
2	Wearable Electroencephalography. IEEE Engineering in Medicine and Biology Magazine, 2010, 29, 44-56.	1.1	303
3	All inkjet-printed graphene-based conductive patterns for wearable e-textile applications. Journal of Materials Chemistry C, 2017, 5, 11640-11648.	2.7	217
4	Wearable EEG and beyond. Biomedical Engineering Letters, 2019, 9, 53-71.	2.1	151
5	Optimal features for online seizure detection. Medical and Biological Engineering and Computing, 2012, 50, 659-669.	1.6	102
6	Description of a Database Containing Wrist PPG Signals Recorded during Physical Exercise with Both Accelerometer and Gyroscope Measures of Motion. Data, 2017, 2, 1.	1.2	78
7	3D Printed Dry EEG Electrodes. Sensors, 2016, 16, 1635.	2.1	77
8	Compressive sensing scalp EEG signals: implementations and practical performance. Medical and Biological Engineering and Computing, 2012, 50, 1137-1145.	1.6	76
9	A 60 pW g$_{m}$C Continuous Wavelet Transform Circuit for Portable EEG Systems. IEEE Journal of Solid-State Circuits, 2011, 46, 1406-1415.	3.5	65
10	An Ultra Low Power Personalizable Wrist Worn ECG Monitor Integrated With IoT Infrastructure. IEEE Access, 2018, 6, 44010-44021.	2.6	63
11	Design and Implementation of a Convolutional Neural Network on an Edge Computing Smartphone for Human Activity Recognition. IEEE Access, 2019, 7, 133509-133520.	2.6	59
12	Wearable EEG: what is it, why is it needed and what does it entail?. , 2008, 2008, 5867-70.		58
13	Towards Photoplethysmography-Based Estimation of Instantaneous Heart Rate During Physical Activity. IEEE Transactions on Biomedical Engineering, 2017, 64, 2042-2053.	2.5	48
14	Toward Online Data Reduction for Portable Electroencephalography Systems in Epilepsy. IEEE Transactions on Biomedical Engineering, 2009, 56, 2816-2825.	2.5	46
15	Gyroscope vs. accelerometer measurements of motion from wrist PPG during physical exercise. ICT Express, 2016, 2, 175-179.	3.3	42
16	Examining the optimal timing for closed-loop auditory stimulation of slow-wave sleep in young and older adults. Sleep, 2020, 43, .	0.6	42
17	A Subhertz Nanopower Low-Pass Filter. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 351-355.	2.2	41
18	Removal of Gross Artifacts of Transcranial Alternating Current Stimulation in Simultaneous EEG Monitoring. Sensors, 2019, 19, 190.	2.1	41

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19	Applying Machine Learning to Kinematic and Eye Movement Features of a Movement Imitation Task to Predict Autism Diagnosis. Scientific Reports, 2020, 10, 8346.	1.6	41
20	Fully printed and multifunctional graphene-based wearable e-textiles for personalized healthcare applications. IScience, 2022, 25, 103945.	1.9	40
21	Effects of neurofeedback in the management of chronic pain: A systematic review and metaâ€analysis of clinical trials. European Journal of Pain, 2020, 24, 1440-1457.	1.4	35
22	Performance metrics for the accurate characterisation of interictal spike detection algorithms. Journal of Neuroscience Methods, 2009, 177, 479-487.	1.3	33
23	The impact of signal normalization on seizure detection using line length features. Medical and Biological Engineering and Computing, 2015, 53, 929-942.	1.6	33
24	Gait Spatiotemporal Signal Analysis for Parkinsonâ€™s Disease Detection and Severity Rating. IEEE Sensors Journal, 2021, 21, 1838-1848.	2.4	33
25	Flexible 3D-Printed EEG Electrodes. Sensors, 2019, 19, 1650.	2.1	31
26	Data reduction techniques to facilitate wireless and long term AEEG epilepsy monitoring. , 2007, , .		29
27	Five Day Attachment ECG Electrodes for Longitudinal Bio-Sensing Using Conformal Tattoo Substrates. IEEE Sensors Journal, 2017, 17, 2205-2214.	2.4	25
28	Electroencephalogram. , 2018, , 45-81.		23
29	An analogue bandpass filter realisation of the Continuous Wavelet Transform. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1850-4.	0.5	22
30	Artificial Neural Network classification of operator workload with an assessment of time variation and noise-enhancement to increase performance. Frontiers in Neuroscience, 2014, 8, 372.	1.4	21
31	Algorithm for AEEG data selection leading to wireless and long term epilepsy monitoring. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2456-9.	0.5	20
32	Compression in Wearable Sensor Nodes: Impacts of Node Topology. IEEE Transactions on Biomedical Engineering, 2014, 61, 1080-1090.	2.5	20
33	The Reflectance of Human Skin in the Millimeter-Wave Band. Sensors, 2020, 20, 1480.	2.1	20
34	Signal agnostic compressive sensing for Body Area Networks: Comparison of signal reconstructions. , 2012, 2012, 4497-500.		19
35	Quantifying the performance of compressive sensing on scalp EEG signals. , 2010, , .		17
36	Estimation of heart rate from foot worn photoplethysmography sensors during fast bike exercise. , 2016, 2016, 3155-2158.		17

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37	Energy efficient heart rate sensing using a painted electrode ECG wearable. , 2017, , .		17
38	A Review and Modern Approach to LC Ladder Synthesis. Journal of Low Power Electronics and Applications, 2011, 1, 20-44.	1.3	16
39	Removal of Transcranial a.c. Current Stimulation artifact from simultaneous EEG recordings by superposition of moving averages. , 2015, 2015, 3436-9.		15
40	Utilising noise to improve an interictal spike detector. Journal of Neuroscience Methods, 2011, 201, 262-268.	1.3	13
41	Entraining Alpha Activity Using Visual Stimulation in Patients With Chronic Musculoskeletal Pain: A Feasibility Study. Frontiers in Neuroscience, 2020, 14, 828.	1.4	13
42	Inkjet printed ECG electrodes for long term biosignal monitoring in personalized and ubiquitous healthcare. , 2015, 2015, 4013-6.		12
43	Machine learning validation of EEG+tACS artefact removal. Journal of Neural Engineering, 2020, 17, 016034.	1.8	11
44	Inertial Kinetic Energy Harvesters for Wearables: The Benefits of Energy Harvesting at the Foot. IEEE Access, 2020, 8, 208136-208148.	2.6	11
45	Monitoring of Dynamic Plantar Foot Temperatures in Diabetes with Personalised 3D-Printed Wearables. Sensors, 2021, 21, 1717.	2.1	11
46	Investigating Gelatine Based Head Phantoms for Electroencephalography Compared to Electrical and Ex Vivo Porcine Skin Models. IEEE Access, 2021, 9, 96722-96738.	2.6	11
47	An Analog Circuit Approximation of the Discrete Wavelet Transform for Ultra Low Power Signal Processing in Wearable Sensor Nodes. Sensors, 2015, 15, 31914-31929.	2.1	10
48	Opportunities and challenges for ultra low power signal processing in wearable healthcare. , 2015, , .		10
49	Generic vs custom; analogue vs digital: On the implementation of an online EEG signal processing algorithm. , 2008, 2008, 5876-80.		9
50	Performance of graphene ECG electrodes under varying conditions. , 2018, 2018, 3813-3816.		9
51	An Exploration of Behind-the-Ear ECG Signals From a Single Ear Using Inkjet Printed Conformal Tattoo Electrodes. , 2018, 2018, 1283-1286.		9
52	Instructions to attend to an observed action increase imitation in autistic adults. Autism, 2020, 24, 730-743.	2.4	9
53	Motion artefact removal in electroencephalography and electrocardiography by using multichannel inertial measurement units and adaptive filtering. Healthcare Technology Letters, 2021, 8, 128-138.	1.9	9
54	Enabling Free Movement EEG Tasks by Eye Fixation and Gyroscope Motion Correction: EEG Effects of Color Priming in Dress Shopping. IEEE Access, 2018, 6, 62975-62987.	2.6	8

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55	Adaptive Symptom Monitoring Using Hidden Markov Models â€" An Application in Ecological Momentary Assessment. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1770-1780.	3.9	8
56	Assessing the impact of signal normalization: Preliminary results on epileptic seizure detection. , 2011, 2011, 1439-42.		7
57	Towards out-of-the-lab EEG in uncontrolled environments: Feasibility study of dry EEG recordings during exercise bike riding. , 2015, 2015, 1025-8.		7
58	Alpha entrainment drives pain relief using visual stimulation in a sample of chronic pain patients: a proof-of-concept controlled study. NeuroReport, 2021, 32, 394-398.	0.6	7
59	An introduction to future truly wearable medical devices—From application to ASIC. , 2010, 2010, 3430-1.		6
60	Discriminating between best performing features for seizure detection and data selection. , 2013, 2013, 1692-5.		6
61	Wearable Algorithms. , 2014, , 353-382.		6
62	A Graphene-Based Sleep Mask for Comfortable Wearable Eye Tracking. , 2019, 2019, 6693-6696.		6
63	Design and optimization of a TensorFlow Lite deep learning neural network for human activity recognition on a smartphone. , 2021, 2021, 7028-7031.		6
64	On data reduction in EEG monitoring: Comparison between ambulatory and non-ambulatory recordings. , 2008, 2008, 5885-8.		5
65	A Low Power Linear Phase Programmable Long Delay Circuit. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 432-441.	2.7	5
66	A smartphone based platform for portable non-invasive light and sound neuromodulation. , 2020, 2020, 5228-5231.		5
67	Using EEG Alpha States to Understand Learning During Alpha Neurofeedback Training for Chronic Pain. Frontiers in Neuroscience, 2020, 14, 620666.	1.4	5
68	Towards signal processing assisted hardware for continuous in-band electrode impedance monitoring (Invited paper). , 2017, , .		4
69	Edge algorithms for wearables: an overview of a truly multi-disciplinary problem. , 2021, , 379-414.		4
70	An inverse filter realisation of a single scale Inverse continuous wavelet transform. , 2008, , .		3
71	Low power signal processing electronics for wearable medical devices. , 2010, 2010, 3439-40.		3
72	Improving seizure detection performance reporting: Analysing the duration needed for a detection. , 2012, 2012, 1069-72.		3

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73	Implementation of a batch normalized deep LSTM recurrent network on a smartphone for human activity recognition. , 2019, , .		3
74	Spatiotemporal Analysis by Deep Learning of Gait Signatures From Floor Sensors. IEEE Sensors Journal, 2021, 21, 16904-16914.	2.4	3
75	Directly conductive, flexible, 3D printed, EEG electrodes. , 2022, , .		3
76	Performance of wrist based electrocardiography with conventional ECG analysis algorithms. , 2014, , .		2
77	Opportunities and challenges for flexible and printable electrodes in electroencephalography. , 2021, , .		2
78	Towards Noise-Enhanced Augmented Cognition. Lecture Notes in Computer Science, 2013, , 259-268.	1.0	2
79	Screen Printed, Skin-compliant Sensors for Mouse Electrocardiography. , 2022, , .		2
80	Hardware aware algorithm performance and the low power continuous wavelet transform. , 2011, , .		1
81	Impact of shift working on the potential for self-powering via kinetic energy harvesting in wearable devices. , 2021, 2021, 7003-7006.		1
82	Considerations on Analogue to Digital Converter Architectures for EEG Acquisition in Augmented Cognition Applications. Proceedings of the Human Factors and Ergonomics Society, 2008, 52, 197-201.	0.2	0
83	Standard filter approximations for low power Continuous Wavelet Transforms. , 2010, 2010, 646-9.		0
84	Nine degree of freedom motion estimation for wrist PPG heart rate measurements. , 2019, 2019, 3231-3234.		0
85	Downsampling wearable sensor data packets by measuring their information value. , 2019, , .		0