Gari D Clifford

List of Publications by Year in descending order

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76326 9,592 140 40 citations h-index papers

g-index 152 152 152 8230 docs citations times ranked citing authors all docs

43889

91

#	Article	IF	CITATIONS
1	Multiparameter Intelligent Monitoring in Intensive Care II: A public-access intensive care unit database*. Critical Care Medicine, 2011, 39, 952-960.	0.9	1,404
2	A dynamical model for generating synthetic electrocardiogram signals. IEEE Transactions on Biomedical Engineering, 2003, 50, 289-294.	4.2	900
3	An Interpretable Machine Learning Model for Accurate Prediction of Sepsis in the ICU. Critical Care Medicine, 2018, 46, 547-553.	0.9	494
4	An open access database for the evaluation of heart sound algorithms. Physiological Measurement, 2016, 37, 2181-2213.	2.1	473
5	A Nonlinear Bayesian Filtering Framework for ECG Denoising. IEEE Transactions on Biomedical Engineering, 2007, 54, 2172-2185.	4.2	398
6	Logistic Regression-HSMM-based Heart Sound Segmentation. IEEE Transactions on Biomedical Engineering, 2015, 63, 1-1.	4.2	280
7	Machine Learning and Decision Support in Critical Care. Proceedings of the IEEE, 2016, 104, 444-466.	21.3	251
8	Quantifying Errors in Spectral Estimates of HRV Due to Beat Replacement and Resampling. IEEE Transactions on Biomedical Engineering, 2005, 52, 630-638.	4.2	231
9	Classification of 12-lead ECGs: the PhysioNet/Computing in Cardiology Challenge 2020. Physiological Measurement, 2020, 41, 124003.	2.1	199
10	A New Severity of Illness Scale Using a Subset of Acute Physiology and Chronic Health Evaluation Data Elements Shows Comparable Predictive Accuracy*. Critical Care Medicine, 2013, 41, 1711-1718.	0.9	184
11	An open source benchmarked toolbox for cardiovascular waveform and interval analysis. Physiological Measurement, 2018, 39, 105004.	2.1	173
12	A machine learning approach to multi-level ECG signal quality classification. Computer Methods and Programs in Biomedicine, 2014, 117, 435-447.	4.7	170
13	Application of independent component analysis in removing artefacts from the electrocardiogram. Neural Computing and Applications, 2006, 15, 105-116.	5.6	166
14	Non-invasive fetal ECG analysis. Physiological Measurement, 2014, 35, 1521-1536.	2.1	149
15	A Comparison of Single Channel Fetal ECG Extraction Methods. Annals of Biomedical Engineering, 2014, 42, 1340-1353.	2.5	145
16	Early Prediction of Sepsis From Clinical Data: The PhysioNet/Computing in Cardiology Challenge 2019. Critical Care Medicine, 2020, 48, 210-217.	0.9	140
17	An open-source framework for stress-testing non-invasive foetal ECG extraction algorithms. Physiological Measurement, 2016, 37, 627-648.	2.1	125
18	A review of current sleep screening applications for smartphones. Physiological Measurement, 2013, 34, R29-R46.	2.1	115

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19	Early sepsis detection in critical care patients using multiscale blood pressure and heart rate dynamics. Journal of Electrocardiology, 2017, 50, 739-743.	0.9	111
20	Combining and benchmarking methods of foetal ECG extraction without maternal or scalp electrode data. Physiological Measurement, 2014, 35, 1569-1589.	2.1	109
21	Signal quality and data fusion for false alarm reduction in the intensive care unit. Journal of Electrocardiology, 2012, 45, 596-603.	0.9	101
22	SMARTHealth India: Development and Field Evaluation of a Mobile Clinical Decision Support System for Cardiovascular Diseases in Rural India. JMIR MHealth and UHealth, 2014, 2, e54.	3.7	100
23	A practical guide to non-invasive foetal electrocardiogram extraction and analysis. Physiological Measurement, 2016, 37, R1-R35.	2.1	99
24	The AURORA Study: a longitudinal, multimodal library of brain biology and function after traumatic stress exposure. Molecular Psychiatry, 2020, 25, 283-296.	7.9	92
25	A review of physiological and behavioral monitoring with digital sensors for neuropsychiatric illnesses. Physiological Measurement, 2018, 39, 05TR01.	2.1	86
26	Multimodal heart beat detection using signal quality indices. Physiological Measurement, 2015, 36, 1665-1677.	2.1	85
27	You Snooze, You Win: The PhysioNet/Computing in Cardiology Challenge 2018. , 2018, 45, .		83
28	An ECG simulator for generating maternal-foetal activity mixtures on abdominal ECG recordings. Physiological Measurement, 2014, 35, 1537-1550.	2.1	82
29	Classification of Normal/Abnormal Heart Sound Recordings: the PhysioNet/Computing in Cardiology Challenge 2016., 0, , .		82
30	The PhysioNet/Computing in Cardiology Challenge 2015: Reducing false arrhythmia alarms in the ICU., 2015, 2015, 273-276.		81
31	SleepAp: An Automated Obstructive Sleep Apnoea Screening Application for Smartphones. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 325-331.	6.3	78
32	Digital health system for personalised COPD long-term management. BMC Medical Informatics and Decision Making, 2017, 17, 19.	3.0	74
33	Recent advances in heart sound analysis. Physiological Measurement, 2017, 38, E10-E25.	2.1	71
34	Combining sparse coding and time-domain features for heart sound classification. Physiological Measurement, 2017, 38, 1701-1713.	2.1	70
35	Deep learning in the cross-time frequency domain for sleep staging from a single-lead electrocardiogram. Physiological Measurement, 2018, 39, 124005.	2.1	64
36	Synthetic ECG generation and Bayesian filtering using a Gaussian wave-based dynamical model. Physiological Measurement, 2010, 31, 1309-1329.	2.1	57

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37	Dynamic Data During Hypotensive Episode Improves Mortality Predictions Among Patients With Sepsis and Hypotension*. Critical Care Medicine, 2013, 41, 954-962.	0.9	53
38	Stage-independent, single lead EEG sleep spindle detection using the continuous wavelet transform and local weighted smoothing. Frontiers in Human Neuroscience, 2015, 9, 181.	2.0	52
39	Robust fundamental frequency estimation in sustained vowels: Detailed algorithmic comparisons and information fusion with adaptive Kalman filtering. Journal of the Acoustical Society of America, 2014, 135, 2885-2901.	1.1	51
40	Impact of the presence of noise on RR interval-based atrial fibrillation detection. Journal of Electrocardiology, 2015, 48, 947-951.	0.9	49
41	A 1.5T MRIâ€conditional 12â€lead electrocardiogram for MRI and intraâ€MR intervention. Magnetic Resonance in Medicine, 2014, 71, 1336-1347.	3.0	48
42	Performance of an open-source heart sound segmentation algorithm on eight independent databases. Physiological Measurement, 2017, 38, 1730-1745.	2.1	46
43	Monitoring fetal maturation—objectives, techniques and indices of autonomic function. Physiological Measurement, 2017, 38, R61-R88.	2.1	45
44	SMARThealth India: A stepped-wedge, cluster randomised controlled trial of a community health worker managed mobile health intervention for people assessed at high cardiovascular disease risk in rural India. PLoS ONE, 2019, 14, e0213708.	2.5	45
45	Robust detection of heart beats in multimodal data. Physiological Measurement, 2015, 36, 1629-1644.	2.1	44
46	Remote health diagnosis and monitoring in the time of COVID-19. Physiological Measurement, 2020, 41, 10TR01.	2.1	44
47	An artificial vector model for generating abnormal electrocardiographic rhythms. Physiological Measurement, 2010, 31, 595-609.	2.1	42
48	A Multilead Scheme Based on Periodic Component Analysis for T-Wave Alternans Analysis in the ECG. Annals of Biomedical Engineering, 2010, 38, 2532-2541.	2.5	40
49	A multifaceted strategy using mobile technology to assist rural primary healthcare doctors and frontline health workers in cardiovascular disease risk management: protocol for the SMARTHealth India cluster randomised controlled trial. Implementation Science, 2013, 8, 137.	6.9	40
50	mHealth intervention to improve the continuum of maternal and perinatal care in rural Guatemala: a pragmatic, randomized controlled feasibility trial. Reproductive Health, 2018, 15, 120.	3.1	40
51	False alarm reduction in critical care. Physiological Measurement, 2016, 37, E5-E23.	2.1	38
52	Brain-Based Biotypes of Psychiatric Vulnerability in the Acute Aftermath of Trauma. American Journal of Psychiatry, 2021, 178, 1037-1049.	7.2	36
53	Clinician blood pressure documentation of stable intensive care patients: An intelligent archiving agent has a higher association with future hypotension. Critical Care Medicine, 2011, 39, 1006-1014.	0.9	34
54	Heart beat detection in multimodal physiological data using a hidden semi-Markov model and signal quality indices. Physiological Measurement, 2015, 36, 1717-1727.	2.1	33

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55	An mHealth monitoring system for traditional birth attendant-led antenatal risk assessment in rural Guatemala. Journal of Medical Engineering and Technology, 2016, 40, 356-371.	1.4	33
56	Critical appraisal of technologies to assess electrical activity during atrial fibrillation: a position paper from the European Heart Rhythm Association and European Society of Cardiology Working Group on eCardiology in collaboration with the Heart Rhythm Society, Asia Pacific Heart Rhythm Society, Latin American Heart Rhythm Society and Computing in Cardiology. Europace, 2022, 24, 313-330.	1.7	33
57	Crowd-Sourced Annotation of ECG Signals Using Contextual Information. Annals of Biomedical Engineering, 2014, 42, 871-884.	2.5	32
58	Multiscale network representation of physiological time series for early prediction of sepsis. Physiological Measurement, 2017, 38, 2235-2248.	2.1	32
59	Prognostic neuroimaging biomarkers of trauma-related psychopathology: resting-state fMRI shortly after trauma predicts future PTSD and depression symptoms in the AURORA study. Neuropsychopharmacology, 2021, 46, 1263-1271.	5.4	32
60	A NOVEL FRAMEWORK FOR SIGNAL REPRESENTATION AND SOURCE SEPARATION: APPLICATIONS TO FILTERING AND SEGMENTATION OF BIOSIGNALS. Journal of Biological Systems, 2006, 14, 169-183.	1.4	31
61	Health Literacy, Health Numeracy, and Trust in Doctor: Effects on Key Patient Health Outcomes. Journal of Consumer Affairs, 2020, 54, 3-42.	2.3	31
62	The CirCor DigiScope Dataset: From Murmur Detection to Murmur Classification. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 2524-2535.	6.3	31
63	Robust classification of neonatal apnoea-related desaturations. Physiological Measurement, 2012, 33, 1503-1516.	2.1	29
64	Automated signal quality assessment of mobile phone-recorded heart sound signals. Journal of Medical Engineering and Technology, 2016, 40, 342-355.	1.4	29
65	First steps in using machine learning on fMRI data to predict intrusive memories of traumatic film footage. Behaviour Research and Therapy, 2014, 62, 37-46.	3.1	28
66	VisMET: a passive, efficient, and sensitive assessment of visuospatial memory in healthy aging, mild cognitive impairment, and Alzheimer's disease. Learning and Memory, 2019, 26, 93-100.	1.3	28
67	eARDS: A multi-center validation of an interpretable machine learning algorithm of early onset Acute Respiratory Distress Syndrome (ARDS) among critically ill adults with COVID-19. PLoS ONE, 2021, 16, e0257056.	2.5	28
68	Evaluation of the fetal QT interval using non-invasive fetal ECG technology. Physiological Measurement, 2016, 37, 1392-1403.	2.1	27
69	Rationale and Design of the Emory Healthy Aging and Emory Healthy Brain Studies. Neuroepidemiology, 2019, 53, 187-200.	2.3	27
70	Model-based estimation of loop gain using spontaneous breathing: A validation study. Respiratory Physiology and Neurobiology, 2014, 201, 84-92.	1.6	26
71	Transfer learning from ECG to PPG for improved sleep staging from wrist-worn wearables. Physiological Measurement, 2021, 42, 044004.	2.1	26
72	Deep Convolutional Neural Networks and Transfer Learning for Measuring Cognitive Impairment Using Eye-Tracking in a Distributed Tablet-Based Environment. IEEE Transactions on Biomedical Engineering, 2021, 68, 11-18.	4.2	25

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73	Heart rate-based window segmentation improves accuracy of classifying posttraumatic stress disorder using heart rate variability measures. Physiological Measurement, 2017, 38, 1061-1076.	2.1	24
74	Continuous assessment of schizophrenia using heart rate and accelerometer data. Physiological Measurement, 2017, 38, 1456-1471.	2.1	24
75	Objective identification and analysis of physiological and behavioral signs of schizophrenia. Journal of Mental Health, 2015, 24, 276-282.	1.9	23
76	Feasibility of Single Channel Oximetry for Mass Screening of Obstructive Sleep Apnea. EClinicalMedicine, 2019, 11, 81-88.	7.1	23
77	Prior sleep problems and adverse post-traumatic neuropsychiatric sequelae of motor vehicle collision in the AURORA study. Sleep, 2021, 44, .	1.1	23
78	Development and Validation of a Model to Predict Posttraumatic Stress Disorder and Major Depression After a Motor Vehicle Collision. JAMA Psychiatry, 2021, 78, 1228.	11.0	23
79	Acquisition of electrocardiogram signals during magnetic resonance imaging. Physiological Measurement, 2017, 38, R119-R142.	2.1	22
80	E-health in low to middle income countries. Journal of Medical Engineering and Technology, 2016, 40, 336-341.	1.4	19
81	Rethinking Algorithm Performance Metrics for Artificial Intelligence in Diagnostic Medicine. JAMA - Journal of the American Medical Association, 2022, 328, 329.	7.4	19
82	Fusing Continuous-Valued Medical Labels Using a Bayesian Model. Annals of Biomedical Engineering, 2015, 43, 2892-2902.	2.5	18
83	The evaluation of an open source online training system for teaching 12 lead electrocardiographic interpretation. Journal of Electrocardiology, 2016, 49, 454-461.	0.9	18
84	Hypoglossal Nerve Stimulation and Heart Rate Variability: Analysis of STAR Trial Responders. Otolaryngology - Head and Neck Surgery, 2019, 160, 165-171.	1.9	18
85	Atrial fibrillation detection on compressed sensed ECG. Physiological Measurement, 2017, 38, 1405-1425.	2.1	17
86	Automated analysis of facial emotions in subjects with cognitive impairment. PLoS ONE, 2022, 17, e0262527.	2.5	17
87	Multiscale network dynamics between heart rate and locomotor activity are altered in schizophrenia. Physiological Measurement, 2018, 39, 115001.	2.1	16
88	Improving the Quality of Point of Care Diagnostics with Real-Time Machine Learning in Low Literacy LMIC Settings. , 2018, , .		16
89	Supervised and unsupervised machine learning for automated scoring of sleep–wake and cataplexy in a mouse model of narcolepsy. Sleep, 2020, 43, .	1.1	16
90	Predicting presumed serious infection among hospitalized children on central venous lines with machine learning. Computers in Biology and Medicine, 2021, 132, 104289.	7.0	16

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91	Classification and Prediction of Post-Trauma Outcomes Related to PTSD Using Circadian Rhythm Changes Measured via Wrist-Worn Research Watch in a Large Longitudinal Cohort. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2866-2876.	6.3	16
92	Implications of Cardiovascular Disease Risk Assessment Using the WHO/ISH Risk Prediction Charts in Rural India. PLoS ONE, 2015, 10, e0133618.	2.5	16
93	Dopplerâ€based fetal heart rate analysis markers for the detection of early intrauterine growth restriction. Acta Obstetricia Et Gynecologica Scandinavica, 2017, 96, 1322-1329.	2.8	15
94	Cardiovascular Disease in African Americans: InnovativeÂCommunity Engagement for Research Recruitment and Impact. American Journal of Kidney Diseases, 2018, 72, S43-S46.	1.9	15
95	Socio-demographic and trauma-related predictors of depression within eight weeks of motor vehicle collision in the AURORA study. Psychological Medicine, 2022, 52, 1934-1947.	4.5	15
96	Temporal-Framing Adaptive Network for Heart Sound Segmentation Without Prior Knowledge of State Duration. IEEE Transactions on Biomedical Engineering, 2021, 68, 650-663.	4.2	15
97	A Wearable Multimodal Sensing System for Tracking Changes in Pulmonary Fluid Status, Lung Sounds, and Respiratory Markers. Sensors, 2022, 22, 1130.	3.8	14
98	Detection of Ectopic Beats in the Electrocardiogram Using an Auto-Associative Neural Network. Neural Processing Letters, 2001, 14, 15-25.	3. 2	13
99	Comparison of Standard and Novel Signal Analysis Approaches to Obstructive Sleep Apnea Classification. Frontiers in Bioengineering and Biotechnology, 2015, 3, 114.	4.1	13
100	Generalizable Seizure Detection Model Using Generating Transferable Adversarial Features. IEEE Signal Processing Letters, 2021, 28, 568-572.	3.6	13
101	Agile Development of a Smartphone App for Perinatal Monitoring in a Resource-Constrained Setting. Journal of Health Informatics in Developing Countries, 2017, 11 , .	2.0	13
102	Assessment of Fetal Development Using Cardiac Valve Intervals. Frontiers in Physiology, 2017, 8, 313.	2.8	12
103	Thalamic volume and fear extinction interact to predict acute posttraumatic stress severity. Journal of Psychiatric Research, 2021, 141, 325-332.	3.1	12
104	T-wave alternans patterns during sleep in healthy, cardiac disease, and sleep apnea patients. Journal of Electrocardiology, 2011, 44, 126-130.	0.9	11
105	Template-based Quality Assessment of the Doppler Ultrasound Signal for Fetal Monitoring. Frontiers in Physiology, 2017, 8, 511.	2.8	11
106	Use of a wearable device to assess sleep and motor function in Duchenne muscular dystrophy. Muscle and Nerve, 2020, 61, 198-204.	2.2	10
107	An unbiased, efficient sleep–wake detection algorithm for a population with sleep disorders: change point decoder. Sleep, 2020, 43, .	1.1	10
108	A prospective examination of sex differences in posttraumatic autonomic functioning. Neurobiology of Stress, 2021, 15, 100384.	4.0	10

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109	Comparison of three artificial models of the magnetohydrodynamic effect on the electrocardiogram. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1400-1417.	1.6	9
110	A review of fetal cardiac monitoring, with a focus on low- and middle-income countries. Physiological Measurement, 2020, 41, 11TR01.	2.1	9
111	Multimodal Assessment of Schizophrenia and Depression Utilizing Video, Acoustic, Locomotor, Electroencephalographic, and Heart Rate Technology: Protocol for an Observational Study. JMIR Research Protocols, 2022, 11, e36417.	1.0	9
112	Benchmarking heart rate variability toolboxes. Journal of Electrocardiology, 2017, 50, 744-747.	0.9	8
113	Atrial fibrillation detection in outpatient electrocardiogram monitoring: An algorithmic crowdsourcing approach. PLoS ONE, 2021, 16, e0259916.	2.5	8
114	Using computerised interactive response technology to assess electrocardiographers and for aggregating diagnoses. Journal of Electrocardiology, 2015, 48, 995-999.	0.9	6
115	Personalized heart failure severity estimates using passive smartphone data. , 2018, , .		6
116	Why do strategies to strengthen primary health care succeed in some places and fail in others? Exploring local variation in the effectiveness of a community health worker managed digital health intervention in rural India. BMJ Global Health, 2021, 6, e005003.	4.7	6
117	Preventing Cardiovascular Disease Among Urban African Americans With a Mobile Health App (the) Tj ETQq $1\ 1$	0.784314	rgBT /Overlo
118	Neurocognition after motor vehicle collision and adverse post-traumatic neuropsychiatric sequelae within 8 weeks: Initial findings from the AURORA study. Journal of Affective Disorders, 2022, 298, 57-67.	4.1	6
119	Utilizing computer vision for facial behavior analysis in schizophrenia studies: A systematic review. PLoS ONE, 2022, 17, e0266828.	2.5	6
120	A Proxy for Detecting IUGR Based on Gestational Age Estimation in a Guatemalan Rural Population. Frontiers in Artificial Intelligence, 2020, 3, 56.	3.4	5
121	Using pulse oximetry waveforms to detect coarctation of the aorta. BioMedical Engineering OnLine, 2020, 19, 31.	2.7	5
122	CNN-Based LCD Transcription of Blood Pressure From a Mobile Phone Camera. Frontiers in Artificial Intelligence, 2021, 4, 543176.	3.4	5
123	Exploring novel algorithms for atrial fibrillation detection by driving graduate level education in medical machine learning. Physiological Measurement, 2022, 43, 074001.	2.1	5
124	Estimating birth weight from observed postnatal weights in a Guatemalan highland community. Physiological Measurement, 2020, 41, 025008.	2.1	4
125	A comparison of subjective and mathematical estimations of fetal heart rate variability. Journal of Maternal-Fetal and Neonatal Medicine, 2008, 21, 101-104.	1.5	3
126	Out of Touch: From audio recordings to phone apps to mattress sensors, noncontact systems offer a less cumbersome way to monitor sleep IEEE Pulse, 2014, 5, 19-21.	0.3	3

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127	Critical questions. Journal of the American Association of Nurse Practitioners, 2017, 29, 571-580.	0.9	3
128	Boosting automated sleep staging performance in big datasets using population subgrouping. Sleep, 2021, 44, .	1.1	3
129	Prior histories of posttraumatic stress disorder and major depression and their onset and course in the three months after a motor vehicle collision in the AURORA study. Depression and Anxiety, 2021, , .	4.1	3
130	Time of trauma prospectively affects PTSD symptom severity: The impact of circadian rhythms and cortisol. Psychoneuroendocrinology, 2022, 141, 105729.	2.7	3
131	The temporal relationships between sleep disturbance and autonomic dysregulation: A co-twin control study. International Journal of Cardiology, 2022, 362, 176-182.	1.7	3
132	Editorial on Remote Health Monitoring: from chronic diseases to pandemics. Physiological Measurement, 2020, 41, 100401.	2.1	2
133	An Edge Computing and Ambient Data Capture System for Clinical and Home Environments. Sensors, 2022, 22, 2511.	3.8	2
134	Dataâ \in driven approach for automatic detection of aortic valve opening: B point detection from impedance cardiogram. Psychophysiology, 0, , .	2.4	2
135	636: Entropy of fetal EKG associated with intrapartum fever. American Journal of Obstetrics and Gynecology, 2007, 197, S183.	1.3	1
136	649: Comparison of abdominal sensors to a fetal scalp electrode for fetal ST analysis during labor. American Journal of Obstetrics and Gynecology, 2011, 204, S256.	1.3	1
137	Hypertension Disparities. JAMA Cardiology, 2017, 2, 661.	6.1	1
138	Obstructive Sleep Apnea Classification in a Mixed-Disorder Elderly Male Population Using a Low-Cost Off-Body Movement Sensor. , 2019, , .		1
139	An Open-Source Privacy-Preserving Large-Scale Mobile Framework for Cardiovascular Health Monitoring and Intervention Planning With an Urban African American Population of Young Adults: User-Centered Design Approach. JMIR Formative Research, 2022, 6, e25444.	1.4	1
140	P123. Anxiety Sensitivity is a Leading Risk Factor of Severe or Widespread Pain Three Months After Motor Vehicle Collision. Biological Psychiatry, 2022, 91, S137.	1.3	0