

Chengyu Liu

List of Publications by Citations

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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.

143
papers

2,331
citations

26
h-index

44
g-index

174
ext. papers

3,315
ext. citations

3
avg, IF

5.38
L-index

#	Paper	IF	Citations
143	An open access database for the evaluation of heart sound algorithms. <i>Physiological Measurement</i> , 2016 , 37, 2181-2213	2.9	236
142	AF Classification from a Short Single Lead ECG Recording: the PhysioNet/Computing in Cardiology Challenge 2017. <i>Computing in Cardiology</i> , 2017 , 44,	1.1	158
141	Assessing the complexity of short-term heartbeat interval series by distribution entropy. <i>Medical and Biological Engineering and Computing</i> , 2015 , 53, 77-87	3.1	138
140	Analysis of heart rate variability using fuzzy measure entropy. <i>Computers in Biology and Medicine</i> , 2013 , 43, 100-8	7	99
139	Comparison of different threshold values r for approximate entropy: application to investigate the heart rate variability between heart failure and healthy control groups. <i>Physiological Measurement</i> , 2011 , 32, 167-80	2.9	85
138	An open source benchmarked toolbox for cardiovascular waveform and interval analysis. <i>Physiological Measurement</i> , 2018 , 39, 105004	2.9	67
137	. <i>IEEE Internet of Things Journal</i> , 2019 , 6, 1363-1374	10.7	65
136	Determination of Sample Entropy and Fuzzy Measure Entropy Parameters for Distinguishing Congestive Heart Failure from Normal Sinus Rhythm Subjects. <i>Entropy</i> , 2015 , 17, 6270-6288	2.8	58
135	A lightweight QRS detector for single lead ECG signals using a max-min difference algorithm. <i>Computer Methods and Programs in Biomedicine</i> , 2017 , 144, 61-75	6.9	54
134	Combining sparse coding and time-domain features for heart sound classification. <i>Physiological Measurement</i> , 2017 , 38, 1701-1713	2.9	46
133	Improving K-means clustering with enhanced Firefly Algorithms. <i>Applied Soft Computing Journal</i> , 2019 , 84, 105763	7.5	46
132	Recent advances in heart sound analysis. <i>Physiological Measurement</i> , 2017 , 38, E10-E25	2.9	44
131	Modeling carotid and radial artery pulse pressure waveforms by curve fitting with Gaussian functions. <i>Biomedical Signal Processing and Control</i> , 2013 , 8, 449-454	4.9	42
130	A low-complexity data-adaptive approach for premature ventricular contraction recognition. <i>Signal, Image and Video Processing</i> , 2014 , 8, 111-120	1.6	42
129	Combining Low-dimensional Wavelet Features and Support Vector Machine for Arrhythmia Beat Classification. <i>Scientific Reports</i> , 2017 , 7, 6067	4.9	39
128	An Adaptive and Time-Efficient ECG R-Peak Detection Algorithm. <i>Journal of Healthcare Engineering</i> , 2017 , 2017, 5980541	3.7	38
127	. <i>Journal of Medical and Biological Engineering</i> , 2012 , 32, 245	2.2	34

126	Performance Analysis of Ten Common QRS Detectors on Different ECG Application Cases. <i>Journal of Healthcare Engineering</i> , 2018 , 2018, 9050812	3.7	34
125	Performance of an open-source heart sound segmentation algorithm on eight independent databases. <i>Physiological Measurement</i> , 2017 , 38, 1730-1745	2.9	33
124	Multiscale Entropy Analysis of the Differential RR Interval Time Series Signal and Its Application in Detecting Congestive Heart Failure. <i>Entropy</i> , 2017 , 19, 251	2.8	31
123	A scattering and repulsive swarm intelligence algorithm for solving global optimization problems. <i>Knowledge-Based Systems</i> , 2018 , 156, 12-42	7.3	31
122	Deep learning in the cross-time frequency domain for sleep staging from a single-lead electrocardiogram. <i>Physiological Measurement</i> , 2018 , 39, 124005	2.9	30
121	A multi-step method with signal quality assessment and fine-tuning procedure to locate maternal and fetal QRS complexes from abdominal ECG recordings. <i>Physiological Measurement</i> , 2014 , 35, 1665-83	2.9	29
120	A comparison of entropy approaches for AF discrimination. <i>Physiological Measurement</i> , 2018 , 39, 074002	2.9	28
119	Heart rate variability monitoring for emotion and disorders of emotion. <i>Physiological Measurement</i> , 2019 , 40, 064004	2.9	27
118	Testing pattern synchronization in coupled systems through different entropy-based measures. <i>Medical and Biological Engineering and Computing</i> , 2013 , 51, 581-91	3.1	27
117	Noise Rejection for Wearable ECGs Using Modified Frequency Slice Wavelet Transform and Convolutional Neural Networks. <i>IEEE Access</i> , 2019 , 7, 34060-34067	3.5	25
116	Remote health diagnosis and monitoring in the time of COVID-19. <i>Physiological Measurement</i> , 2020 , 41, 10TR01	2.9	25
115	Atrial Fibrillation Beat Identification Using the Combination of Modified Frequency Slice Wavelet Transform and Convolutional Neural Networks. <i>Journal of Healthcare Engineering</i> , 2018 , 2018, 2102918	3.7	25
114	Differences of Heart Rate Variability Between Happiness and Sadness Emotion States: A Pilot Study. <i>Journal of Medical and Biological Engineering</i> , 2017 , 37, 527-539	2.2	24
113	Comparison of time-domain, frequency-domain and non-linear analysis for distinguishing congestive heart failure patients from normal sinus rhythm subjects. <i>Biomedical Signal Processing and Control</i> , 2018 , 42, 30-36	4.9	21
112	Combining Convolutional Neural Network and Distance Distribution Matrix for Identification of Congestive Heart Failure. <i>IEEE Access</i> , 2018 , 6, 39734-39744	3.5	21
111	Using Lempel-Ziv Complexity to Assess ECG Signal Quality. <i>Journal of Medical and Biological Engineering</i> , 2016 , 36, 625-634	2.2	20
110	PCG Classification Using Multidomain Features and SVM Classifier. <i>BioMed Research International</i> , 2018 , 2018, 4205027	3	20
109	Detection of Coupling in Short Physiological Series by a Joint Distribution Entropy Method. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 2231-2242	5	19

108	Rule-Based Method for Morphological Classification of ST Segment in ECG Signals. <i>Journal of Medical and Biological Engineering</i> , 2015 , 35, 816-823	2.2	19
107	Comparing the Performance of Random Forest, SVM and Their Variants for ECG Quality Assessment Combined with Nonlinear Features. <i>Journal of Medical and Biological Engineering</i> , 2019 , 39, 381-392	2.2	17
106	Application of Permutation Entropy and Permutation Min-Entropy in Multiple Emotional States Analysis of RRI Time Series. <i>Entropy</i> , 2018 , 20,	2.8	16
105	Automatic detection of atrial fibrillation using R-R interval signal 2011 ,		15
104	Measuring synchronization in coupled simulation and coupled cardiovascular time series: A comparison of different cross entropy measures. <i>Biomedical Signal Processing and Control</i> , 2015 , 21, 49-57	4.9	14
103	A novel encoding Lempel-Ziv complexity algorithm for quantifying the irregularity of physiological time series. <i>Computer Methods and Programs in Biomedicine</i> , 2016 , 133, 7-15	6.9	14
102	Variation of the Korotkoff Stethoscope Sounds During Blood Pressure Measurement: Analysis Using a Convolutional Neural Network. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2017 , 21, 1593-1598	7.2	14
101	Differences in photoplethysmography morphological features and feature time series between two opposite emotions: Happiness and sadness. <i>Artery Research</i> , 2017 , 18, 7	2.2	13
100	Electrocardiogram of a Silver Nanowire Based Dry Electrode: Quantitative Comparison With the Standard Ag/AgCl Gel Electrode. <i>IEEE Access</i> , 2019 , 7, 20789-20800	3.5	13
99	Continuous assessment of schizophrenia using heart rate and accelerometer data. <i>Physiological Measurement</i> , 2017 , 38, 1456-1471	2.9	13
98	Performance Analysis of Multiscale Entropy for the Assessment of ECG Signal Quality. <i>Journal of Electrical and Computer Engineering</i> , 2015 , 2015, 1-9	1.9	13
97	Extracting fetal heart beats from maternal abdominal recordings: selection of the optimal principal components. <i>Physiological Measurement</i> , 2014 , 35, 1649-64	2.9	13
96	A New Entropy-Based Atrial Fibrillation Detection Method for Scanning Wearable ECG Recordings. <i>Entropy</i> , 2018 , 20,	2.8	13
95	Comparison between heart rate variability and pulse rate variability during different sleep stages for sleep apnea patients. <i>Technology and Health Care</i> , 2017 , 25, 435-445	1.1	12
94	Comparison of stethoscope bell and diaphragm, and of stethoscope tube length, for clinical blood pressure measurement. <i>Blood Pressure Monitoring</i> , 2016 , 21, 178-83	1.3	12
93	Over-fitting suppression training strategies for deep learning-based atrial fibrillation detection. <i>Medical and Biological Engineering and Computing</i> , 2021 , 59, 165-173	3.1	12
92	Atrial fibrillation detection on compressed sensed ECG. <i>Physiological Measurement</i> , 2017 , 38, 1405-1425	2.9	11
91	Ventricular ectopic beat detection using a wavelet transform and a convolutional neural network. <i>Physiological Measurement</i> , 2019 , 40, 055002	2.9	11

90	Elastic properties of peripheral arteries in heart failure patients in comparison with normal subjects. <i>Journal of Physiological Sciences</i> , 2013 , 63, 195-201	2.3	11
89	An Explainable Artificial Intelligence Predictor for Early Detection of Sepsis. <i>Critical Care Medicine</i> , 2020 , 48, e1091-e1096	1.4	11
88	Improving the Quality of Point of Care Diagnostics with Real-Time Machine Learning in Low Literacy LMIC Settings 2018 ,		11
87	Multiple Time Scales Analysis for Identifying Congestive Heart Failure Based on Heart Rate Variability. <i>IEEE Access</i> , 2019 , 7, 17862-17871	3.5	10
86	Athletic differences in the characteristics of the photoplethysmographic pulse shape: effect of maximal oxygen uptake and maximal muscular voluntary contraction. <i>BioMed Research International</i> , 2015 , 2015, 752570	3	10
85	Gaussian fitting for carotid and radial artery pressure waveforms: comparison between normal subjects and heart failure patients. <i>Bio-Medical Materials and Engineering</i> , 2014 , 24, 271-7	1	10
84	Efficient sleep classification based on entropy features and a support vector machine classifier. <i>Physiological Measurement</i> , 2018 , 39, 115005	2.9	10
83	Classification of congestive heart failure with different New York Heart Association functional classes based on heart rate variability indices and machine learning. <i>Expert Systems</i> , 2019 , 36, e12396	2.1	9
82	Life-threatening false alarm rejection in ICU: using the rule-based and multi-channel information fusion method. <i>Physiological Measurement</i> , 2016 , 37, 1298-312	2.9	9
81	Reduction of False Alarms in Intensive Care Unit using Multi-feature Fusion Method 2015 ,		8
80	. <i>IEEE Access</i> , 2019 , 7, 17716-17724	3.5	7
79	Arteries Stiffen With Age, but Can Retain an Ability to Become More Elastic With Applied External Cuff Pressure. <i>Medicine (United States)</i> , 2015 , 94, e1831	1.8	7
78	Modelling arterial pressure waveforms using Gaussian functions and two-stage particle swarm optimizer. <i>BioMed Research International</i> , 2014 , 2014, 923260	3	7
77	An efficient abnormal beat detection scheme from ECG signals using neural network and ensemble classifiers 2014 ,		7
76	Cross-Sample Entropy and Cross-Fuzzy Entropy for Testing Pattern Synchrony: How Results Vary with Different Threshold Value r . <i>IFMBE Proceedings</i> , 2013 , 485-488	0.2	7
75	Multivariable Fuzzy Measure Entropy Analysis for Heart Rate Variability and Heart Sound Amplitude Variability. <i>Entropy</i> , 2016 , 18, 430	2.8	7
74	Cardiorespiratory Coupling Analysis Based on Entropy and Cross-Entropy in Distinguishing Different Depression Stages. <i>Frontiers in Physiology</i> , 2019 , 10, 359	4.6	6
73	Increased pulse wave transit time after percutaneous coronary intervention procedure in CAD patients. <i>Scientific Reports</i> , 2018 , 8, 115	4.9	6

72	Relationship between carotid artery sclerosis and blood pressure variability in essential hypertension patients. <i>Computers in Biology and Medicine</i> , 2018 , 92, 73-77	7	6
71	Short-term QT interval variability in patients with coronary artery disease and congestive heart failure: a comparison with healthy control subjects. <i>Medical and Biological Engineering and Computing</i> , 2019 , 57, 389-400	3.1	6
70	Evaluation of consistency of HRV indices change among different emotions 2017 ,		6
69	Design of a smart ECG garment based on conductive textile electrode and flexible printed circuit board. <i>Technology and Health Care</i> , 2017 , 25, 815-821	1.1	5
68	A New Physically Meaningful Threshold of Sample Entropy for Detecting Cardiovascular Diseases. <i>Entropy</i> , 2019 , 21, 830	2.8	5
67	Suppressing the Influence of Ectopic Beats by Applying a Physical Threshold-Based Sample Entropy. <i>Entropy</i> , 2020 , 22,	2.8	5
66	Dynamic ECG Signal Quality Evaluation Based on the Generalized bSQI Index. <i>IEEE Access</i> , 2018 , 6, 418923-419025	3.5	5
65	IFFLC: An Integrated Framework of Feature Learning and Classification for Multiple Diagnosis Codes Assignment. <i>IEEE Access</i> , 2019 , 7, 36810-36818	3.5	5
64	Benchmarking heart rate variability toolboxes. <i>Journal of Electrocardiology</i> , 2017 , 50, 744-747	1.4	5
63	Effects of blood pressure and sex on the change of wave reflection: evidence from Gaussian fitting method for radial artery pressure waveform. <i>PLoS ONE</i> , 2014 , 9, e112895	3.7	5
62	Modeling radial artery pressure waveforms using curve fitting: Comparison of four types of fitting functions. <i>Artery Research</i> , 2018 , 23, 56	2.2	5
61	Integration of Results From Convolutional Neural Network in a Support Vector Machine for the Detection of Atrial Fibrillation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021 , 70, 1-10	5.2	5
60	. <i>IEEE Access</i> , 2019 , 7, 37228-37237	3.5	4
59	Recurrence Plot-Based Approach for Cardiac Arrhythmia Classification Using Inception-ResNet-v2. <i>Frontiers in Physiology</i> , 2021 , 12, 648950	4.6	4
58	An Improved Sliding Window Area Method for Wave Detection. <i>Computational and Mathematical Methods in Medicine</i> , 2019 , 2019, 3130527	2.8	3
57	Multi-classification of cardiac diseases utilizing wavelet thresholding and support vector machine 2019 ,		3
56	Decreased peripheral arterial volume distensibility in patients with branch retinal vein occlusion in comparison with normal subjects. <i>Scientific Reports</i> , 2014 , 4, 6685	4.9	3
55	2015 ,		3

54	Physiological Signal Variability Analysis Based on the Largest Lyapunov Exponent 2009 ,		3
53	Atrial Fibrillation Detection Using a Feedforward Neural Network. <i>Journal of Medical and Biological Engineering</i> , 2022 , 42, 63	2.2	3
52	Quantification of vascular function changes under different emotion states: A pilot study. <i>Technology and Health Care</i> , 2017 , 25, 447-456	1.1	3
51	The Accuracy on the Common Pan-Tompkins Based QRS Detection Methods Through Low-Quality Electrocardiogram Database. <i>Journal of Medical Imaging and Health Informatics</i> , 2017 , 7, 1039-1043	1.2	3
50	Continuous-Valued Annotations Aggregation for Heart Rate Detection. <i>IEEE Access</i> , 2019 , 7, 37664-37674	1.5	2
49	Improving Accuracy of Heart Failure Detection Using Data Refinement. <i>Entropy</i> , 2020 , 22,	2.8	2
48	Change of bilateral difference in radial artery pulse morphology with one-side arm movement. <i>Artery Research</i> , 2017 , 19, 1	2.2	2
47	Comparison of heart rate variability between resting state and external-cuff-inflation-and-deflation state: a pilot study. <i>Physiological Measurement</i> , 2015 , 36, 2135-46	2.9	2
46	Effect of Ectopic Beats on Heart Rate Variability Indices in Heart Failure Patients. <i>IFMBE Proceedings</i> , 2019 , 361-365	0.2	2
45	Frontal Alpha Complexity of Different Severity Depression Patients. <i>Journal of Healthcare Engineering</i> , 2020 , 2020, 8854725	3.7	2
44	An Open-Access Arrhythmia Database of Wearable Electrocardiogram. <i>Journal of Medical and Biological Engineering</i> , 2020 , 40, 564-574	2.2	2
43	Decreased sample entropy during sleep-to-wake transition in sleep apnea patients. <i>Physiological Measurement</i> , 2021 , 42,	2.9	2
42	Influence of Ectopic Beats on Heart Rate Variability Analysis. <i>Entropy</i> , 2021 , 23,	2.8	2
41	Effect of a Percutaneous Coronary Intervention Procedure on Heart Rate Variability and Pulse Transit Time Variability: A Comparison Study Based on Fuzzy Measure Entropy. <i>Entropy</i> , 2016 , 18, 246	2.8	2
40	Measuring Electromechanical Coupling in Patients with Coronary Artery Disease and Healthy Subjects. <i>Entropy</i> , 2016 , 18, 153	2.8	2
39	Changes of Femoral Photoethismographic Waveform Characteristics in Anesthetized Dogs with Increased Blood Pressure Induced by Epinephrine. <i>Frontiers in Physiology</i> , 2016 , 7, 404	4.6	2
38	A Low-Noise-Level Heart Sound System Based on Novel Thorax-Integration Head Design and Wavelet Denoising Algorithm. <i>Micromachines</i> , 2019 , 10,	3.3	2
37	. <i>IEEE Access</i> , 2018 , 6, 67653-67664	3.5	2

36	Action Recognition of Lower Limbs Based on Surface Electromyography Weighted Feature Method. <i>Sensors</i> , 2021 , 21,	3.8	2
35	Convolutional squeeze-and-excitation network for ECG arrhythmia detection. <i>Artificial Intelligence in Medicine</i> , 2021 , 121, 102181	7.4	2
34	A multi-step paroxysmal atrial fibrillation scanning strategy in long-term ECGs. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022 , 1-1	5.2	2
33	Entropy Analysis of Heart Rate Variability in Different Sleep Stages.. <i>Entropy</i> , 2022 , 24,	2.8	2
32	Design and evaluation of an autonomic nerve monitoring system based on skin sympathetic nerve activity. <i>Biomedical Signal Processing and Control</i> , 2022 , 76, 103681	4.9	2
31	Effects of Inferior Myocardial Infarction Sizes and Sites on Simulated Electrocardiograms Based on a Torso-Heart Model. <i>IEEE Access</i> , 2019 , 7, 35470-35479	3.5	1
30	Changes in the bilateral pulse transit time difference with a moving arm. <i>Technology and Health Care</i> , 2018 , 26, 113-119	1.1	1
29	A signal quality assessment method for mobile ECG using multiple features and fuzzy support vector machine 2016 ,		1
28	Effect of multiple clinical factors on recurrent angina after percutaneous coronary intervention: A retrospective study from 398 ST-segment elevation myocardial infarction patients. <i>Medicine (United States)</i> , 2016 , 95, e5015	1.8	1
27	Development of Novel Hearing Aids by Using Image Recognition Technology. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2019 , 23, 1163-1170	7.2	1
26	. <i>IEEE Access</i> , 2019 , 7, 63809-63817	3.5	1
25	Applications of Complexity Analysis in Clinical Heart Failure 2017 , 301-325		1
24	Combining Multi-source Features and Support Vector Machine for Heart Rhythm Classification 2017 ,		1
23	Changes of Permutation Pattern Entropy and Ordinal Pattern Entropy During Three Emotion States: Natural, Happiness and Sadness 2017 ,		1
22	2015 ,		1
21	Medical image registration based on special generalized Jensen-Schur measure 2010 ,		1
20	Non-Invasive Measurement of Arterial Pressure-Dependent Compliance 2007 ,		1
19	A Decision-Making Fusion Method for Accurately Locating QRS Complexes from the Multiple QRS Detectors. <i>IFMBE Proceedings</i> , 2019 , 351-355	0.2	1

18	Detecting Depression from Speech through an Attentive LSTM Network. <i>IEICE Transactions on Information and Systems</i> , 2021 , E104.D, 2019-2023	0.6	1
17	Robust Feature Selection Based on Fuzzy Rough Sets with Representative Sample. <i>Lecture Notes in Computer Science</i> , 2019 , 151-165	0.9	1
16	Active Stacking for Heart Rate Estimation 2020 ,		1
15	Frontal Alpha EEG Asymmetry Variation of Depression Patients Assessed by Entropy Measures and Lempel-Ziv Complexity. <i>Journal of Medical and Biological Engineering</i> , 2021 , 41, 146-154	2.2	1
14	Relationships between blood pressure variability and silent cerebral infarction in patients with primary hypertension. <i>Artery Research</i> , 2018 , 24, 40	2.2	1
13	An integrated framework for evaluation on typical ECG-derived respiration waveform extraction and respiration. <i>Computers in Biology and Medicine</i> , 2021 , 135, 104593	7	1
12	Multi-Head Attention-Based Long Short-Term Memory for Depression Detection From Speech. <i>Frontiers in Neurorobotics</i> , 2021 , 15, 684037	3.4	1
11	An Open-Access Database for the Evaluation of Cardio-Mechanical Signals From Patients With Valvular Heart Diseases. <i>Frontiers in Physiology</i> , 2021 , 12, 750221	4.6	1
10	Non-Contact Electrocardiograms Acquisition Method Based on Capacitive Coupling. <i>IEEE Instrumentation and Measurement Magazine</i> , 2022 , 25, 53-61	1.4	1
9	An Impulsive Noise Rejection Filter for Wearable ECG Signal Processing. <i>IFMBE Proceedings</i> , 2019 , 377-380	0.2	0
8	Variations of Time Irreversibility of Heart Rate Variability Under Normobaric Hypoxic Exposure. <i>Frontiers in Physiology</i> , 2021 , 12, 607356	4.6	0
7	Effects of long-term fasting and confinement on the cardiovascular activity. <i>Medical and Biological Engineering and Computing</i> , 2021 , 59, 1901-1915	3.1	0
6	An Artifact-Resistant Feature SKNAER for Quantifying the Burst of Skin Sympathetic Nerve Activity Signal. <i>Biosensors</i> , 2022 , 12, 355	5.9	0
5	Effect of Myocardial Infarction Size on the Simulated ECG Morphology Based on a 3D Torso-Heart Model. <i>IFMBE Proceedings</i> , 2019 , 357-360	0.2	
4	In-Hospital Mortality Prediction for Heart Failure Patients Using Electronic Health Records and an Improved Bagging Algorithm. <i>Journal of Medical Imaging and Health Informatics</i> , 2020 , 10, 998-1004	1.2	
3	ANALYSIS OF PHOTOPLETHYSMOGRAPHIC MORPHOLOGY IN SLEEP APNEA SYNDROME PATIENTS USING CURVE FITTING AND SUPPORT VECTOR MACHINE. <i>Journal of Mechanics in Medicine and Biology</i> , 2021 , 21, 2140019	0.7	
2	A wearable real-time telemonitoring electrocardiogram device compared with traditional Holter monitoring. <i>Journal of Biomedical Research</i> , 2020 , 35, 238-246	1.5	
1	Premature Beats Rejection Strategy on Paroxysmal Atrial Fibrillation Detection.. <i>Frontiers in Physiology</i> , 2022 , 13, 890139	4.6	

