Chengyu Liu

List of Publications by Year in Descending Order

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	Atrial Fibrillation Detection Using a Feedforward Neural Network. *Journal of Medical and Biological Engineering*, **2022**, 42, 63	2.2	3
142	A multi-step paroxysmal atrial fibrillation scanning strategy in long-term ECGs. *IEEE Transactions on Instrumentation and Measurement*, **2022**, 1-1	5.2	2
141	Entropy Analysis of Heart Rate Variability in Different Sleep Stages.. *Entropy*, **2022**, 24,	2.8	2
140	Premature Beats Rejection Strategy on Paroxysmal Atrial Fibrillation Detection.. *Frontiers in Physiology*, **2022**, 13, 890139	4.6	
139	Non-Contact Electrocardiograms Acquisition Method Based on Capacitive Coupling. *IEEE Instrumentation and Measurement Magazine*, **2022**, 25, 53-61	1.4	1
138	Design and evaluation of an autonomic nerve monitoring system based on skin sympathetic nerve activity. *Biomedical Signal Processing and Control*, **2022**, 76, 103681	4.9	2
137	An Artifact-Resistant Feature SKNAER for Quantifying the Burst of Skin Sympathetic Nerve Activity Signal. *Biosensors*, **2022**, 12, 355	5.9	0
136	Detecting Depression from Speech through an Attentive LSTM Network. *IEICE Transactions on Information and Systems*, **2021**, E104.D, 2019-2023	0.6	1
135	Variations of Time Irreversibility of Heart Rate Variability Under Normobaric Hypoxic Exposure. *Frontiers in Physiology*, **2021**, 12, 607356	4.6	0
134	ANALYSIS OF PHOTOPLETHYSMOGRAPHIC MORPHOLOGY IN SLEEP APNEA SYNDROME PATIENTS USING CURVE FITTING AND SUPPORT VECTOR MACHINE. *Journal of Mechanics in Medicine and Biology*, **2021**, 21, 2140019	0.7	
133	Decreased sample entropy during sleep-to-wake transition in sleep apnea patients. *Physiological Measurement*, **2021**, 42,	2.9	2
132	Influence of Ectopic Beats on Heart Rate Variability Analysis. *Entropy*, **2021**, 23,	2.8	2
131	Recurrence Plot-Based Approach for Cardiac Arrhythmia Classification Using Inception-ResNet-v2. *Frontiers in Physiology*, **2021**, 12, 648950	4.6	4
130	Frontal Alpha EEG Asymmetry Variation of Depression Patients Assessed by Entropy Measures and Lempel-Ziv Complexity. *Journal of Medical and Biological Engineering*, **2021**, 41, 146-154	2.2	1
129	Effects of long-term fasting and confinement on the cardiovascular activity. *Medical and Biological Engineering and Computing*, **2021**, 59, 1901-1915	3.1	0
128	An integrated framework for evaluation on typical ECG-derived respiration waveform extraction and respiration. *Computers in Biology and Medicine*, **2021**, 135, 104593	7	1
127	Multi-Head Attention-Based Long Short-Term Memory for Depression Detection From Speech. *Frontiers in Neurorobotics*, **2021**, 15, 684037	3.4	1

126	An Open-Access Database for the Evaluation of Cardio-Mechanical Signals From Patients With Valvular Heart Diseases. *Frontiers in Physiology*, **2021**, 12, 750221	4.6	1
125	Action Recognition of Lower Limbs Based on Surface Electromyography Weighted Feature Method. *Sensors*, **2021**, 21,	3.8	2
124	Convolutional squeeze-and-excitation network for ECG arrhythmia detection. *Artificial Intelligence in Medicine*, **2021**, 121, 102181	7.4	2
123	Integration of Results From Convolutional Neural Network in a Support Vector Machine for the Detection of Atrial Fibrillation. *IEEE Transactions on Instrumentation and Measurement*, **2021**, 70, 1-10	5.2	5
122	Over-fitting suppression training strategies for deep learning-based atrial fibrillation detection. *Medical and Biological Engineering and Computing*, **2021**, 59, 165-173	3.1	12
121	Improving Accuracy of Heart Failure Detection Using Data Refinement. *Entropy*, **2020**, 22,	2.8	2
120	Suppressing the Influence of Ectopic Beats by Applying a Physical Threshold-Based Sample Entropy. *Entropy*, **2020**, 22,	2.8	5
119	In-Hospital Mortality Prediction for Heart Failure Patients Using Electronic Health Records and an Improved Bagging Algorithm. *Journal of Medical Imaging and Health Informatics*, **2020**, 10, 998-1004	1.2	
118	Remote health diagnosis and monitoring in the time of COVID-19. *Physiological Measurement*, **2020**, 41, 10TR01	2.9	25
117	An Explainable Artificial Intelligence Predictor for Early Detection of Sepsis. *Critical Care Medicine*, **2020**, 48, e1091-e1096	1.4	11
116	Frontal Alpha Complexity of Different Severity Depression Patients. *Journal of Healthcare Engineering*, **2020**, 2020, 8854725	3.7	2
115	An Open-Access Arrhythmia Database of Wearable Electrocardiogram. *Journal of Medical and Biological Engineering*, **2020**, 40, 564-574	2.2	2
114	Active Stacking for Heart Rate Estimation **2020**,		1
113	A wearable real-time telemonitoring electrocardiogram device compared with traditional Holter monitoring. *Journal of Biomedical Research*, **2020**, 35, 238-246	1.5	
112	Improving K-means clustering with enhanced Firefly Algorithms. *Applied Soft Computing Journal*, **2019**, 84, 105763	7.5	46
111	A New Physically Meaningful Threshold of Sample Entropy for Detecting Cardiovascular Diseases. *Entropy*, **2019**, 21, 830	2.8	5
110	. *IEEE Access*, **2019**, 7, 17716-17724	3.5	7
109	Cardiorespiratory Coupling Analysis Based on Entropy and Cross-Entropy in Distinguishing Different Depression Stages. *Frontiers in Physiology*, **2019**, 10, 359	4.6	6

108	Continuous-Valued Annotations Aggregation for Heart Rate Detection. *IEEE Access*, **2019**, 7, 37664-37674	3.5	2
107	An Improved Sliding Window Area Method for Wave Detection. *Computational and Mathematical Methods in Medicine*, **2019**, 2019, 3130527	2.8	3
106	Noise Rejection for Wearable ECGs Using Modified Frequency Slice Wavelet Transform and Convolutional Neural Networks. *IEEE Access*, **2019**, 7, 34060-34067	3.5	25
105	Classification of congestive heart failure with different New York Heart Association functional classes based on heart rate variability indices and machine learning. *Expert Systems*, **2019**, 36, e12396	2.1	9
104	. *IEEE Access*, **2019**, 7, 37228-37237	3.5	4
103	Heart rate variability monitoring for emotion and disorders of emotion. *Physiological Measurement*, **2019**, 40, 064004	2.9	27
102	Ventricular ectopic beat detection using a wavelet transform and a convolutional neural network. *Physiological Measurement*, **2019**, 40, 055002	2.9	11
101	Effects of Inferior Myocardial Infarction Sizes and Sites on Simulated Electrocardiograms Based on a Torso-Heart Model. *IEEE Access*, **2019**, 7, 35470-35479	3.5	1
100	Electrocardiogram of a Silver Nanowire Based Dry Electrode: Quantitative Comparison With the Standard Ag/AgCl Gel Electrode. *IEEE Access*, **2019**, 7, 20789-20800	3.5	13
99	Multi-classification of cardiac diseases utilizing wavelet thresholding and support vector machine **2019**,		3
98	Multiple Time Scales Analysis for Identifying Congestive Heart Failure Based on Heart Rate Variability. *IEEE Access*, **2019**, 7, 17862-17871	3.5	10
97	. *IEEE Internet of Things Journal*, **2019**, 6, 1363-1374	10.7	65
96	Development of Novel Hearing Aids by Using Image Recognition Technology. *IEEE Journal of Biomedical and Health Informatics*, **2019**, 23, 1163-1170	7.2	1
95	Short-term QT interval variability in patients with coronary artery disease and congestive heart failure: a comparison with healthy control subjects. *Medical and Biological Engineering and Computing*, **2019**, 57, 389-400	3.1	6
94	. *IEEE Access*, **2019**, 7, 63809-63817	3.5	1
93	IFFLC: An Integrated Framework of Feature Learning and Classification for Multiple Diagnosis Codes Assignment. *IEEE Access*, **2019**, 7, 36810-36818	3.5	5
92	A Decision-Making Fusion Method for Accurately Locating QRS Complexes from the Multiple QRS Detectors. *IFMBE Proceedings*, **2019**, 351-355	0.2	1
91	An Impulsive Noise Rejection Filter for Wearable ECG Signal Processing. *IFMBE Proceedings*, **2019**, 377-380	0.2	0

90	Effect of Myocardial Infarction Size on the Simulated ECG Morphology Based on a 3D Torso-Heart Model. *IFMBE Proceedings*, **2019**, 357-360	0.2	
89	Robust Feature Selection Based on Fuzzy Rough Sets with Representative Sample. *Lecture Notes in Computer Science*, **2019**, 151-165	0.9	1
88	Effect of Ectopic Beats on Heart Rate Variability Indices in Heart Failure Patients. *IFMBE Proceedings*, **2019**, 361-365	0.2	2
87	A Low-Noise-Level Heart Sound System Based on Novel Thorax-Integration Head Design and Wavelet Denoising Algorithm. *Micromachines*, **2019**, 10,	3.3	2
86	Comparing the Performance of Random Forest, SVM and Their Variants for ECG Quality Assessment Combined with Nonlinear Features. *Journal of Medical and Biological Engineering*, **2019**, 39, 381-392	2.2	17
85	Comparison of time-domain, frequency-domain and non-linear analysis for distinguishing congestive heart failure patients from normal sinus rhythm subjects. *Biomedical Signal Processing and Control*, **2018**, 42, 30-36	4.9	21
84	Increased pulse wave transit time after percutaneous coronary intervention procedure in CAD patients. *Scientific Reports*, **2018**, 8, 115	4.9	6
83	Changes in the bilateral pulse transit time difference with a moving arm. *Technology and Health Care*, **2018**, 26, 113-119	1.1	1
82	Relationship between carotid artery sclerosis and blood pressure variability in essential hypertension patients. *Computers in Biology and Medicine*, **2018**, 92, 73-77	7	6
81	Application of Permutation Entropy and Permutation Min-Entropy in Multiple Emotional States Analysis of RRI Time Series. *Entropy*, **2018**, 20,	2.8	16
80	Combining Convolutional Neural Network and Distance Distribution Matrix for Identification of Congestive Heart Failure. *IEEE Access*, **2018**, 6, 39734-39744	3.5	21
79	PCG Classification Using Multidomain Features and SVM Classifier. *BioMed Research International*, **2018**, 2018, 4205027	3	20
78	Dynamic ECG Signal Quality Evaluation Based on the Generalized bSQI Index. *IEEE Access*, **2018**, 6, 41892-41902	3.5	5
77	A comparison of entropy approaches for AF discrimination. *Physiological Measurement*, **2018**, 39, 074002	2.9	28
76	. *IEEE Access*, **2018**, 6, 67653-67664	3.5	2
75	Deep learning in the cross-time frequency domain for sleep staging from a single-lead electrocardiogram. *Physiological Measurement*, **2018**, 39, 124005	2.9	30
74	Relationships between blood pressure variability and silent cerebral infarction in patients with primary hypertension. *Artery Research*, **2018**, 24, 40	2.2	1
73	A New Entropy-Based Atrial Fibrillation Detection Method for Scanning Wearable ECG Recordings. *Entropy*, **2018**, 20,	2.8	13

72	Efficient sleep classification based on entropy features and a support vector machine classifier. *Physiological Measurement*, **2018**, 39, 115005	2.9	10
71	Modeling radial artery pressure waveforms using curve fitting: Comparison of four types of fitting functions. *Artery Research*, **2018**, 23, 56	2.2	5
70	An open source benchmarked toolbox for cardiovascular waveform and interval analysis. *Physiological Measurement*, **2018**, 39, 105004	2.9	67
69	Atrial Fibrillation Beat Identification Using the Combination of Modified Frequency Slice Wavelet Transform and Convolutional Neural Networks. *Journal of Healthcare Engineering*, **2018**, 2018, 2102918	3.7	25
68	A scattering and repulsive swarm intelligence algorithm for solving global optimization problems. *Knowledge-Based Systems*, **2018**, 156, 12-42	7.3	31
67	Performance Analysis of Ten Common QRS Detectors on Different ECG Application Cases. *Journal of Healthcare Engineering*, **2018**, 2018, 9050812	3.7	34
66	Improving the Quality of Point of Care Diagnostics with Real-Time Machine Learning in Low Literacy LMIC Settings **2018**,		11
65	Comparison between heart rate variability and pulse rate variability during different sleep stages for sleep apnea patients. *Technology and Health Care*, **2017**, 25, 435-445	1.1	12
64	Differences in photoplethysmography morphological features and feature time series between two opposite emotions: Happiness and sadness. *Artery Research*, **2017**, 18, 7	2.2	13
63	Design of a smart ECG garment based on conductive textile electrode and flexible printed circuit board. *Technology and Health Care*, **2017**, 25, 815-821	1.1	5
62	Combining sparse coding and time-domain features for heart sound classification. *Physiological Measurement*, **2017**, 38, 1701-1713	2.9	46
61	Atrial fibrillation detection on compressed sensed ECG. *Physiological Measurement*, **2017**, 38, 1405-1425	2.9	11
60	Differences of Heart Rate Variability Between Happiness and Sadness Emotion States: A Pilot Study. *Journal of Medical and Biological Engineering*, **2017**, 37, 527-539	2.2	24
59	A lightweight QRS detector for single lead ECG signals using a max-min difference algorithm. *Computer Methods and Programs in Biomedicine*, **2017**, 144, 61-75	6.9	54
58	AF Classification from a Short Single Lead ECG Recording: the PhysioNet/Computing in Cardiology Challenge 2017. *Computing in Cardiology*, **2017**, 44,	1.1	158
57	Recent advances in heart sound analysis. *Physiological Measurement*, **2017**, 38, E10-E25	2.9	44
56	Combining Low-dimensional Wavelet Features and Support Vector Machine for Arrhythmia Beat Classification. *Scientific Reports*, **2017**, 7, 6067	4.9	39
55	Performance of an open-source heart sound segmentation algorithm on eight independent databases. *Physiological Measurement*, **2017**, 38, 1730-1745	2.9	33

54	Applications of Complexity Analysis in Clinical Heart Failure **2017**, 301-325		1
53	Benchmarking heart rate variability toolboxes. *Journal of Electrocardiology*, **2017**, 50, 744-747	1.4	5
52	Continuous assessment of schizophrenia using heart rate and accelerometer data. *Physiological Measurement*, **2017**, 38, 1456-1471	2.9	13
51	Change of bilateral difference in radial artery pulse morphology with one-side arm movement. *Artery Research*, **2017**, 19, 1	2.2	2
50	Combining Multi-source Features and Support Vector Machine for Heart Rhythm Classification **2017**,		1
49	Evaluation of consistency of HRV indices change among different emotions **2017**,		6
48	Changes of Permutation Pattern Entropy and Ordinal Pattern Entropy During Three Emotion States: Natural, Happiness and Sadness **2017**,		1
47	Multiscale Entropy Analysis of the Differential RR Interval Time Series Signal and Its Application in Detecting Congestive Heart Failure. *Entropy*, **2017**, 19, 251	2.8	31
46	An Adaptive and Time-Efficient ECG R-Peak Detection Algorithm. *Journal of Healthcare Engineering*, **2017**, 2017, 5980541	3.7	38
45	Variation of the Korotkoff Stethoscope Sounds During Blood Pressure Measurement: Analysis Using a Convolutional Neural Network. *IEEE Journal of Biomedical and Health Informatics*, **2017**, 21, 1593-1598	3.3	14
44	Quantification of vascular function changes under different emotion states: A pilot study. *Technology and Health Care*, **2017**, 25, 447-456	1.1	3
43	The Accuracy on the Common Pan-Tompkins Based QRS Detection Methods Through Low-Quality Electrocardiogram Database. *Journal of Medical Imaging and Health Informatics*, **2017**, 7, 1039-1043	1.2	3
42	An open access database for the evaluation of heart sound algorithms. *Physiological Measurement*, **2016**, 37, 2181-2213	2.9	236
41	Using Lempel-Ziv Complexity to Assess ECG Signal Quality. *Journal of Medical and Biological Engineering*, **2016**, 36, 625-634	2.2	20
40	A signal quality assessment method for mobile ECG using multiple features and fuzzy support vector machine **2016**,		1
39	Effect of multiple clinical factors on recurrent angina after percutaneous coronary intervention: A retrospective study from 398 ST-segment elevation myocardial infarction patients. *Medicine (United States)*, **2016**, 95, e5015	1.8	1
38	A novel encoding Lempel-Ziv complexity algorithm for quantifying the irregularity of physiological time series. *Computer Methods and Programs in Biomedicine*, **2016**, 133, 7-15	6.9	14
37	Detection of Coupling in Short Physiological Series by a Joint Distribution Entropy Method. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 2231-2242	5	19

36	Comparison of stethoscope bell and diaphragm, and of stethoscope tube length, for clinical blood pressure measurement. *Blood Pressure Monitoring*, **2016**, 21, 178-83	1.3	12
35	Effect of a Percutaneous Coronary Intervention Procedure on Heart Rate Variability and Pulse Transit Time Variability: A Comparison Study Based on Fuzzy Measure Entropy. *Entropy*, **2016**, 18, 246	2.8	2
34	Measuring Electromechanical Coupling in Patients with Coronary Artery Disease and Healthy Subjects. *Entropy*, **2016**, 18, 153	2.8	2
33	Multivariable Fuzzy Measure Entropy Analysis for Heart Rate Variability and Heart Sound Amplitude Variability. *Entropy*, **2016**, 18, 430	2.8	7
32	Changes of Femoral Photolethysmographic Waveform Characteristics in Anesthetized Dogs with Increased Blood Pressure Induced by Epinephrine. *Frontiers in Physiology*, **2016**, 7, 404	4.6	2
31	Life-threatening false alarm rejection in ICU: using the rule-based and multi-channel information fusion method. *Physiological Measurement*, **2016**, 37, 1298-312	2.9	9
30	Assessing the complexity of short-term heartbeat interval series by distribution entropy. *Medical and Biological Engineering and Computing*, **2015**, 53, 77-87	3.1	138
29	Measuring synchronization in coupled simulation and coupled cardiovascular time series: A comparison of different cross entropy measures. *Biomedical Signal Processing and Control*, **2015**, 21, 49-57	1.9	14
28	**2015**,		1
27	Reduction of False Alarms in Intensive Care Unit using Multi-feature Fusion Method **2015**,		8
26	Comparison of heart rate variability between resting state and external-cuff-inflation-and-deflation state: a pilot study. *Physiological Measurement*, **2015**, 36, 2135-46	2.9	2
25	Arteries Stiffen With Age, but Can Retain an Ability to Become More Elastic With Applied External Cuff Pressure. *Medicine (United States)*, **2015**, 94, e1831	1.8	7
24	Determination of Sample Entropy and Fuzzy Measure Entropy Parameters for Distinguishing Congestive Heart Failure from Normal Sinus Rhythm Subjects. *Entropy*, **2015**, 17, 6270-6288	2.8	58
23	Athletic differences in the characteristics of the photoplethysmographic pulse shape: effect of maximal oxygen uptake and maximal muscular voluntary contraction. *BioMed Research International*, **2015**, 2015, 752570	3	10
22	Performance Analysis of Multiscale Entropy for the Assessment of ECG Signal Quality. *Journal of Electrical and Computer Engineering*, **2015**, 2015, 1-9	1.9	13
21	Rule-Based Method for Morphological Classification of ST Segment in ECG Signals. *Journal of Medical and Biological Engineering*, **2015**, 35, 816-823	2.2	19
20	**2015**,		3
19	Decreased peripheral arterial volume distensibility in patients with branch retinal vein occlusion in comparison with normal subjects. *Scientific Reports*, **2014**, 4, 6685	4.9	3

18	Effects of blood pressure and sex on the change of wave reflection: evidence from Gaussian fitting method for radial artery pressure waveform. *PLoS ONE*, **2014**, 9, e112895	3.7	5
17	Modelling arterial pressure waveforms using Gaussian functions and two-stage particle swarm optimizer. *BioMed Research International*, **2014**, 2014, 923260	3	7
16	Extracting fetal heart beats from maternal abdominal recordings: selection of the optimal principal components. *Physiological Measurement*, **2014**, 35, 1649-64	2.9	13
15	An efficient abnormal beat detection scheme from ECG signals using neural network and ensemble classifiers **2014**,		7
14	Gaussian fitting for carotid and radial artery pressure waveforms: comparison between normal subjects and heart failure patients. *Bio-Medical Materials and Engineering*, **2014**, 24, 271-7	1	10
13	A multi-step method with signal quality assessment and fine-tuning procedure to locate maternal and fetal QRS complexes from abdominal ECG recordings. *Physiological Measurement*, **2014**, 35, 1665-83	2.9	29
12	A low-complexity data-adaptive approach for premature ventricular contraction recognition. *Signal, Image and Video Processing*, **2014**, 8, 111-120	1.6	42
11	Elastic properties of peripheral arteries in heart failure patients in comparison with normal subjects. *Journal of Physiological Sciences*, **2013**, 63, 195-201	2.3	11
10	Analysis of heart rate variability using fuzzy measure entropy. *Computers in Biology and Medicine*, **2013**, 43, 100-8	7	99
9	Testing pattern synchronization in coupled systems through different entropy-based measures. *Medical and Biological Engineering and Computing*, **2013**, 51, 581-91	3.1	27
8	Modeling carotid and radial artery pulse pressure waveforms by curve fitting with Gaussian functions. *Biomedical Signal Processing and Control*, **2013**, 8, 449-454	4.9	42
7	Cross-Sample Entropy and Cross-Fuzzy Entropy for Testing Pattern Synchrony: How Results Vary with Different Threshold Value r. *IFMBE Proceedings*, **2013**, 485-488	0.2	7
6	. *Journal of Medical and Biological Engineering*, **2012**, 32, 245	2.2	34
5	Comparison of different threshold values r for approximate entropy: application to investigate the heart rate variability between heart failure and healthy control groups. *Physiological Measurement*, **2011**, 32, 167-80	2.9	85
4	Automatic detection of atrial fibrillation using R-R interval signal **2011**,		15
3	Medical image registration based on special generalized Jensen-Schur measure **2010**,		1
2	Physiological Signal Variability Analysis Based on the Largest Lyapunov Exponent **2009**,		3
1	Non-Invasive Measurement of Arterial Pressure-Dependent Compliance **2007**,		1