PhysioNet: a Web-based resource for the study of physiologic signals

#	Paper	IF	Citations
267	Efficient hemodynamic event detection utilizing relational databases and wavelet analysis.		1
266	Do nonlinearities play a significant role in short term, beat-to-beat variability?.		
265	The impact of the MIT-BIH arrhythmia database. *IEEE Engineering in Medicine and Biology Magazine*, **2001**, 20, 45-50		1721
264	An automatic ECG processing algorithm to identify patients prone to paroxysmal atrial fibrillation.		14
263	Ubiquitous mobile access to real-time patient monitoring data.		22
262	On cardiac activity characterization from Implantable Cardioverter Defibrillator electrogram analysis: is far-field better?.		2
261	Model-based interpretation of cardiac beats by evolutionary algorithms.		0
260	Fractal dynamics in physiology: alterations with disease and aging. **2002**, 99 Suppl 1, 2466-72		1397
259	Model-based interpretation of cardiac beats by evolutionary algorithms: signal and model interaction. **2002**, 26, 211-35		25
258	Systematic comparison of different algorithms for apnoea detection based on electrocardiogram recordings. **2002**, 40, 402-7		300
257	PhysioNet: an NIH research resource for complex signals. *Journal of Electrocardiology*, **2003**, 36 Suppl, 139-44	1.4	22
256	Development of a new QT algorithm with heterogenous ECG databases. *Journal of Electrocardiology*, **2003**, 36 Suppl, 145-50	1.4	13
255	Clustering of electrocardiograph signals in computer-aided Holter analysis. *Computer Methods and Programs in Biomedicine*, **2003**, 72, 179-96	6.9	38
254	easyG-electrocardiogram analysis system Graz.		1
253	Reliability and accuracy of heart rate variability metrics versus ECG segment duration.		2
252	SignalML: metaformat for description of biomedical time series. *Computer Methods and Programs in Biomedicine*, **2004**, 76, 253-9	6.9	12
251	Most probable dimension value and most flat interval methods for automatic estimation of dimension from time series. **2004**, 20, 779-790		10

250   libRASCH: a programming framework for signal handling.   3

249   libRASCH--a programming framework for transparent access to physiological signals. **2004**, 2004, 3254-7   5

248   Introduction. **2005**, 1-24   3

247   Ubiquitous RFID Healthcare Systems Analysis on PhysioNet Grid Portal Services Using Petri Nets.   0

246   Privacy and security control architecture for ubiquitous RFID healthcare system in wireless sensor networks.   11

245   The influence of autonomic arousal and semantic relatedness on memory for emotional words. **2006**, 61, 26-33   114

244   Continuous cardiac output monitoring in humans by invasive and noninvasive peripheral blood pressure waveform analysis. **2006**, 101, 598-608   48

243   Reliability and accuracy of heart rate variability metrics versus ECG segment duration. **2006**, 44, 747-56   77

242   ECG signal analysis through hidden Markov models. **2006**, 53, 1541-9   178

241   Continuous cardiac output and left atrial pressure monitoring by pulmonary artery pressure waveform analysis. **2006**, 2006, 214-7   5

240   Giles f. Filley lecture. Complex systems. **2006**, 3, 467-71   110

239   Cancellation of artifacts in ECG signals using a normalized adaptive neural filter. **2007**, 2007, 2552-5   3

238   Sistema de Tele-Monitoreo Inalámbrico de Eventos Cardiacos para Seguimiento de Arritmias. *IFMBE Proceedings*, **2007**, 948-952   0.2

237   A wavelet method for the noise reduction in electrocardiographic signals. **2007**,

236   Blind source separation of electrocardiographic signals using system stability criteria. **2007**, 2007, 3493-5   2

235   Intelligent Analysis System in Time Series of Smart Health Home On-line Monitoring Data. **2007**,

234   Design and implementation of a portable physiologic data acquisition system. **2007**, 8, 563-9   10

233   Filtering of Noise in Electrocardiographic Signals Using An Unbiased and Normalized Adaptive Artifact Cancellation System. **2007**,   1

| 232 | Nonstationarity and duration of the cardiac interval time series in assessing the functional state of operator personnel. **2007**, 52, 241-247 | 4 |

| 231 | BioLab: An Educational Tool for Signal Processing Training in Biomedical Engineering. **2007**, 50, 34-40 | 14 |

| 230 | Detrended fluctuation analysis of intracranial pressure predicts outcome following traumatic brain injury. **2008**, 55, 2509-18 | 40 |

| 229 | Reduced heart rate multiscale entropy predicts death in critical illness: a study of physiologic complexity in 285 trauma patients. **2008**, 23, 399-405 | 55 |

| 228 | ECG segmentation in a body sensor network using Hidden Markov Models. **2008**, | 3 |

| 227 | ECG segmentation in a body sensor network using Hidden Markov Models. **2008**, | |

| 226 | Assessment of computerized analysis algorithms for one dimension physiologic data with multiple databases. **2008**, 2008, 5004-7 | |

| 225 | Heart rate multiscale entropy at three hours predicts hospital mortality in 3,154 trauma patients. **2008**, 30, 17-22 | 75 |

| 224 | Complexity Analysis of Gait Time Series under the Different Physiological States. **2009**, | |

| 223 | An R package for heart rate variability analysis. **2009**, | 2 |

| 222 | Open questions on unified approach for calibration of oscillometric blood pressure measurement devices. **2009**, | 2 |

| 221 | Computer-aided analysis of gait rhythm fluctuations in amyotrophic lateral sclerosis. **2009**, 47, 1165-71 | 41 |

| 220 | Filtering electrocardiographic signals using an unbiased and normalized adaptive noise reduction system. **2009**, 31, 17-26 | 56 |

| 219 | Study on ECG Data Lossless Compression Algorithm Based on K-means Cluster. **2009**, | 8 |

| 218 | Hybrid QRS Detection Circuit Based on Dynamic Reconfigurable Field Programmable Analog Array. **2010**, 43, 48-53 | 2 |

| 217 | Instruments and Methods for Calibration of Oscillometric Blood Pressure Measurement Devices. **2010**, 59, 2391-2404 | 25 |

| 216 | Statistical analysis of gait rhythm in patients with Parkinson's disease. **2010**, 18, 150-8 | 95 |

| 215 | Analyzing murine electrocardiogram with PhysioToolkit. *Journal of Electrocardiology*, **2010**, 43, 701-5 | 1.4 | 3 |

214	A PDF-based classification of gait cadence patterns in patients with amyotrophic lateral sclerosis. **2010**, 2010, 1304-7		1
213	A Real-Time Cardiac Arrhythmia Classification System with Wearable Electrocardiogram. **2011**,		10
212	A real-time cardiac arrhythmia classification system with wearable electrocardiogram. **2011**,		2
211	Comparison of characterizing and data analysis methods for detecting abnormalities in ECG. **2011**,		1
210	Digital pacer detection in diagnostic grade ECG. **2011**,		8
209	Data, Signals, and Information: Medical Applications of Digital Signal Processing. **2011**, 33-60		
208	PhysioNet: physiologic signals, time series and related open source software for basic, clinical, and applied research. **2011**, 2011, 8327-30		19
207	ECG beat detection using wavelet denoising. **2011**, 8-11		1
206	Toward optimal display of physiologic status in critical care: I. Recreating bedside displays from archived physiologic data. **2011**, 26, 105.e1-9		13
205	An open source tool for heart rate variability spectral analysis. *Computer Methods and Programs in Biomedicine*, **2011**, 103, 39-50	6.9	36
204	Using "off-the-shelf" tools for terabyte-scale waveform recording in intensive care: computer system design, database description and lessons learned. *Computer Methods and Programs in Biomedicine*, **2011**, 103, 151-60	6.9	13
203	Optimal timing in screening patients with congestive heart failure and healthy subjects during circadian observation. **2011**, 39, 835-49		12
202	Analysis of altered gait cycle duration in amyotrophic lateral sclerosis based on nonparametric probability density function estimation. **2011**, 33, 347-55		41
201	Statistical analysis of gait maturation in children based on probability density functions. **2011**, 2011, 1652-5		2
200	A real-time cardiac arrhythmia classification system with wearable sensor networks. *Sensors*, **2012**, 12, 12844-69	3.8	28
199	Improving empirical mode decomposition with an optimized piecewise cubic Hermite interpolation method. **2012**,		5
198	Multiscale modeling and data integration in the virtual physiological rat project. **2012**, 40, 2365-78		42
197	. **2012**,		6

196	Adaptive cancellation of motion artifact in wearable biosensors. **2012**, 2012, 2004-8		17
195	ECG analysis in the Time-Frequency domain. **2012**,		1
194	Towards resiliency in embedded medical monitoring devices. **2012**,		4
193	Extraction of fetal heart rate from maternal surface ECG with provisions for multiple pregnancies. **2012**, 2012, 6165-8		1
192	Fractional dynamical model for the generation of ECG like signals from filtered coupled Van-der Pol oscillators. *Computer Methods and Programs in Biomedicine*, **2013**, 112, 490-507	6.9	29
191	Multiscale adaptive basis function modeling of spatiotemporal vectorcardiogram signals. **2013**, 17, 484-92		20
190	Miniaturized wireless ECG monitor for real-time detection of epileptic seizures. **2013**, 12, 1-21		28
189	A severity measurement system for obstructive sleep apnea discrimination using a single ECG signal. **2013**,		1
188	Statistical Analysis of Gait Maturation in Children Using Nonparametric Probability Density Function Modeling. **2013**, 15, 753-766		13
187	The electrocardiogram at a crossroads. **2013**, 128, 79-82		25
186	Traffic Pattern Based Data Recovery Scheme for Cyber-Physical Systems. **2014**, E97.A, 1926-1936		5
185	HMM for classification of Parkinson's disease based on the raw gait data. **2014**, 38, 147		56
184	Model-driven parametric monitoring of high-dimensional nonlinear functional profiles. **2014**,		7
183	Using independent component analysis to obtain feature space for reliable ECG Arrhythmia classification. **2014**,		14
182	A configurable quantized compressed sensing architecture for low-power tele-monitoring. **2014**,		5
181	Signal quality quantification and waveform reconstruction of arterial blood pressure recordings. **2014**, 2014, 2233-6		2
180	Reliable real-time calculation of heart-rate complexity in critically ill patients using multiple noisy waveform sources. **2014**, 28, 123-31		5
179	Wavelet-based electrocardiogram signal compression methods and their performances: A prospective review. *Biomedical Signal Processing and Control*, **2014**, 14, 73-107	4.9	74

178	Noninvasive subject-specific monitoring of autonomic-cardiac regulation. **2014**, 61, 1196-207		3
177	Steps required to inclusion in commercial ECG analysis systems--the new ECG indices for quantitating extent, acuteness and severity of acute myocardial ischemia for facilitating emergency triage decisions. *Journal of Electrocardiology*, **2014**, 47, 577-82	1.4	0
176	A web-based platform for biosignal visualization and annotation. *Multimedia Tools and Applications*, **2014**, 70, 433-460	2.5	7
175	Obstructive sleep apnea detection using spectrum and bispectrum analysis of single-lead ECG signal. **2015**, 36, 1963-1980		25
174	Performance Evaluation of Heartbeat Classification Methods Based on Morphological Descriptors1. **2015**, 9,		
173	Individualization of a vectorcardiographic model by a particle swarm optimization. *Biomedical Signal Processing and Control*, **2015**, 22, 65-73	4.9	1
172	Machine intelligent diagnosis of ECG for arrhythmia classification using DWT, ICA and SVM techniques. **2015**,		27
171	Collaborating and sharing data in epilepsy research. **2015**, 32, 235-9		46
170	A sensor fusion wearable health-monitoring system with haptic feedback. **2015**,		20
169	A novel approach for QRS delineation in ECG signal based on chirplet transform. **2015**,		3
168	Gaussian Process-Based Feature Selection for Wavelet Parameters: Predicting Acute Hypotensive Episodes from Physiological Signals. **2015**,		4
167	Low Complexity Neural Networks to Classify EEG Signals Associated to Emotional Stimuli. *Lecture Notes in Computer Science*, **2015**, 177-188	0.9	
166	Naive Bayes classification of neurodegenerative diseases by using discrete wavelet transform. **2015**,		3
165	. **2015**, 12, 106-115		78
164	Wavelet-based characterization of gait signal for neurological abnormalities. **2015**, 41, 634-9		25
163	A statistical index for early diagnosis of ventricular arrhythmia from the trend analysis of ECG phase-portraits. **2015**, 36, 107-31		11
162	Quantization Effects in an Analog-to-Information Front End in EEG Telemonitoring. **2015**, 62, 104-108		9
161	A Power-Efficient Adaptive Fuzzy Resolution Control System for Wireless Body Sensor Networks. *IEEE Access*, **2015**, 3, 743-751	3.5	37

160	Nonconvex Sorted (ell _1) Minimization for Sparse Approximation. **2015**, 3, 207-229	13
159	Adaptive compressed sensing architecture in wireless brain-computer interface. **2015**,	9
158	Strategic framework for management of hybrid biosignals from study design to statistics. **2015**,	1
157	Two-level ⨍1 minimization for compressed sensing. **2015**, 108, 459-475	26
156	Are the Associations of Cardiac Acceleration and Deceleration Capacities With Fine Metal Particulate in Welders Mediated by Inflammation?. **2016**, 58, 232-7	2
155	. **2016**,	7
154	Joint reduction of baseline wander, PLI and its harmonics in ECG signal using Ramanujan Periodic Transform. **2016**,	5
153	Distribution of premature heartbeats. **2016**,	1
152	Real time EEG based automatic brainwave regulation by music. **2016**,	3
151	Huberian function applied to neurodegenerative disorder gait rhythm. **2016**, 43, 2065-2084	1
150	Value locality based storage compression memory architecture for ECG sensor node. **2016**, 59, 1	1
149	Perpetual and Virtual Patients for Cardiorespiratory Physiological Studies. **2016**, 5, 122-128	4
148	Level-crossing ADC modeling for wireless electrocardiogram signal acquisition system. **2016**,	3
147	A Programmable Analog-to-Information Converter for Agile Biosensing. **2016**,	1
146	WaveformECG: A Platform for Visualizing, Annotating, and Analyzing ECG Data. **2016**, 18, 36-46	5
145	A Survey of Wearable Biometric Recognition Systems. **2016**, 49, 1-35	72
144	R peak delineation in ECG signal based on polynomial chirplet transform using adaptive threshold. **2016**,	
143	Removal of narrowband interference (PLI in ECG signal) using Ramanujan periodic transform (RPT). **2016**,	6

142	Management Framework for Biosignals in Biomedical Studies: From Study Design to Data Statistics. **2016**, 65, 776-782		2
141	ECG Authentication System Design Based on Signal Analysis in Mobile and Wearable Devices. **2016**, 23, 805-808		56
140	Ultra-Low Power Dynamic Knob in Adaptive Compressed Sensing Towards Biosignal Dynamics. **2016**, 10, 579-92		15
139	A non-autonomous system leading to cyclic chaotic sets to model physiological rhythms. **2016**, 281, 343-355		1
138	A Configurable Energy-Efficient Compressed Sensing Architecture With Its Application on Body Sensor Networks. **2016**, 12, 15-27		27
137	State-Based General Gamma CUSUM for Modeling Heart Rate Variability Using Electrocardiography Signals. **2017**, 14, 1160-1171		3
136	. **2017**, 24, 24-34		9
135	Heartbeat monitoring from adaptively down-sampled electrocardiogram. **2017**, 84, 217-225		7
134	Physiological Informatics: Collection and Analyses of Data from Wearable Sensors and Smartphone for Healthcare. **2017**, 1028, 17-37		12
133	Bio-medical analysis framework. **2017**,		
132	Towards the discrimination of primary and secondary headache: An intelligent systems approach. **2017**,		3
131	Fine-Grained Supervision and Restriction of Biomedical Applications in Linux Containers. **2017**,		2
130	Multiwavelet feature sets for ECG beat classification. **2017**,		2
129	Optimal design of linear phase multi-band stop filters using improved cuckoo search particle swarm optimization. **2017**, 52, 435-445		23
128	Measuring signal fluctuations in gait rhythm time series of patients with Parkinson's disease using entropy parameters. *Biomedical Signal Processing and Control*, **2017**, 31, 265-271	4.9	36
127	The impact of feature extraction for the classification of amyotrophic lateral sclerosis among neurodegenerative diseases and healthy subjects. *Biomedical Signal Processing and Control*, **2017**, 31, 288-294	4.9	23
126	. **2017**,		6
125	Computing the variations in the self-similar properties of the various gait intervals in Parkinson disease patients. **2017**, 2017, 2434-2437		2

124	Sleep order detection model using support vector machines and features extracted from brain ECG signals. **2017**,		1
123	Ramanujan and DFT mixed basis representation for removal of PLI in ECG signal. **2017**,		3
122	Sandboxing of biomedical applications in Linux containers based on system call evaluation. **2018**, 30, e4484		1
121	Level-crossing ADC design and evaluation methodology for normal and pathological electrocardiogram signals measurement. **2018**, 124, 413-425		7
120	Emotional states recognition, implementing a low computational complexity strategy. **2018**, 24, 146-170		6
119	A new multi-stage combined kernel filtering approach for ECG noise removal. *Journal of Electrocardiology*, **2018**, 51, 265-275	1.4	19
118	Parallel Implementation of an Algorithm for Atrial Fibrillation Detection Using RR Intervals and Shannon Entropy. **2018**,		
117	Curating Research Data - Cyber security perspective from a nascent Brain Machine Interface Laboratory. **2018**,		0
116	A novel training method to preserve generalization of RBPNN classifiers applied to ECG signals diagnosis. **2018**, 108, 331-338		29
115	Consistent Sliding Mode Fault Tolerant Control for Second Order Multi-Agent Systems. **2018**,		
114	Investigation of EEG Noise and Artifact Removal by Patch-Based and Kernel Adaptive Filtering Techniques. **2018**,		4
113	Brute Force ECG Feature Extraction Applied on Discomfort Detection. *Advances in Intelligent Systems and Computing*, **2019**, 365-376	0.4	
112	EoT-driven hybrid ambient assisted living framework with naÊ™e BayesÊfirefly algorithm. **2019**, 31, 1275-1300		30
111	Phase Space Reconstruction Based CVD Classifier Using Localized Features. **2019**, 9, 14593		4
110	iPhys: An Open Non-Contact Imaging-Based Physiological Measurement Toolbox. **2019**, 2019, 6521-6524		31
109	A review of automated sleep stage scoring based on physiological signals for the new millennia. *Computer Methods and Programs in Biomedicine*, **2019**, 176, 81-91	6.9	47
108	Noise Reduction in ECG Signals Using Fully Convolutional Denoising Autoencoders. *IEEE Access*, **2019**, 7, 60806-60813	3.5	81
107	A eHealth System for Atrial Fibrillation Monitoring. **2019**, 229-241		2

106   The complexity of intracranial pressure as an indicator of cerebral autoregulation. **2019**, 75, 192-199   1

105   Detection of abnormalities in heart rate using multiple Fourier transforms. **2019**, 16, 5237-5242   2

104   Arrhythmia Detection - A Machine Learning based Comparative Analysis with MIT-BIH ECG Data. **2019**,   2

103   Wafer bonded CMUT technology utilizing a Poly-Silicon-on-Insulator wafer. **2019**,   2

102   Design of a Metasurface with Wide RCS Reduction Bandwidth. **2019**,   2

101   Investigating effects of force and pressure centre signals on stabilogram analysis. **2019**, 13, 1305-1310   1

100   Classification and Detection of Arrhythmia in ECG Signal Using Machine Learning Techniques. **2019**,   0

99   Greedy Algorithm for Selecting D2D Mobile Relays under Cost Constraints. **2019**,   0

98   . **2019**,   1

97   Preliminary Analysis On The Indicators Affecting Islamic Information Credibility In Social Media. **2019**,   0

96   A Graph-Neural-Network Decoder with MLP-based Processing Cells for Polar Codes. **2019**,   1

95   An Optimal Low-Complexity Detection Algorithm for Differential Spatial Modulation. **2019**,

94   ECPNet: An Efficient Attention-Based Convolution Network with Pseudo-3D Block for Human Action Recognition. **2019**,

93   Study and Design of Soft-Switched PWM DC-DC Buck Converter. **2019**,

92   Sankhya: An Unbiased Benchmark for Bangla Handwritten Digits Recognition. **2019**,   2

91   Introducing SPAIN (SParse Audio INpainter). **2019**,   5

90   UbiComp/ISWC 2019: A Post-Conference Summary Report. **2019**, 18, 71-79

89   Intelligent parking system using multiple sensor detection. **2019**,   1

88	Modeling of the Buried Multiple Junction (BMJ) Detector in Reach-Through (RT) Condition. **2019**,		1
87	Modeling Framework for the Generation of Synthetic RR Series during Atrial Arrhythmias. **2019**, 2019, 6347-6350		2
86	Ultra-Wideband Absorber Based on Printed Resonance Frequency-Selective Surfaces with Lumped Losses. **2019**,		
85	A Two-Phase Relax-and-Fix Heuristic for Multi-Level Lot-Sizing and Facility Location Problems. **2019**,		
84	Knowledge-Based Question and Answering System for Turkish. **2019**,		0
83	A Hybrid Real-time remote monitoring framework with NB-WOA algorithm for patients with chronic diseases. **2019**, 93, 77-95		32
82	PhysioUnicaDB: a dataset of EEG and ECG simultaneously acquired. **2019**, 126, 119-122		6
81	Arrhythmia detection by extracting hybrid features based on refined Fuzzy entropy (FuzEn) approach and employing machine learning techniques. **2020**, 30, 656-686		9
80	EEG mobility artifact removal for ambulatory epileptic seizure prediction applications. *Biomedical Signal Processing and Control*, **2020**, 55, 101638	4.9	14
79	RTEST 2020 Conference Program. **2020**,		
78	ECG Data Mining Using SAS. **2020**,		1
77	Automatic Classification of Myocardial Infarction Using Spline Representation of Single-Lead Derived Vectorcardiography. *Sensors*, **2020**, 20,	3.8	3
76	On the wavelet-based compressibility of continuous-time sampled ECG signal for e-health applications. **2020**, 164, 108031		4
75	Network modeling and Internet of things for smart and connected health systems case study for smart heart health monitoring and management. **2020**, 10, 159-171		6
74	7-kV 1-MVA SiC-Based Modular Multilevel Converter Prototype for Medium-Voltage Electric Machine Drives. **2020**, 35, 10137-10149		28
73	Event-Driven ECG Sensor in Healthcare Devices for Data Transfer Optimization. **2020**, 45, 1-27		8
72	Automatic ECG Diagnosis Using Convolutional Neural Network. *Electronics (Switzerland)*, **2020**, 9, 951	2.6	23
71	Embedded real-time feature extraction for electrode inversion detection in telemedicine electrocardiograms. *Biomedical Signal Processing and Control*, **2020**, 60, 101946	4.9	

70	Variance of the Gait Parameters and Fraction of Double-Support Interval for Determining the Severity of Parkinson's Disease. **2020**, 10, 577		6
69	Bas-Relief Modeling With Detail Preservation and Local Significance Enhancement. *IEEE Access*, **2020**, 8, 44190-44201	3.5	2
68	. **2020**, 56, 1-7		3
67	Local Excitation of a Perfectly Conducting Slab With Finite or Infinite Number of Slits and the Role of Proper Complex Waves. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 6154-6161	4.9	1
66	A novel dimensionality reduction approach for ECG signal via convolutional denoising autoencoder with LSTM. *Biomedical Signal Processing and Control*, **2021**, 63, 102225	4.9	10
65	Real-time smart monitoring system for atrial fibrillation pathology. *Journal of Ambient Intelligence and Humanized Computing*, **2021**, 12, 4461-4469	3.7	3
64	Development of a Low-Cost ECG Device. *Algorithms for Intelligent Systems*, **2021**, 401-419	0.5	
63	Review of Computational Techniques for the Analysis of Abnormal Patterns of ECG Signal Provoked by Cardiac Disease. *CMES - Computer Modeling in Engineering and Sciences*, **2021**, 128, 875-906	1.7	1
62	Privacy-Preserving Collective Learning With Homomorphic Encryption. *IEEE Access*, **2021**, 9, 132084-132096	3.5	1
61	Advances of ECG Sensors from Hardware, Software and Format Interoperability Perspectives. *Electronics (Switzerland)*, **2021**, 10, 105	2.6	10
60	ECG diagnostic support system (EDSS): A deep learning neural network based classification system for detecting ECG abnormal rhythms from a low-powered wearable biosensors. *Sensing and Bio-Sensing Research*, **2021**, 31, 100398	3.3	7
59	Data analytics and clinical feature ranking of medical records of patients with sepsis. *BioData Mining*, **2021**, 14, 12	4.3	3
58	A new automated multi-stage system of non-local means and multi-kernel adaptive filtering techniques for EEG noise and artifacts suppression. *Journal of Neural Engineering*, **2021**, 18,	5	4
57	Atrial fibrillation detection based on multi-feature extraction and convolutional neural network for processing ECG signals. *Computer Methods and Programs in Biomedicine*, **2021**, 202, 106009	6.9	13
56	Electrocardiogram Data Compression Techniques for Cardiac Healthcare Systems: A Methodological Review. *Irbm*, **2021**,	4.8	4
55	Dynamic Reliability Management in Neuromorphic Computing. *ACM Journal on Emerging Technologies in Computing Systems*, **2021**, 17, 1-27	1.7	6
54	Detection of heartbeat abnormalities from phonocardiography using machine learning. **2021**,		
53	Encyclopedia of Computational Neuroscience. **2014**, 1-3		2

52	A Two-Stage Feature Extraction Approach for ECG Signals. *Advances in Intelligent Systems and Computing*, **2018**, 299-310	0.4	5
51	AFC-ECG: An Adaptive Fuzzy ECG Classifier. **2007**, 189-199		16
50	A novel ECG detector performance metric and its relationship with missing and false heart rate limit alarms. *Journal of Electrocardiology*, **2018**, 51, 68-73	1.4	3
49	Independent Component Analysis Methods to Improve Electrocardiogram Patterns Recognition in the Presence of Non-Trivial Artifacts. *Journal of Medical and Bioengineering*, **2015**, 4, 221-226		3
48	A flattest constrained envelope approach for empirical mode decomposition. *PLoS ONE*, **2013**, 8, e61739	3.7	5
47	Synthesis of Chest-Lead ECG Using Temporal Convolutional Networks. **2021**,		
46	Healthcare System Architecture, Economic Value, and Policy Models in Large-Scale Wireless Sensor Networks. *Lecture Notes in Computer Science*, **2006**, 233-246	0.9	1
45	System Architecture and Economic Value-Chain Models for Healthcare Privacy and Security Control in Large-Scale Wireless Sensor Networks. *Lecture Notes in Computer Science*, **2006**, 511-520	0.9	1
44	Eliminaci de ruido en biose les utilizando la ecuaci algebraica de Lyapunov. *IFMBE Proceedings*, **2007**, 78-81	0.2	1
43	Anlse de Diferentes Tnicas de Classifica N-Supervisionada de Batimentos Cardacos. *IFMBE Proceedings*, **2007**, 69-73	0.2	
42	Analysis of Heart Rate Variability. **2013**, 51-77		
41	Influence of Neurodegenerative Disorders on Gait Dynamics Using Poincar Symbolic Measures. *MOJ Gerontology & Geriatrics*, **2017**, 1,	0.2	
40	An Accurate LSTM Based Video Heart Rate Estimation Method. *Lecture Notes in Computer Science*, **2019**, 409-417	0.9	2
39	A Classification of ECG Arrhythmia Analysis Based on Performance Factors Using Machine Learning Approach. *Asset Analytics*, **2020**, 65-74	0.3	
38	Compiling Spiking Neural Networks to Neuromorphic Hardware. **2020**,		17
37	ECG physical signals study and analysis as applied task for physics virtual laboratory work for pupils at secondary schools. **2020**,		
36	EntropyHub: An open-source toolkit for entropic time series analysis. *PLoS ONE*, **2021**, 16, e0259448	3.7	4
35	Assessment of Ventricular Repolarization From Body-Surface ECGs in Humans. **2005**, 107-129		

34	Biosignal Analysis Using Independent Components with Intelligent Systems. *Lecture Notes in Mechanical Engineering*, **2021**, 771-785	0.4	
33	Application of Deep Learning Technology in Predicting the Risk of Inpatient Death in Intensive Care Unit.. *Journal of Healthcare Engineering*, **2021**, 2021, 6169481	3.7	
32	Edge-assisted Solutions for IoT-based Connected Healthcare Systems: A Literature Review. *IEEE Internet of Things Journal*, **2021**, 1-1	10.7	2
31	Feature Selection for ECG Beat Classification using Genetic Algorithms. **2018**, 149-156		0
30	Reliability-Performance Trade-offs in Neuromorphic Computing. **2020**,		6
29	The Effect of Obstructive Sleep Apnea on the Cardiovascular Variability. **2020**,		0
28	Electronic stethoscope for detecting heart abnormalities in athletes. **2020**,		1
27	Mathematically Based Assessment of the Accuracy of Protection of Cardiac Data Realized with the Help of Cryptography and Steganography. *Mathematics*, **2022**, 10, 390	2.3	0
26	Cuffless Blood Pressure Measurement Using Linear and Nonlinear Optimized Feature Selection.. *Diagnostics*, **2022**, 12,	3.8	1
25	Cardiac Arrhythmia Diagnosis via Multichannel Independent Component Analysis: An Approach Towards a Better Health Care System. *Communications in Computer and Information Science*, **2022**, 150-166	0.3	0
24	Automatic Detection of Heart Diseases Using Biomedical Signals: A Literature Review of Current Status and Limitations. *Lecture Notes in Networks and Systems*, **2022**, 420-440	0.5	
23	Transfer learning autoencoder used for compressing multimodal biosignal. *Multimedia Tools and Applications*, 1	2.5	1
22	Cardiac arrhythmia detection using dual-tree wavelet transform and convolutional neural network. *Soft Computing*, **2022**, 26, 3561-3571	3.5	6
21	A New Approach for Identifying Patients with Obstructive Sleep Apnea Using K-Nearest Neighbor Classification. **2021**,		0
20	Self-Correcting Recurrent Neural Network for Acute Kidney Injury Prediction in Critical Care. *Health Data Science*, **2021**, 2021, 1-10		0
19	Anlise computacional da variabilidade da freqũcia card̃ca a partir de sinais eletrocardiogr̃ficos. *The Academic Society Journal*, 38-44	0.1	0
18	Death by Round Numbers and Sharp Thresholds: How to Avoid Dangerous AI EHR Recommendations.		1
17	Novel cascade filter design of improved sparse low-rank matrix estimation and kernel adaptive filtering for ECG denoising and artifacts cancellation. *Biomedical Signal Processing and Control*, **2022**, 77, 103750	4.9	0

16	Classification of cardiac arrhythmia using a convolutional neural network and bi-directional long short-term memory. *Digital Health*, **2022**, 8, 205520762211027	4	1
15	A Novel Hybrid Deep Learning Approach using BiGRU-BiLSTM and Multi-layered Dilated CNN to Detect Arrhythmia. *IEEE Access*, **2022**, 1-1	3.5	1
14	A Vision-Based System for Stage Classification of Parkinsonian Gait Using Machine Learning and Synthetic Data. *Sensors*, **2022**, 22, 4463	3.8	1
13	PhysioNet. **2022**, 2806-2808		
12	A systematic review and Meta-data analysis on the applications of Deep Learning in Electrocardiogram. *Journal of Ambient Intelligence and Humanized Computing*,	3.7	0
11	Autoregressive Modeling based ECG Cardiac Arrhythmias Database System. *International Journal of Circuits, Systems and Signal Processing*, **2022**, 16, 1074-1083	1.3	
10	Derivation of chest-lead ECG from limb-lead using temporal convolutional network in variational mode decomposition domain.		
9	QRS complex detection using stationary wavelet transform and adaptive thresholding. **2022**, 8, 065011		0
8	A Parametric Lossy Compression Techniques for Biosignals: A Review.		0
7	Generalizability and Clinical Implications of Electrocardiogram Denoising with Cardio-NAFNet.		0
6	Knowledge-Based Systems in Medicine. **2022**, 75-108		0
5	Psychological stress recognition from heart rate variability parameters based on field programmable gate arrays. **2022**, 93, 115107		0
4	Pulmonary Artery Pressure (PAP) Prediction Based On Three Physiological And Seven ECG Signal Features. **2022**,		0
3	Heart disease recognition based on extended ECG sequence database and deep learning techniques. **2022**,		0
2	Unsupervised technique for cardiac data compression with wavelet transform for telemedicine. **2023**, 100671		0
1	HARDC : A novel ECG-based heartbeat classification method to detect arrhythmia using hierarchical attention based dual structured RNN with dilated CNN. **2023**, 162, 271-287		0