

Pablo laguna

List of Publications by Year in descending order

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255
papers

8,602
citations

66234

42
h-index

56606

83
g-index

265
all docs

265
docs citations

265
times ranked

5919
citing authors

#	ARTICLE	IF	CITATIONS
1	A Wavelet-Based ECG Delineator: Evaluation on Standard Databases. IEEE Transactions on Biomedical Engineering, 2004, 51, 570-581.	2.5	1,216
2	Automatic Detection of Wave Boundaries in Multilead ECG Signals: Validation with the CSE Database. Journal of Biomedical Informatics, 1994, 27, 45-60.	0.7	408
3	Photoplethysmography pulse rate variability as a surrogate measurement of heart rate variability during non-stationary conditions. Physiological Measurement, 2010, 31, 1271-1290.	1.2	372
4	Power spectral density of unevenly sampled data by least-square analysis: performance and application to heart rate signals. IEEE Transactions on Biomedical Engineering, 1998, 45, 698-715.	2.5	232
5	Principal Component Analysis in ECG Signal Processing. Eurasip Journal on Advances in Signal Processing, 2007, 2007, 1.	1.0	224
6	Analysis of heart rate variability in the presence of ectopic beats using the heart timing signal. IEEE Transactions on Biomedical Engineering, 2003, 50, 334-343.	2.5	211
7	New algorithm for QT interval analysis in 24-hour Holter ECG: performance and applications. Medical and Biological Engineering and Computing, 1990, 28, 67-73.	1.6	208
8	Drowsiness detection using heart rate variability. Medical and Biological Engineering and Computing, 2016, 54, 927-937.	1.6	191
9	QT interval variability in body surface ECG: measurement, physiological basis, and clinical value: position statement and consensus guidance endorsed by the European Heart Rhythm Association jointly with the ESC Working Group on Cardiac Cellular Electrophysiology. Europace, 2016, 18, 925-944.	0.7	186
10	Improved heart rate variability signal analysis from the beat occurrence times according to the IPFM model. IEEE Transactions on Biomedical Engineering, 2000, 47, 985-996.	2.5	144
11	Computational techniques for ECG analysis and interpretation in light of their contribution to medical advances. Journal of the Royal Society Interface, 2018, 15, 20170821.	1.5	143
12	A Robust Method for ECG-Based Estimation of the Respiratory Frequency During Stress Testing. IEEE Transactions on Biomedical Engineering, 2006, 53, 1273-1285.	2.5	142
13	Adaptive filter for event-related bioelectric signals using an impulse correlated reference input: comparison with signal averaging techniques. IEEE Transactions on Biomedical Engineering, 1992, 39, 1032-1044.	2.5	133
14	Characterization of QT Interval Adaptation to RR Interval Changes and Its Use as a Risk-Stratifier of Arrhythmic Mortality in Amiodarone-Treated Survivors of Acute Myocardial Infarction. IEEE Transactions on Biomedical Engineering, 2004, 51, 1511-1520.	2.5	131
15	Pulse Rate Variability Analysis for Discrimination of Sleep-Apnea-Related Decreases in the Amplitude Fluctuations of Pulse Photoplethysmographic Signal in Children. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 240-246.	3.9	124
16	Inclusion of Respiratory Frequency Information in Heart Rate Variability Analysis for Stress Assessment. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 1016-1025.	3.9	123
17	Deriving respiration from photoplethysmographic pulse width. Medical and Biological Engineering and Computing, 2013, 51, 233-242.	1.6	112
18	Adaptive estimation of QRS complex wave features of ECG signal by the hermite model. Medical and Biological Engineering and Computing, 1996, 34, 58-68.	1.6	106

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19	Characterization of Dynamic Interactions Between Cardiovascular Signals by Time-Frequency Coherence. IEEE Transactions on Biomedical Engineering, 2012, 59, 663-673.	2.5	101
20	Alignment methods for averaging of high-resolution cardiac signals: a comparative study of performance. IEEE Transactions on Biomedical Engineering, 1991, 38, 571-579.	2.5	96
21	A method for continuously assessing the autonomic response to music-induced emotions through HRV analysis. Medical and Biological Engineering and Computing, 2010, 48, 423-433.	1.6	96
22	The Integral Pulse Frequency Modulation Model With Time-Varying Threshold: Application to Heart Rate Variability Analysis During Exercise Stress Testing. IEEE Transactions on Biomedical Engineering, 2011, 58, 642-652.	2.5	85
23	Measuring acute stress response through physiological signals: towards a quantitative assessment of stress. Medical and Biological Engineering and Computing, 2019, 57, 271-287.	1.6	77
24	Characterization of Repolarization Alternans During Ischemia: Time-Course and Spatial Analysis. IEEE Transactions on Biomedical Engineering, 2006, 53, 701-711.	2.5	76
25	Detection of decreases in the amplitude fluctuation of pulse photoplethysmography signal as indication of obstructive sleep apnea syndrome in children. Biomedical Signal Processing and Control, 2008, 3, 267-277.	3.5	73
26	QRS Slopes for Detection and Characterization of Myocardial Ischemia. IEEE Transactions on Biomedical Engineering, 2008, 55, 468-477.	2.5	72
27	Mechanisms of ventricular rate adaptation as a predictor of arrhythmic risk. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1577-H1587.	1.5	70
28	PTT Variability for Discrimination of Sleep Apnea Related Decreases in the Amplitude Fluctuations of PPG Signal in Children. IEEE Transactions on Biomedical Engineering, 2010, 57, 1079-1088.	2.5	67
29	Automatic detection of ST-T complex changes on the ECG using filtered RMS difference series: application to ambulatory ischemia monitoring. IEEE Transactions on Biomedical Engineering, 2000, 47, 1195-1201.	2.5	65
30	Discrimination of Sleep-Apnea-Related Decreases in the Amplitude Fluctuations of PPG Signal in Children by HRV Analysis. IEEE Transactions on Biomedical Engineering, 2009, 56, 1005-1014.	2.5	65
31	Multilead Analysis of T-Wave Alternans in the ECG Using Principal Component Analysis. IEEE Transactions on Biomedical Engineering, 2009, 56, 1880-1890.	2.5	65
32	A Comparative Study of ECG-derived Respiration in Ambulatory Monitoring using the Single-lead ECG. Scientific Reports, 2020, 10, 5704.	1.6	65
33	ECG Signal Processing. , 2005, , 453-566.		63
34	Electrocardiogram Derived Respiratory Rate from QRS Slopes and R-Wave Angle. Annals of Biomedical Engineering, 2014, 42, 2072-2083.	1.3	59
35	Analysis of the ST-T complex of the electrocardiogram using the Karhunen-Loève transform: adaptive monitoring and alternans detection. Medical and Biological Engineering and Computing, 1999, 37, 175-189.	1.6	58
36	Distinct ECG Phenotypes Identified in Hypertrophic Cardiomyopathy Using Machine Learning Associate With Arrhythmic Risk Markers. Frontiers in Physiology, 2018, 9, 213.	1.3	57

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37	Estimation of the QT/RR hysteresis lag. Journal of Electrocardiology, 2003, 36, 187-190.	0.4	56
38	EEG Signal Processing. , 2005, , 55-179.		56
39	Comparative Study of Local and Karhunen-Loève-Based ST-T Indexes in Recordings from Human Subjects with Induced Myocardial Ischemia. Journal of Biomedical Informatics, 1998, 31, 271-292.	0.7	52
40	QT Variability and HRV Interactions in ECG: Quantification and Reliability. IEEE Transactions on Biomedical Engineering, 2006, 53, 1317-1329.	2.5	52
41	Low-pass differentiators for biological signals with known spectra: application to ECG signal processing. IEEE Transactions on Biomedical Engineering, 1990, 37, 420-425.	2.5	47
42	Assessment of the dynamic interactions between heart rate and arterial pressure by the cross time-frequency analysis. Physiological Measurement, 2012, 33, 315-331.	1.2	46
43	The Na ⁺ /K ⁺ pump is an important modulator of refractoriness and rotor dynamics in human atrial tissue. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H1146-H1159.	1.5	45
44	Analysis of Heart Rate Variability Using Time-Varying Frequency Bands Based on Respiratory Frequency. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6675-8.	0.5	44
45	Heart Rate Turbulence Analysis Based on Photoplethysmography. IEEE Transactions on Biomedical Engineering, 2013, 60, 3149-3155.	2.5	44
46	Variability of Ventricular Repolarization Dispersion Quantified by Time-Warping the Morphology of the T-Waves. IEEE Transactions on Biomedical Engineering, 2017, 64, 1619-1630.	2.5	44
47	Wearable Armband Device for Daily Life Electrocardiogram Monitoring. IEEE Transactions on Biomedical Engineering, 2020, 67, 3464-3473.	2.5	44
48	ECG-based detection of body position changes in ischemia monitoring. IEEE Transactions on Biomedical Engineering, 2003, 50, 677-685.	2.5	42
49	Vectorcardiographic loop alignment and the measurement of morphologic beat-to-beat variability in noisy signals. IEEE Transactions on Biomedical Engineering, 2000, 47, 497-506.	2.5	41
50	Analysis of heart rate variability during exercise stress testing using respiratory information. Biomedical Signal Processing and Control, 2010, 5, 299-310.	3.5	41
51	Automatic measurement of corrected QT interval in Holter recordings: Comparison of its dynamic behavior in patients after myocardial infarction with and without life-threatening arrhythmias. American Heart Journal, 1997, 134, 181-187.	1.2	40
52	Block adaptive filters with deterministic reference inputs for event-related signals: BLMS and BRLS. IEEE Transactions on Signal Processing, 2002, 50, 1102-1112.	3.2	40
53	A Multilead Scheme Based on Periodic Component Analysis for T-Wave Alternans Analysis in the ECG. Annals of Biomedical Engineering, 2010, 38, 2532-2541.	1.3	40
54	A human ventricular cell model for investigation of cardiac arrhythmias under hyperkalaemic conditions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 4205-4232.	1.6	40

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55	Quantification of Restitution Dispersion From the Dynamic Changes of the ST-Segment Wave Peak to End, Measured at the Surface ECG. IEEE Transactions on Biomedical Engineering, 2011, 58, 1172-1182.	2.5	39
56	Detection and Classification of Sleep Apnea and Hypopnea Using PPG and SpO ₂ Signals. IEEE Transactions on Biomedical Engineering, 2021, 68, 1496-1506.	2.5	39
57	Average T-wave alternans activity in ambulatory ECG records predicts sudden cardiac death in patients with chronic heart failure. Heart Rhythm, 2012, 9, 383-389.	0.3	38
58	Human emotion recognition using heart rate variability analysis with spectral bands based on respiration. , 2015, 2015, 6134-7.		38
59	Sudden cardiac death and pump failure death prediction in chronic heart failure by combining ECG and clinical markers in an integrated risk model. PLoS ONE, 2017, 12, e0186152.	1.1	38
60	Depolarization Changes During Acute Myocardial Ischemia by Evaluation of QRS Slopes: Standard Lead and Vectorial Approach. IEEE Transactions on Biomedical Engineering, 2011, 58, 110-120.	2.5	37
61	Techniques for Ventricular Repolarization Instability Assessment From the ECG. Proceedings of the IEEE, 2016, 104, 392-415.	16.4	36
62	Coronary artery disease diagnosis based on exercise electrocardiogram indexes from repolarisation, depolarisation and heart rate variability. Medical and Biological Engineering and Computing, 2003, 41, 561-571.	1.6	34
63	An Efficient Method for Handling Ectopic Beats Using the Heart Timing Signal. IEEE Transactions on Biomedical Engineering, 2006, 53, 13-20.	2.5	34
64	Steady-state MSE convergence of LMS adaptive filters with deterministic reference inputs with applications to biomedical signals. IEEE Transactions on Signal Processing, 2000, 48, 2229-2241.	3.2	33
65	Estimation of the respiratory frequency using spatial information in the VCG. Medical Engineering and Physics, 2003, 25, 501-507.	0.8	32
66	Multilead ECG Delineation Using Spatially Projected Leads From Wavelet Transform Loops. IEEE Transactions on Biomedical Engineering, 2009, 56, 1996-2005.	2.5	32
67	Automatic SVM classification of sudden cardiac death and pump failure death from autonomic and repolarization ECG markers. Journal of Electrocardiology, 2015, 48, 551-557.	0.4	32
68	T-wave Morphology Restitution Predicts Sudden Cardiac Death in Patients With Chronic Heart Failure. Journal of the American Heart Association, 2017, 6, .	1.6	32
69	Orthonormal (Fourier and Walsh) models of time-varying evoked potentials in neurological injury. IEEE Transactions on Biomedical Engineering, 1993, 40, 213-221.	2.5	30
70	Identification of the Occluded Artery in Patients with Myocardial Ischemia Induced by Prolonged Percutaneous Transluminal Coronary Angioplasty Using Traditional vs Transformed ECG-Based Indexes. Journal of Biomedical Informatics, 1999, 32, 470-482.	0.7	30
71	Individual Patterns of Dynamic QT/RR Relationship in Survivors of Acute Myocardial Infarction and Their Relationship to Antiarrhythmic Efficacy of Amiodarone. Journal of Cardiovascular Electrophysiology, 2004, 15, 1147-1154.	0.8	30
72	Machine learning enables noninvasive prediction of atrial fibrillation driver location and acute pulmonary vein ablation success using the 12-lead ECG. Cardiovascular Digital Health Journal, 2021, 2, 126-136.	0.5	30

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73	Influence of Running Stride Frequency in Heart Rate Variability Analysis During Treadmill Exercise Testing. IEEE Transactions on Biomedical Engineering, 2013, 60, 1796-1805.	2.5	29
74	Transient and rapid QRS-widening associated with a J-wave pattern predicts impending ventricular fibrillation in experimental myocardial infarction. Heart Rhythm, 2014, 11, 1195-1201.	0.3	29
75	Photoplethysmographic Waveform Analysis for Autonomic Reactivity Assessment in Depression. IEEE Transactions on Biomedical Engineering, 2021, 68, 1273-1281.	2.5	29
76	Cardiac repolarization analysis using the surface electrocardiogram. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 213-233.	1.6	28
77	Sampling rate and the estimation of ensemble variability for repetitive signals. Medical and Biological Engineering and Computing, 2000, 38, 540-546.	1.6	27
78	Detection and quantification of acute myocardial ischemia by morphologic evaluation of QRS changes by an angle-based method. Journal of Electrocardiology, 2013, 46, 204-214.	0.4	27
79	ECG-Derived Respiratory Rate in Atrial Fibrillation. IEEE Transactions on Biomedical Engineering, 2020, 67, 905-914.	2.5	26
80	ECG Beat Representation and Delineation by Means of Variable Projection. IEEE Transactions on Biomedical Engineering, 2021, 68, 2997-3008.	2.5	25
81	The adaptive linear combiner with a periodic-impulse reference input as a linear comb filter. Signal Processing, 1996, 48, 193-203.	2.1	24
82	Remote processing server for ECG-based clinical diagnosis support. IEEE Transactions on Information Technology in Biomedicine, 2002, 6, 277-284.	3.6	24
83	Evaluation of depolarization changes during acute myocardial ischemia by analysis of QRS slopes. Journal of Electrocardiology, 2011, 44, 416-424.	0.4	23
84	Synthesis of HRV signals characterized by predetermined time-frequency structure by means of time-varying ARMA models. Biomedical Signal Processing and Control, 2012, 7, 141-150.	3.5	23
85	Respiratory rate derived from smartphone-camera-acquired pulse photoplethysmographic signals. Physiological Measurement, 2015, 36, 2317-2333.	1.2	23
86	A dynamic model to characterize beat-to-beat adaptation of repolarization to heart rate changes. Biomedical Signal Processing and Control, 2008, 3, 29-43.	3.5	22
87	Methodological Framework for Estimating the Correlation Dimension in HRV Signals. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-11.	0.7	22
88	Temporal evolution of traditional versus transformed ECG-Based indexes in patients with induced myocardial ischemia. Journal of Electrocardiology, 2000, 33, 37-47.	0.4	21
89	Prediction of hypotension in hemodialysis patients. Physiological Measurement, 2014, 35, 1885-1898.	1.2	21
90	A Time-Varying Nonparametric Methodology for Assessing Changes in QT Variability Unrelated to Heart Rate Variability. IEEE Transactions on Biomedical Engineering, 2018, 65, 1443-1451.	2.5	21

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91	A multivariate time-frequency method to characterize the influence of respiration over heart period and arterial pressure. <i>Eurasip Journal on Advances in Signal Processing</i> , 2012, 2012, .	1.0	20
92	Mutual information between heart rate variability and respiration for emotion characterization. <i>Physiological Measurement</i> , 2019, 40, 084001.	1.2	20
93	Pulse Rate and Transit Time Analysis to Predict Hypotension Events After Spinal Anesthesia During Programmed Cesarean Labor. <i>Annals of Biomedical Engineering</i> , 2017, 45, 2253-2263.	1.3	19
94	Time domain baroreflex sensitivity assessment by joint analysis of spontaneous SBP and RR series. <i>Biomedical Signal Processing and Control</i> , 2009, 4, 254-261.	3.5	18
95	Non-linear HRV indices under autonomic nervous system blockade. , 2014, 2014, 3252-5.		18
96	Methodological framework for heart rate variability analysis during exercise: application to running and cycling stress testing. <i>Medical and Biological Engineering and Computing</i> , 2018, 56, 781-794.	1.6	18
97	ECG signal compression plus noise filtering with truncated orthogonal expansions. <i>Signal Processing</i> , 1999, 79, 97-115.	2.1	17
98	T-wave width as an index for quantification of ventricular repolarization dispersion: Evaluation in an isolated rabbit heart model. <i>Biomedical Signal Processing and Control</i> , 2008, 3, 67-77.	3.5	17
99	Karhunen-LoÃve transform as a tool to analyze the ST-segment. <i>Journal of Electrocardiology</i> , 1995, 28, 41-49.	0.4	16
100	A Novel Method to Capture the Onset of Dynamic Electrocardiographic Ischemic Changes and its Implications to Arrhythmia Susceptibility. <i>Journal of the American Heart Association</i> , 2014, 3, e001055.	1.6	16
101	The STAFF III ECG database and its significance for methodological development and evaluation. <i>Journal of Electrocardiology</i> , 2014, 47, 408-417.	0.4	16
102	Detection of body position changes using the surface electrocardiogram. <i>Medical and Biological Engineering and Computing</i> , 2003, 41, 164-171.	1.6	15
103	Prognostic value of average T-wave alternans and QT variability for cardiac events in MADIT-II patients. <i>Journal of Electrocardiology</i> , 2013, 46, 480-486.	0.4	15
104	Evaluation of ventricular repolarization dispersion during acute myocardial ischemia: spatial and temporal ECG indices. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 375-391.	1.6	15
105	Human Emotion Characterization by Heart Rate Variability Analysis Guided by Respiration. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2019, 23, 2446-2454.	3.9	15
106	Model-Based Detection of Heart Rate Turbulence. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 2712-2722.	2.5	14
107	Model-Based Detection of Heart Rate Turbulence Using Mean Shape Information. <i>IEEE Transactions on Biomedical Engineering</i> , 2010, 57, 334-342.	2.5	14
108	Selection of Nonstationary Dynamic Features for Obstructive Sleep Apnoea Detection in Children. <i>Eurasip Journal on Advances in Signal Processing</i> , 2011, 2011, .	1.0	14

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109	A Wavelet-Based Electrogram Onset Delineator for Automatic Ventricular Activation Mapping. IEEE Transactions on Biomedical Engineering, 2014, 61, 2830-2839.	2.5	14
110	Respiration Effect on Wavelet-Based ECG T-Wave End Delineation Strategies. IEEE Transactions on Biomedical Engineering, 2012, 59, 1818-1828.	2.5	13
111	QT/RR and T-peak-to-end/RR curvatures and slopes in chronic heart failure: Relation to sudden cardiac death. Journal of Electrocardiology, 2014, 47, 842-848.	0.4	13
112	A Multi-Variate Predictability Framework to Assess Invasive Cardiac Activity and Interactions During Atrial Fibrillation. IEEE Transactions on Biomedical Engineering, 2017, 64, 1157-1168.	2.5	13
113	Cardiovascular Predictive Value and Genetic Basis of Ventricular Repolarization Dynamics. Circulation: Arrhythmia and Electrophysiology, 2019, 12, e007549.	2.1	13
114	Baroreflex Sensitivity Measured by Pulse Photoplethysmography. Frontiers in Neuroscience, 2019, 13, 339.	1.4	13
115	Electrocardiogram Derived Respiratory Rate Using a Wearable Armband. IEEE Transactions on Biomedical Engineering, 2021, 68, 1056-1065.	2.5	13
116	Assessment of QT-measurement accuracy using the 12-lead electrocardiogram derived from EASI leads. Journal of Electrocardiology, 2007, 40, 172-179.	0.4	12
117	Discrimination between ischemic and artifactual ST segment events in Holter recordings. Biomedical Signal Processing and Control, 2010, 5, 21-31.	3.5	12
118	Time-varying spectral analysis for comparison of HRV and PPG variability during tilt table test. , 2010, 2010, 3579-82.		12
119	Ischemia detection from morphological QRS angle changes. Physiological Measurement, 2016, 37, 1004-1023.	1.2	12
120	Detection Performance and Risk Stratification Using a Model-Based Shape Index Characterizing Heart Rate Turbulence. Annals of Biomedical Engineering, 2010, 38, 3173-3184.	1.3	11
121	Influence of time-varying mean heart rate in coronary artery disease diagnostic performance of heart rate variability indices from exercise stress testing. Journal of Electrocardiology, 2011, 44, 445-452.	0.4	11
122	Monitoring breathing rate by fusing the physiological impact of respiration on video-photoplethysmogram with head movements. Physiological Measurement, 2019, 40, 094002.	1.2	11
123	Monitoring blood potassium concentration in hemodialysis patients by quantifying T-wave morphology dynamics. Scientific Reports, 2021, 11, 3883.	1.6	11
124	Modeling and estimation of time-varying heart rate variability during stress test by parametric and non parametric analysis. , 2007, , .		10
125	Impact of Sampling Rate Reduction on Automatic ECG Delineation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2587-90.	0.5	10
126	T wave alternans in experimental myocardial infarction: Time course and predictive value for the assessment of myocardial damage. Journal of Electrocardiology, 2013, 46, 263-269.	0.4	10

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127	Weightlessness and Cardiac Rhythm Disorders: Current Knowledge from Space Flight and Bed-Rest Studies. <i>Frontiers in Astronomy and Space Sciences</i> , 2016, 3, .	1.1	10
128	Assessment of Quadratic Nonlinear Cardiorespiratory Couplings During Tilt-Table Test by Means of Real Wavelet Biphase. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 66, 187-198.	2.5	10
129	Truncated orthogonal expansions of recurrent signals: equivalence to a linear time-variant periodic filter. <i>IEEE Transactions on Signal Processing</i> , 1999, 47, 3164-3172.	3.2	9
130	Detection of body position changes from the ECG using a Laplacian noise model. <i>Biomedical Signal Processing and Control</i> , 2014, 14, 189-196.	3.5	9
131	ECG-based estimation of dispersion of APD restitution as a tool to stratify sotalol-induced arrhythmic risk. <i>Journal of Electrocardiology</i> , 2015, 48, 867-873.	0.4	9
132	Heart morphology differences induced by intrauterine growth restriction and preterm birth measured on the ECG at preadolescent age. <i>Journal of Electrocardiology</i> , 2016, 49, 401-409.	0.4	9
133	A Two Step Gaussian Modelling to Assess PPG Morphological Variability Induced by Psychological Stress. , 0, , .		9
134	A time delay estimator based on the signal integral: theoretical performance and testing on ECG signals. <i>IEEE Transactions on Signal Processing</i> , 1994, 42, 3224-3229.	3.2	8
135	Evaluation of a root mean squared based ischemia detector on the long-term ST database with body position change cancellation. , 2005, , .		8
136	Pulse Photoplethysmography Amplitude Decrease Detector for Sleep Apnea Evaluation in Children. , 2005, 2005, 2743-6.		8
137	Dynamic assessment of spontaneous baroreflex sensitivity by means of time-frequency analysis using either RR or pulse interval variability. , 2010, 2010, 1630-3.		8
138	Eigenvalue-based time delay estimation of repetitive biomedical signals. , 2018, 75, 107-119.		8
139	Characterization of T Wave Amplitude, Duration and Morphology Changes During Hemodialysis: Relationship With Serum Electrolyte Levels and Heart Rate. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 2467-2478.	2.5	8
140	Improved QT variability quantification by multilead automatic delineation. , 2005, , .		7
141	Impaired T-wave amplitude adaptation to heart-rate induced by cardiac deconditioning after 5-days of head-down bed-rest. <i>Acta Astronautica</i> , 2013, 91, 166-172.	1.7	7
142	Electrocardiogram derived respiration from QRS slopes. , 2013, 2013, 3913-6.		7
143	Post-Ventricular Premature Contraction Phase Correction Improves the Predictive Value of Average T-Wave Alternans in Ambulatory ECG Recordings. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 635-644.	2.5	7
144	Pilot Study on Electrocardiogram Derived Respiratory Rate Using a Wearable Armband. , 2018, , .		7

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145	ECG-based monitoring of blood potassium concentration: Periodic versus principal component as lead transformation for biomarker robustness. <i>Biomedical Signal Processing and Control</i> , 2021, 68, 102719.	3.5	7
146	Location of Parasympathetic Innervation Regions From Electrograms to Guide Atrial Fibrillation Ablation Therapy: An in silico Modeling Study. <i>Frontiers in Physiology</i> , 2021, 12, 674197.	1.3	7
147	Proposal for a Home Sleep Monitoring Platform Employing a Smart Glove. <i>Sensors</i> , 2021, 21, 7976.	2.1	7
148	Model-based estimation of cardiovascular repolarization features: Ischaemia detection and PTCA monitoring. <i>Journal of Medical Engineering and Technology</i> , 1998, 22, 64-72.	0.8	6
149	ECG Signal Processing: Heart Rate Variability. , 2005, , 567-631.		6
150	Microgravity effects on ventricular response to heart rate changes. , 2012, 2012, 3424-7.		6
151	Modeling and Quantification of Repolarization Feature Dependency on Heart Rate. <i>Methods of Information in Medicine</i> , 2014, 53, 324-328.	0.7	6
152	Evaluation of T-wave alternans activity under stress conditions after 5â€™ and 21â€™ of sedentary head-down bed rest. <i>Physiological Measurement</i> , 2015, 36, 2041-2055.	1.2	6
153	Assessment of respiratory flow cycle morphology in patients with chronic heart failure. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 245-255.	1.6	6
154	The STAFF III Database: ECGs Recorded During Acutely Induced Myocardial Ischemia. , 0, ,		6
155	Evoked Potentials. , 2005, , 181-336.		5
156	Assessment of myocardial damage in chronic chagasic patients using QRS slopes. , 2007, ,		5
157	BioSigBrowser, biosignal processing interface. , 2009, ,		5
158	Real Time QRS Detection Based on M-ary Likelihood Ratio Test on the DFT Coefficients. <i>PLoS ONE</i> , 2014, 9, e110629.	1.1	5
159	Smartphone-camera-acquired pulse photoplethysmographic signal for deriving respiratory rate. , 2014, ,		5
160	Changes in respiration during emotional stress. , 2015, ,		5
161	Time-Frequency Analysis of Cardiovascular Signals and Their Dynamic Interactions. , 2017, , 257-287.		5
162	Respiratory Rate Detection Using a Camera as Contactless Sensor. , 0, ,		5

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163	Feasibility of Long-Term Daily Life Electrocardiogram Monitoring Based on a Wearable Armband Device. , 2019, 2019, 4314-4317.		5
164	Effect of yoga on pulse rate variability measured from a venous pressure waveform. , 2019, 2019, 372-375.		5
165	Cardiopulmonary coupling indices to assess weaning readiness from mechanical ventilation. Scientific Reports, 2021, 11, 16014.	1.6	5
166	Characterization of Atrial Propagation Patterns and Fibrotic Substrate With a Modified Omnipolar Electrogram Strategy in Multi-Electrode Arrays. Frontiers in Physiology, 2021, 12, 674223.	1.3	5
167	Mental Stress Detection Using Cardiorespiratory Wavelet Cross:Bispectrum. , 0, , .		5
168	Heart Rate Variability Analysis Guided by Respiration in Major Depressive Disorder. , 0, , .		5
169	Cardiovascular Changes Induced by Acute Emotional Stress Estimated from the Pulse Transit Time Difference. , 0, , .		5
170	Amplitude variability extraction from multi-lead electrocardiograms for improvement of sleep apnea recognition. , 2005, , .		4
171	High-frequency signature of the QRS complex across ischemia quantified by QRS slopes. , 2005, , .		4
172	Study of the relationship between Pulse Photoplethysmography amplitude decrease events and sleep apneas in children. , 2006, 2006, 3887-90.		4
173	Improved time domain BRS assessment with the use of baroreflex events. , 2007, , .		4
174	Introduction. Editorial on "Signal processing in vital rhythms and signs"™. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 207-211.	1.6	4
175	Respiration effect on single and multi lead ECG delineation strategies. , 2010, 2010, 3575-8.		4
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