Raquel BailÃ³n

List of Publications by Year
in descending order

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75 papers	2,201 citations	304743 22 h-index	254184 43 g-index
77 all docs	77 docs citations	77 times ranked	2383 citing authors

#	Article	IF	Citations
1	Acute Stress State Classification Based on Electrodermal Activity Modeling. IEEE Transactions on Affective Computing, 2023, 14, 788-799.	8.3	26
2	Fitbeat: COVID-19 estimation based on wristband heart rate using a contrastive convolutional auto-encoder. Pattern Recognition, 2022, 123, 108403.	8.1	26
3	Electrocardiogram Derived Respiratory Rate Using a Wearable Armband. IEEE Transactions on Biomedical Engineering, 2021, 68, 1056-1065.	4.2	13
4	Model-Based Evaluation of Methods for Respiratory Sinus Arrhythmia Estimation. IEEE Transactions on Biomedical Engineering, 2021, 68, 1882-1893.	4.2	12
5	Photoplethysmographic Waveform Analysis for Autonomic Reactivity Assessment in Depression. IEEE Transactions on Biomedical Engineering, 2021, 68, 1273-1281.	4.2	29
6	Estimation of the second ventilatory threshold through ventricular repolarization profile analysis. Scandinavian Journal of Medicine and Science in Sports, 2021, 31, 339-349.	2.9	4
7	Validity of the Polar H7 Heart Rate Sensor for Heart Rate Variability Analysis during Exercise in Different Age, Body Composition and Fitness Level Groups. Sensors, 2021, 21, 902.	3.8	31
8	Cardiopulmonary coupling indices to assess weaning readiness from mechanical ventilation. Scientific Reports, 2021, 11, 16014.	3.3	5
9	Asthmatic subjects stratification using autonomic nervous system information. Biomedical Signal Processing and Control, 2021, 69, 102802.	5.7	0
10	Detection of Walk Tests in Free-Living Activities Using a Wrist-Worn Device. Frontiers in Physiology, 2021, 12, 706545.	2.8	11
11	ECG Ventricular Repolarization Dynamics during Exercise: Temporal Profile, Relation to Heart Rate Variability and Effects of Age and Physical Health. International Journal of Environmental Research and Public Health, 2021, 18, 9497.	2.6	3
12	Two-Dimensional EspEn: A New Approach to Analyze Image Texture by Irregularity. Entropy, 2021, 23, 1261.	2.2	2
13	QT variability unrelated to RR variability during stress testing for identification of coronary artery disease. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200261.	3.4	1
14	Ventilatory Thresholds Estimation Based on ECG-derived Respiratory Rate. , 2021, , .		2
15	The Added Value of Nonlinear Cardiorespiratory Coupling Indices in the Assessment of Depression. , 2021, 2021, 5473-5476.		0
16	Electrocardiogram-Derived Tidal Volume During Treadmill Stress Test. IEEE Transactions on Biomedical Engineering, 2020, 67, 193-202.	4.2	9
17	Heart Rate Variability and Exceptional Longevity. Frontiers in Physiology, 2020, 11, 566399.	2.8	21
18	A Comparative Study of ECG-derived Respiration in Ambulatory Monitoring using the Single-lead ECG. Scientific Reports, 2020, 10, 5704.	3.3	65

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19	Effects of a 75-km mountain ultra-marathon on heart rate variability in amateur runners. Journal of Sports Medicine and Physical Fitness, 2020, 60, 1401-1407.	0.7	4
20	Measuring acute stress response through physiological signals: towards a quantitative assessment of stress. Medical and Biological Engineering and Computing, 2019, 57, 271-287.	2.8	77
21	Assessment of Quadratic Nonlinear Cardiorespiratory Couplings During Tilt-Table Test by Means of Real Wavelet Biphase. IEEE Transactions on Biomedical Engineering, 2019, 66, 187-198.	4.2	10
22	Mutual information between heart rate variability and respiration for emotion characterization. Physiological Measurement, 2019, 40, 084001.	2.1	20
23	Noninvasive Cardiorespiratory Signals Analysis for Asthma Evolution Monitoring in Preschool Children. IEEE Transactions on Biomedical Engineering, 2019, 67, 1-1.	4.2	7
24	Human Emotion Characterization by Heart Rate Variability Analysis Guided by Respiration. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2446-2454.	6.3	15
25	Autonomic Dysfunction Increases Cardiovascular Risk in the Presence of Sleep Apnea. Frontiers in Physiology, 2019, 10, 620.	2.8	13
26	Baroreflex Sensitivity Measured by Pulse Photoplethysmography. Frontiers in Neuroscience, 2019, 13, 339.	2.8	13
27	Effect of yoga on pulse rate variability measured from a venous pressure waveform. , 2019, 2019, 372-375.		5
28	The Effect of Emotional Valence on Ventricular Repolarization Dynamics Is Mediated by Heart Rate Variability: A Study of QT Variability and Music-Induced Emotions. Frontiers in Physiology, 2019, 10, 1465.	2.8	8
29	Unconstrained Estimation of HRV Indices After Removing Respiratory Influences From Heart Rate. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2386-2397.	6.3	34
30	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.	4.2	21
31	Reliability of Lagged PoincarÃ© Plot Parameters in Ultrashort Heart Rate Variability Series: Application on Affective Sounds. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 741-749.	6.3	26
32	Validation of Heart Rate Monitor Polar RS800 for Heart Rate Variability Analysis During Exercise. Journal of Strength and Conditioning Research, 2018, 32, 716-725.	2.1	95
33	Methodological framework for heart rate variability analysis during exercise: application to running and cycling stress testing. Medical and Biological Engineering and Computing, 2018, 56, 781-794.	2.8	18
34	On the Standardization of Approximate Entropy: Multidimensional Approximate Entropy Index Evaluated on Short-Term HRV Time Series. Complexity, 2018, 2018, 1-15.	1.6	7
35	Validity of Venous Waveform Signal for Heart Rate Variability Monitoring. , 2018, , .		2
36	Respiratory Rate Derived from Pulse Photoplethysmographic Signal by Pulse Decomposition Analysis. , 2018, 2018, 5282-5285.		3

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37	Nocturnal Heart Rate Variability Spectrum Characterization in Preschool Children With Asthmatic Symptoms. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1332-1340.	6.3	16
38	Validation of the Apple Watch for Heart Rate Variability Measurements during Relax and Mental Stress in Healthy Subjects. Sensors, 2018, 18, 2619.	3.8	135
39	Nonlinear Dynamics of Heart Rate Variability in Children with Asthmatic Symptoms. IFMBE Proceedings, 2018, , 815-818.	0.3	1
40	Time-Frequency Analysis of Cardiovascular Signals and Their Dynamic Interactions. , 2017, , 257-287.		5
41	Pulse Rate and Transit Time Analysis to Predict Hypotension Events After Spinal Anesthesia During Programmed Cesarean Labor. Annals of Biomedical Engineering, 2017, 45, 2253-2263.	2.5	19
42	Separating the effect of respiration on the heart rate variability using Granger's causality and linear filtering. Biomedical Signal Processing and Control, 2017, 31, 272-287.	5.7	19
43	Feasibility and safety of virtual-reality-based early neurocognitive stimulation in critically ill patients. Annals of Intensive Care, 2017, 7, 81.	4.6	34
44	Influence of Heart Rate in Non-linear HRV Indices as a Sampling Rate Effect Evaluated on Supine and Standing. Frontiers in Physiology, 2016, 7, 501.	2.8	26
45	Inclusion of Respiratory Frequency Information in Heart Rate Variability Analysis for Stress Assessment. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 1016-1025.	6.3	123
46	Heart morphology differences induced by intrauterine growth restriction and preterm birth measured on the ECG at preadolescent age. Journal of Electrocardiology, 2016, 49, 401-409.	0.9	9
47	Drowsiness detection using heart rate variability. Medical and Biological Engineering and Computing, 2016, 54, 927-937.	2.8	191
48	Autonomic nervous system assessment in critically ill patients undergoing a cognitive rehabilitation therapy. , 2015, , .		0
49	Changes in respiration during emotional stress. , 2015, , .		5
50	Human emotion recognition using heart rate variability analysis with spectral bands based on respiration. , 2015, 2015, 6134-7.		38
51	Identification of patients prone to hypotension during hemodialysis based on the analysis of cardiovascular signals. Medical Engineering and Physics, 2015, 37, 1156-1161.	1.7	3
52	Non-linear HRV indices under autonomic nervous system blockade. , 2014, 2014, 3252-5.		18
53	Methodological Framework for Estimating the Correlation Dimension in HRV Signals. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-11.	1.3	22
54	Prediction of hypotension in hemodialysis patients. Physiological Measurement, 2014, 35, 1885-1898.	2.1	21

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55	Electrocardiogram Derived Respiratory Rate from QRS Slopes and R-Wave Angle. Annals of Biomedical Engineering, 2014, 42, 2072-2083.	2.5	59
56	Electrocardiogram Derived Respiratory Rate from QRS Slopes and R-Wave Angle. , 2014, 42, 2072.		1
57	Influence of Running Stride Frequency in Heart Rate Variability Analysis During Treadmill Exercise Testing. IEEE Transactions on Biomedical Engineering, 2013, 60, 1796-1805.	4.2	29
58	Deriving respiration from photoplethysmographic pulse width. Medical and Biological Engineering and Computing, 2013, 51, 233-242.	2.8	112
59	Signal Processing Guided by Physiology: Making the Most of Cardiorespiratory Signals [Life Sciences]. IEEE Signal Processing Magazine, 2013, 30, 136-142.	5.6	2
60	Electrocardiogram derived respiration from QRS slopes. , 2013, 2013, 3913-6.		7
61	Very low frequency modulation in QRS slopes and its relation with respiration and heart rate variability during hemodialysis. , 2013, 2013, 5365-8.		0
62	A multivariate time-frequency method to characterize the influence of respiration over heart period and arterial pressure. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.7	20
63	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.	5.7	23
64	Respiration Effect on Wavelet-Based ECG T-Wave End Delineation Strategies. IEEE Transactions on Biomedical Engineering, 2012, 59, 1818-1828.	4.2	13
65	Characterization of Dynamic Interactions Between Cardiovascular Signals by Time-Frequency Coherence. IEEE Transactions on Biomedical Engineering, 2012, 59, 663-673.	4.2	101
66	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.	4.2	85
67	Time-frequency phase differences and phase locking to characterize dynamic interactions between cardiovascular signals. , 2011, 2011, 4689-92.		2
68	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.	0.9	11
69	Analysis of heart rate variability during exercise stress testing using respiratory information. Biomedical Signal Processing and Control, 2010, 5, 299-310.	5.7	41
70	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.	2.8	96
71	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.	4.2	67
72	Time-varying spectral analysis for comparison of HRV and PPG variability during tilt table test. , 2010, 2010, 3579-82.		12

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73	Dynamic assessment of spontaneous baroreflex sensitivity by means of time-frequency analysis using either RR or pulse interval variability. , 2010, 2010, 1630-3.		8
74	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
75	A Robust Method for ECG-Based Estimation of the Respiratory Frequency During Stress Testing. IEEE Transactions on Biomedical Engineering, 2006, 53, 1273-1285.	4.2	142