Raimon JanÃ©

List of Publications by Year
in descending order

121	2,672	236612	223531
papers	citations	25	46
		h-index	g-index

122	122	122	1931
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Noninvasive Assessment of Neuromechanical and Neuroventilatory Coupling in COPD. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 3385-3396.	3.9	1
2	Combining Bioimpedance and Myographic Signals for the Assessment of COPD During Loaded Breathing. IEEE Transactions on Biomedical Engineering, 2021, 68, 298-307.	2.5	19
3	Evaluation of Respiratory Muscle Activity by Means of Concentric Ring Electrodes. IEEE Transactions on Biomedical Engineering, 2021, 68, 1005-1014.	2.5	7
4	Global and Transient Effects of Intermittent Hypoxia on Heart Rate Variability Markers: Evaluation Using an Obstructive Sleep Apnea Model. IEEE Access, 2021, 9, 19043-19052.	2.6	3
5	Noninvasive Assessment of Neuromechanical Coupling and Mechanical Efficiency of Parasternal Intercostal Muscle during Inspiratory Threshold Loading. Sensors, 2021, 21, 1781.	2.1	6
6	Assessment of trunk flexion in arm reaching tasks with electromyography and smartphone accelerometry in healthy human subjects. Scientific Reports, 2021, 11, 5363.	1.6	3
7	Enhanced Monitoring of Sleep Position in Sleep Apnea Patients: Smartphone Triaxial Accelerometry Compared with Video-Validated Position from Polysomnography. Sensors, 2021, 21, 3689.	2.1	7
8	SleepPos App: An Automated Smartphone Application for Angle Based High Resolution Sleep Position Monitoring and Treatment. Sensors, 2021, 21, 4531.	2.1	8
9	Quantitative evaluation of trunk function and the StartReact effect during reaching in patients with cervical and thoracic spinal cord injury. Journal of Neural Engineering, 2021, 18, 0460d2.	1.8	2
10	Detection of Sleep-Disordered Breathing in Patients with Spinal Cord Injury Using a Smartphone. Sensors, 2021, 21, 7182.	2.1	2
11	Relationship between Sleep Stages and HRV response in Obstructive Sleep Apnea Patients. , 2021, 2021, 5535-5538.		0
12	Detection of Respiratory Phases to Estimate Breathing Pattern Parameters using Wearable Bioimpendace. , 2021, 2021, 5508-5511.		2
13	Assessment of the Non-linear Response of the fSampEn on Simulated EMG Signals. , 2021, 2021, 5582-5585.		1
14	Performance Evaluation of Fixed Sample Entropy for Lung Sound Intensity Estimation. , 2020, 2020, 2740-2743.		0
15	Spatial Distribution of Normal Lung Sounds in Healthy Individuals under Varied Inspiratory Load and Flow Conditions. , 2020, 2020, 2744-2747.		0
16	Analysis of Smartphone Triaxial Accelerometry for Monitoring Sleep-Disordered Breathing and Sleep Position at Home. IEEE Access, 2020, 8, 71231-71244.	2.6	19
17	Identifying Muscle Synergies From Reaching and Grasping Movements in Rats. IEEE Access, 2020, 8, 62517-62530.	2.6	2
18	Health Outcomes from Home Hospitalization: Multisource Predictive Modeling. Journal of Medical Internet Research, 2020, 22, e21367.	2.1	13

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19	Wearable Bioimpedance Measurement for Respiratory Monitoring During Inspiratory Loading. IEEE Access, 2019, 7, 89487-89496.	2.6	35
20	Engineered Macroscale Cardiac Constructs Elicit Human Myocardial Tissue-like Functionality. Stem Cell Reports, 2019, 13, 207-220.	2.3	47
21	Entropy Analysis of Acoustic Signals Recorded With a Smartphone for Detecting Apneas and Hypopneas: A Comparison With a Commercial System for Home Sleep Apnea Diagnosis. IEEE Access, 2019, 7, 128224-128241.	2.6	20
22	Neural Offset Time Evaluation in Surface Respiratory Signals during Controlled Respiration. , 2019, 2019, 2344-2347.		4
23	Electromyography-Based Respiratory Onset Detection in COPD Patients on Non-Invasive Mechanical Ventilation. Entropy, 2019, 21, 258.	1.1	8
24	Performance Evaluation of Fixed Sample Entropy in Myographic Signals for Inspiratory Muscle Activity Estimation. Entropy, 2019, 21, 183.	1.1	6
25	Analysis of Tracheal and Pulmonary Continuous Adventitious Respiratory Sounds in Asthma. , 2019, 2019, 4930-4933.		0
26	Linear Mixed Effects Modelling of Oxygen Desaturation after Sleep Apneas and Hypopneas: A Pilot Study. , 2019, 2019, 5731-5734.		1
27	Analysis of Time Delay between Bioimpedance and Respiratory Volume Signals under Inspiratory Loaded Breathing. , 2019, 2019, 2365-2368.		5
28	Noninvasive Assessment of Inspiratory Muscle Neuromechanical Coupling During Inspiratory Threshold Loading. IEEE Access, 2019, 7, 183634-183646.	2.6	6
29	Chest Movement and Respiratory Volume both Contribute to Thoracic Bioimpedance during Loaded Breathing. Scientific Reports, 2019, 9, 20232.	1.6	27
30	Class Imbalance Impact on the Prediction of Complications during Home Hospitalization: A Comparative Study. , 2019, 2019, 3446-3449.		6
31	Automatic Silence Events Detector from Smartphone Audio Signals: A Pilot mHealth System for Sleep Apnea Monitoring at Home. , 2019, 2019, 4982-4985.		6
32	Non-linear HRV Analysis to Quantify the Effects of Intermittent Hypoxia Using an OSA Rat Model. , 2019, 2019, 4994-4997.		6
33	Automatic Event Detector from Smartphone Accelerometry: Pilot mHealth Study for Obstructive Sleep Apnea Monitoring at Home. , 2019, 2019, 4990-4993.		5
34	Evaluation of a Wearable Device to Determine Cardiorespiratory Parameters From Surface Diaphragm Electromyography. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 1964-1971.	3.9	12
35	Temporal Categorization of Upper Limb Muscleâ€™s EMG Activity During Reaching and Grasping. Biosystems and Biorobotics, 2019, , 876-879.	0.2	0
36	Eigenvalue-based time delay estimation of repetitive biomedical signals. , 2018, 75, 107-119.		8

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37	Onset and Offset Estimation of the Neural Inspiratory Time in Surface Diaphragm Electromyography: A Pilot Study in Healthy Subjects. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 67-76.	3.9	20
38	Assessment of Inspiratory Muscle Activation using Surface Diaphragm Mechanomyography and Crural Diaphragm Electromyography. , 2018, 2018, 3342-3345.		3
39	Assessment of Respiratory Muscle Activity with Surface Electromyographic Signals Acquired by Concentric Ring Electrodes. , 2018, 2018, 3350-3353.		6
40	Surface mechanomyography and electromyography provide non-invasive indices of inspiratory muscle force and activation in healthy subjects. Scientific Reports, 2018, 8, 16921.	1.6	20
41	Assessment of respiratory flow cycle morphology in patients with chronic heart failure. Medical and Biological Engineering and Computing, 2017, 55, 245-255.	1.6	6
42	Characterization of microphones for snoring and breathing events analysis in mHealth. , 2017, 2017, 1547-1550.		5
43	Evaluation of indirect measures of neural inspiratory time from invasive and noninvasive recordings of respiratory activity. , 2017, 2017, 341-344.		2
44	mHealth tools for monitoring Obstructive Sleep Apnea patients at home: Proof-of-concept. , 2017, 2017, 1555-1558.		13
45	Relationship between heart rate excursion and apnea duration in patients with Obstructive Sleep Apnea. , 2017, 2017, 1539-1542.		5
46	Characterization of a tooth microphone coupled to an oral appliance device: A new system for monitoring OSA patients. , 2017, 2017, 1543-1546.		3
47	Influence of Parameter Selection in Fixed Sample Entropy of Surface Diaphragm Electromyography for Estimating Respiratory Activity. Entropy, 2017, 19, 460.	1.1	22
48	Novel approach to continuous adventitious respiratory sound analysis for the assessment of bronchodilator response. PLoS ONE, 2017, 12, e0171455.	1.1	9
49	Inspiratory muscle activation increases with COPD severity as confirmed by non-invasive mechanomyographic analysis. PLoS ONE, 2017, 12, e0177730.	1.1	11
50	Time-frequency representations of the sternocleidomastoid muscle electromyographic signal recorded with concentric ring electrodes. , 2016, 2016, 3785-3788.		4
51	Study of phase estimation methods to analyse cardiorespiratory synchronization in OSA patients. , 2016, 2016, 4280-4283.		0
52	Evaluating respiratory muscle activity using a wireless sensor platform. , 2016, 2016, 5769-5772.		7
53	Automatic Differentiation of Normal and Continuous Adventitious Respiratory Sounds Using Ensemble Empirical Mode Decomposition and Instantaneous Frequency. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 486-497.	3.9	51
54	Improvement in Neural Respiratory Drive Estimation From Diaphragm Electromyographic Signals Using Fixed Sample Entropy. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 476-485.	3.9	46

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55	Performance evaluation of the Hilbert–Huang transform for respiratory sound analysis and its application to continuous adventitious sound characterization. Signal Processing, 2016, 120, 99-116.	2.1	32
56	Cardiorespiratory Phase Synchronization in OSA subjects during wake and sleep states. , 2015, 2015, 7708-11.		7
57	EMG-derived respiration signal using the fixed sample entropy during an Inspiratory load protocol. , 2015, 2015, 1703-6.		8
58	Respiratory signal derived from the smartphone built-in accelerometer during a Respiratory Load Protocol. , 2015, 2015, 6768-71.		11
59	Efficiency of mechanical activation of inspiratory muscles in COPD using sample entropy. European Respiratory Journal, 2015, 46, 1808-1811.	3.1	19
60	Time-varying signal analysis to detect high-altitude periodic breathing in climbers ascending to extreme altitude. Medical and Biological Engineering and Computing, 2015, 53, 699-712.	1.6	8
61	Engineering Sleep Disorders: From classical CPAP devices toward new intelligent adaptive ventilatory therapy.. IEEE Pulse, 2014, 5, 29-32.	0.1	4
62	Evaluation of Laplacian diaphragm electromyographic recording in a dynamic inspiratory maneuver. , 2014, 2014, 2201-4.		3
63	Identification of Obstructive Sleep Apnea patients from tracheal breath sound analysis during wakefulness in polysomnographic studies. , 2014, 2014, 4232-5.		13
64	Respiratory rate detection by empirical mode decomposition method applied to diaphragm mechanomyographic signals. , 2014, 2014, 3204-7.		5
65	Estimation of bilateral asynchrony between diaphragm mechanomyographic signals in patients with Chronic Obstructive Pulmonary Disease. , 2014, 2014, 3813-6.		2
66	Evidence towards Improved Estimation of Respiratory Muscle Effort from Diaphragm Mechanomyographic Signals with Cardiac Vibration Interference Using Sample Entropy with Fixed Tolerance Values. PLoS ONE, 2014, 9, e88902.	1.1	34
67	Detecting Unilateral Phrenic Paralysis by Acoustic Respiratory Analysis. PLoS ONE, 2014, 9, e93595.	1.1	21
68	Index for estimation of muscle force from mechanomyography based on the Lempel–Ziv algorithm. Journal of Electromyography and Kinesiology, 2013, 23, 548-557.	0.7	26
69	Estimation of instantaneous frequency from empirical mode decomposition on respiratory sounds analysis. , 2013, 2013, 981-4.		14
70	Characterization of laplacian surface electromyographic signals during isometric contraction in biceps brachii. , 2013, 2013, 535-8.		8
71	Evaluation and adaptive attenuation of the cardiac vibration interference in mechanomyographic signals. , 2012, 2012, 3400-3.		2
72	Multiclass classification of subjects with sleep apnoea–hypopnoea syndrome through snoring analysis. Medical Engineering and Physics, 2012, 34, 1213-1220.	0.8	44

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73	All night analysis of time interval between snores in subjects with sleep apnea hypopnea syndrome. Medical and Biological Engineering and Computing, 2012, 50, 373-381.	1.6	27
74	Snoring analysis for the screening of sleep apnea hypopnea syndrome with a single-channel device developed using polysomnographic and snoring databases. , 2011, 2011, 8331-3.		17
75	Bayes classification of snoring subjects with and without Sleep Apnea Hypopnea Syndrome, using a Kernel method. , 2011, 2011, 6071-4.		5
76	Analysis of the respiratory flow cycle morphology in chronic heart failure patients applying principal components analysis. , 2011, 2011, 1725-8.		3
77	Evaluation of the respiratory muscles efficiency during an incremental flow respiratory test. , 2011, 2011, 3820-3.		1
78	Usefulness of an Expandable Interbody Spacer for the Treatment of Foraminal Stenosis in Extremely Collapsed Disks. Journal of Spinal Disorders and Techniques, 2011, 24, 485-491.	1.8	25
79	Breathing Pattern Characterization in Chronic Heart Failure Patients Using the Respiratory Flow Signal. Annals of Biomedical Engineering, 2010, 38, 3572-3580.	1.3	15
80	Correntropy-Based Spectral Characterization of Respiratory Patterns in Patients With Chronic Heart Failure. IEEE Transactions on Biomedical Engineering, 2010, 57, 1964-1972.	2.5	32
81	An Invasive and a Noninvasive Approach for the Automatic Differentiation of Obstructive and Central Hypopneas. IEEE Transactions on Biomedical Engineering, 2010, 57, 1927-1936.	2.5	16
82	Continuous analysis and monitoring of snores and their relationship to the apneaâ€hypopnea index. Laryngoscope, 2010, 120, 854-862.	1.1	61
83	Analysis of QRS loop in the Vectorcardiogram of patients with Chagas' disease. , 2010, 2010, 2561-4.		10
84	Noninvasive measurement of inspiratory muscle performance by means of diaphragm muscle mechanomyographic signals in COPD patients during an incremental load respiratory test. , 2010, 2010, 2493-6.		11
85	The natural history of the sleep and respiratory engineering track at EMBC 1988 to 2010. , 2010, 2010, 288-91.		0
86	Correntropy-based nonlinearity test applied to patients with chronic heart failure. , 2010, 2010, 2399-402.		6
87	Interpretation of the approximate entropy using fixed tolerance values as a measure of amplitude variations in biomedical signals. , 2010, 2010, 5967-70.		17
88	Correntropy-based analysis of respiratory patterns in patients with chronic heart failure. , 2009, 2009, 4687-90.		5
89	Time-varying respiratory pattern characterization in chronic heart failure patients and healthy subjects. , 2009, 2009, 4007-10.		6
90	Evaluation of the respiratory muscular function by means of diaphragmatic mechanomyographic signals in copd patients. , 2009, 2009, 3925-8.		11

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91	Multistate Lempel-Ziv (MLZ) index interpretation as a measure of amplitude and complexity changes. , 2009, 2009, 4375-8.		12
92	Analysis of QRS loop changes in the beat-to-beat Vectocardiogram of ischemic patients undergoing PTCA. , 2009, 2009, 1750-3.		4
93	Assessment of Changes in Upper Airway Obstruction by Automatic Identification of Inspiratory Flow Limitation During Sleep. IEEE Transactions on Biomedical Engineering, 2009, 56, 2006-2015.	2.5	14
94	Treatment of Patients With Simple Snoring. Archivos De Bronconeumologia, 2009, 45, 508-515.	0.4	1
95	An energy-based detection algorithm of epileptic seizures in EEG records. , 2009, 2009, 1384-7.		6
96	Sleep apnea detection based on spectral analysis of three ECG - derived respiratory signals. , 2009, 2009, 4723-6.		23
97	RÃ©nyi entropy and Lempel-Ziv complexity of mechanomyographic recordings of diaphragm muscle as indexes of respiratory effort. , 2008, 2008, 2112-5.		11
98	Characterization of periodic and non-periodic breathing pattern in chronic heart failure patients. , 2008, 2008, 3227-30.		5
99	Application of the Empirical Mode Decomposition method to the Analysis of Respiratory Mechanomyographic Signals. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1566-9.	0.5	13
100	Automatic classification of subjects with and without Sleep Apnea through snoring analysis. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6094-7.	0.5	24
101	Inspiratory Pressure Evaluation by means of the Entropy of Respiratory Mechanomyographic Signals. , 2006, 2006, 5735-8.		10
102	Detection and Adaptive Cancellation of Heart Sound Interference in Tracheal Sounds. , 2006, 2006, 2860-3.		8
103	Analysis of Forced Wheezes in Asthma Patients. Respiration, 2006, 73, 55-60.	1.2	35
104	Time-Frequency Detection and Analysis of Wheezes During Forced Exhalation. IEEE Transactions on Biomedical Engineering, 2004, 51, 182-186.	2.5	90
105	Non-Invasive monitoring of diaphragmatic timing by means of surface contact sensors: An experimental study in dogs. BMC Pulmonary Medicine, 2004, 4, 8.	0.8	8
106	Improved alignment method for noisy high-resolution ECG and holter records using multiscale cross-correlation. IEEE Transactions on Biomedical Engineering, 2003, 50, 344-353.	2.5	34
107	Detection of Wheezing During Maximal Forced Exhalation in Patients With Obstructed Airways. Chest, 2002, 122, 186-191.	0.4	59
108	Study of myographic signals from sternomastoid muscle in patients with chronic obstructive pulmonary disease. IEEE Transactions on Biomedical Engineering, 2000, 47, 674-681.	2.5	27

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109	Analysis of Tracheal Sounds During Forced Exhalation in Asthma Patients and Normal Subjects. Chest, 1999, 116, 633-638.	0.4	35
110	ECG signal compression plus noise filtering with truncated orthogonal expansions. Signal Processing, 1999, 79, 97-115.	2.1	17
111	Acoustic analysis of snoring sound in patients with simple snoring and obstructive sleep apnoea. European Respiratory Journal, 1996, 9, 2365-2370.	3.1	163
112	The adaptive linear combiner with a periodic-impulse reference input as a linear comb filter. Signal Processing, 1996, 48, 193-203.	2.1	24
113	Karhunen-Loà¨ve transform as a tool to analyze the ST-segment. Journal of Electrocardiology, 1995, 28, 41-49.	0.4	16
114	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
115	A time delay estimator based on the signal integral: theoretical performance and testing on ECG signals. IEEE Transactions on Signal Processing, 1994, 42, 3224-3229.	3.2	8
116	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
117	Acoustic Analysis of Vowel Emission in Obstructive Sleep Apnea. Chest, 1993, 104, 1093-1096.	0.4	44
118	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
119	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
120	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
121	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