

Daniel Alvarez

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

94 papers	2,125 citations	27 h-index	44 g-index
102 ext. papers	2,569 ext. citations	3.1 avg, IF	5.1 L-index

#	Paper	IF	Citations
94	Pediatric Sleep Apnea: The Overnight Electroencephalogram as a Phenotypic Biomarker. <i>Frontiers in Neuroscience</i> , 2021 , 15, 644697	5.1	1
93	Heart rate variability spectrum characteristics in children with sleep apnea. <i>Pediatric Research</i> , 2021 , 89, 1771-1779	3.2	4
92	Reliability of machine learning to diagnose pediatric obstructive sleep apnea: Systematic review and meta-analysis. <i>Pediatric Pulmonology</i> , 2021 ,	3.5	7
91	Machine learning for nocturnal diagnosis of chronic obstructive pulmonary disease using digital oximetry biomarkers. <i>Physiological Measurement</i> , 2021 , 42,	2.9	2
90	Bispectral analysis of overnight airflow to improve the pediatric sleep apnea diagnosis. <i>Computers in Biology and Medicine</i> , 2021 , 129, 104167	7	7
89	Digital oximetry biomarkers for assessing respiratory function: standards of measurement, physiological interpretation, and clinical use. <i>Npj Digital Medicine</i> , 2021 , 4, 1	15.7	89
88	Wavelet Analysis of Overnight Airflow to Detect Obstructive Sleep Apnea in Children. <i>Sensors</i> , 2021 , 21,	3.8	7
87	Bispectral Analysis of Heart Rate Variability to Characterize and Help Diagnose Pediatric Sleep Apnea. <i>Entropy</i> , 2021 , 23,	2.8	4
86	A Convolutional Neural Network Architecture to Enhance Oximetry Ability to Diagnose Pediatric Obstructive Sleep Apnea. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2021 , 25, 2906-2916	7.2	9
85	Ensemble-learning regression to estimate sleep apnea severity using at-home oximetry in adults. <i>Applied Soft Computing Journal</i> , 2021 , 111, 107827	7.5	3
84	Risk models for predicting in-hospital mortality from COVID-19 pneumonia in the elderly. <i>Emergencias</i> , 2021 , 33, 282-291	0.9	0
83	Automatic Sleep Staging in Children with Sleep Apnea using Photoplethysmography and Convolutional Neural Networks. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2021 , 2021, 216-219	0.9	0
82	Assessment of Nocturnal Autonomic Cardiac Imbalance in Positional Obstructive Sleep Apnea. A Multiscale Nonlinear Approach. <i>Entropy</i> , 2020 , 22,	2.8	4
81	A machine learning-based test for adult sleep apnoea screening at home using oximetry and airflow. <i>Scientific Reports</i> , 2020 , 10, 5332	4.9	22
80	Assessment of Airflow and Oximetry Signals to Detect Pediatric Sleep Apnea-Hypopnea Syndrome Using AdaBoost. <i>Entropy</i> , 2020 , 22,	2.8	11
79	Network Analysis on Overnight EEG Spectrum to Assess Relationships Between Paediatric Sleep Apnoea and Cognition. <i>IFMBE Proceedings</i> , 2020 , 1138-1146	0.2	1
78	Study of the Adherence to continuous positive airway pressure Treatment in Patients with Obstructive Sleep Apnea Syndrome in the Confinement During the COVID-19 Pandemic. <i>Archivos De Bronconeumologia</i> , 2020 , 56, 818-819	0.7	10

77	Automatic Assessment of Pediatric Sleep Apnea Severity Using Overnight Oximetry and Convolutional Neural Networks. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2020, 2020, 633-636</i>	0.9	1
76	Usefulness of recurrence plots from airflow recordings to aid in paediatric sleep apnoea diagnosis. <i>Computer Methods and Programs in Biomedicine, 2020, 183, 105083</i>	6.9	12
75	Influence of Chronic Obstructive Pulmonary Disease and Moderate-To-Severe Sleep Apnoea in Overnight Cardiac Autonomic Modulation: Time, Frequency and Non-Linear Analyses. <i>Entropy, 2019, 21,</i>	2.8	3
74	Pulse Rate Variability Analysis to Enhance Oximetry as at-Home Alternative for Sleep Apnea Diagnosing. <i>IFMBE Proceedings, 2019, 213-217</i>	0.2	0
73	Usefulness of Spectral Analysis of Respiratory Rate Variability to Help in Pediatric Sleep Apnea-Hypopnea Syndrome Diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 4580-4583</i>	0.9	3
72	Convolutional Neural Networks to Detect Pediatric Apnea-Hypopnea Events from Oximetry. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 3555-3558</i>	0.9	5
71	Evaluation of Machine-Learning Approaches to Estimate Sleep Apnea Severity From At-Home Oximetry Recordings. <i>IEEE Journal of Biomedical and Health Informatics, 2019, 23, 882-892</i>	7.2	29
70	Assessment of oximetry-based statistical classifiers as simplified screening tools in the management of childhood obstructive sleep apnea. <i>Sleep and Breathing, 2018, 22, 1063-1073</i>	3.1	14
69	Utility of bispectrum in the screening of pediatric sleep apnea-hypopnea syndrome using oximetry recordings. <i>Computer Methods and Programs in Biomedicine, 2018, 156, 141-149</i>	6.9	27
68	Oximetry use in obstructive sleep apnea. <i>Expert Review of Respiratory Medicine, 2018, 12, 665-681</i>	3.8	22
67	Wavelet analysis of oximetry recordings to assist in the automated detection of moderate-to-severe pediatric sleep apnea-hypopnea syndrome. <i>PLoS ONE, 2018, 13, e0208502</i>	3.7	11
66	Improving the Diagnostic Ability of Oximetry Recordings in Pediatric Sleep Apnea-Hypopnea Syndrome by Means of Multi-Class AdaBoost. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2018, 2018, 147-150</i>	0.9	4
65	Bispectral Analysis to Enhance Oximetry as a Simplified Alternative for Pediatric Sleep Apnea Diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2018, 2018, 175-178</i>	0.9	2
64	Detrended fluctuation analysis of the oximetry signal to assist in paediatric sleep apnoea-hypopnoea syndrome diagnosis. <i>Physiological Measurement, 2018, 39, 114006</i>	2.9	11
63	Symbolic dynamics to enhance diagnostic ability of portable oximetry from the phone oximeter in the detection of paediatric sleep apnoea. <i>Physiological Measurement, 2018,</i>	2.9	5
62	Usefulness of Artificial Neural Networks in the Diagnosis and Treatment of Sleep Apnea-Hypopnea Syndrome 2017,		1
61	Nocturnal Oximetry-based Evaluation of Habitually Snoring Children. <i>American Journal of Respiratory and Critical Care Medicine, 2017, 196, 1591-1598</i>	10.2	68
60	An Asynchronous P300-Based Brain-Computer Interface Web Browser for Severely Disabled People. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1332-1342</i>	4.8	35

59	Usefulness of discrete wavelet transform in the analysis of oximetry signals to assist in childhood sleep apnea-hypopnea syndrome diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 3753-3756	0.9	2
58	Multiscale Entropy Analysis of Unattended Oximetric Recordings to Assist in the Screening of Paediatric Sleep Apnoea at Home. <i>Entropy</i> , 2017 , 19, 284	2.8	15
57	Irregularity and Variability Analysis of Airflow Recordings to Facilitate the Diagnosis of Paediatric Sleep Apnoea-Hypopnoea Syndrome. <i>Entropy</i> , 2017 , 19, 447	2.8	10
56	Assessment of automated analysis of portable oximetry as a screening test for moderate-to-severe sleep apnea in patients with chronic obstructive pulmonary disease. <i>PLoS ONE</i> , 2017 , 12, e0188094	3.7	15
55	Automated Screening of Children With Obstructive Sleep Apnea Using Nocturnal Oximetry: An Alternative to Respiratory Polygraphy in Unattended Settings. <i>Journal of Clinical Sleep Medicine</i> , 2017 , 13, 693-702	3.1	35
54	A Bayesian neural network approach to compare the spectral information from nasal pressure and thermistor airflow in the automatic sleep apnea severity estimation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 3744-3747	0.9	1
53	Utility of AdaBoost to Detect Sleep Apnea-Hypopnea Syndrome From Single-Channel Airflow. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 636-46	5	45
52	Regularity analysis of nocturnal oximetry recordings to assist in the diagnosis of sleep apnoea syndrome. <i>Medical Engineering and Physics</i> , 2016 , 38, 216-24	2.4	5
51	Neurofeedback training with a motor imagery-based BCI: neurocognitive improvements and EEG changes in the elderly. <i>Medical and Biological Engineering and Computing</i> , 2016 , 54, 1655-1666	3.1	33
50	2016 ,		3
49	Automated analysis of unattended portable oximetry by means of Bayesian neural networks to assist in the diagnosis of sleep apnea 2016 ,		4
48	Adaptive Stacked Generalization for Multiclass Motor Imagery-Based Brain Computer Interfaces. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2015 , 23, 702-12	4.8	41
47	Assessment of Time and Frequency Domain Entropies to Detect Sleep Apnoea in Heart Rate Variability Recordings from Men and Women. <i>Entropy</i> , 2015 , 17, 123-141	2.8	24
46	Positive airway pressure and electrical stimulation methods for obstructive sleep apnea treatment: a patent review (2005 - 2014). <i>Expert Opinion on Therapeutic Patents</i> , 2015 , 25, 971-89	6.8	6
45	Diagnosis of pediatric obstructive sleep apnea: Preliminary findings using automatic analysis of airflow and oximetry recordings obtained at patients home. <i>Biomedical Signal Processing and Control</i> , 2015 , 18, 401-407	4.9	27
44	Automated analysis of nocturnal oximetry as screening tool for childhood obstructive sleep apnea-hypopnea syndrome. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 4540-3	0.9	3
43	Analysis and classification of oximetry recordings to predict obstructive sleep apnea severity in children. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 4540-3	0.9	6
42	Adaptive semi-supervised classification to reduce intersession non-stationarity in multiclass motor imagery-based brain computer interfaces. <i>Neurocomputing</i> , 2015 , 159, 186-196	5.4	59

41	Statistical and nonlinear analysis of oximetry from respiratory polygraphy to assist in the diagnosis of Sleep Apnea in children. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 1260-3</i>	0.9	0
40	Assessment of neurofeedback training by means of motor imagery based-BCI for cognitive rehabilitation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 1260-3</i>	0.9	10
39	Exploring the spectral information of airflow recordings to help in pediatric Obstructive Sleep Apnea-Hypopnea Syndrome diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 2298-301</i>	0.9	
38	A P300-based brain-computer interface aimed at operating electronic devices at home for severely disabled people. <i>Medical and Biological Engineering and Computing, 2014, 52, 861-72</i>	3.1	43
37	Ensemble learning for classification of motor imagery tasks in multiclass brain computer interfaces 2014,		5
36	Assessment of feature selection and classification approaches to enhance information from overnight oximetry in the context of apnea diagnosis. <i>International Journal of Neural Systems, 2013, 23, 1350020</i>	6.2	45
35	Pattern recognition in airflow recordings to assist in the sleep apnoea-hypopnoea syndrome diagnosis. <i>Medical and Biological Engineering and Computing, 2013, 51, 1367-80</i>	3.1	31
34	Analytic common spatial pattern and adaptive classification for multiclass motor imagery-based BCI 2013,		3
33	Assessment of spectral bands of interest in airflow signal to assist in sleep apnea-hypopnea syndrome diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2013, 2013, 5021-4</i>	0.9	
32	A P300-Based BCI Aimed at Managing Electronic Devices for People with Severe Disabilities. <i>Biosystems and Biorobotics, 2013, 641-645</i>	0.2	1
31	Automated prediction of the apnea-hypopnea index from nocturnal oximetry recordings. <i>IEEE Transactions on Biomedical Engineering, 2012, 59, 141-9</i>	5	44
30	Feature selection from nocturnal oximetry using genetic algorithms to assist in obstructive sleep apnoea diagnosis. <i>Medical Engineering and Physics, 2012, 34, 1049-57</i>	2.4	30
29	Apnea-hypopnea index estimation from spectral analysis of airflow recordings. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2012, 2012, 3444-7</i>	0.9	3
28	Linear and nonlinear analysis of airflow recordings to help in sleep apnoea-hypopnoea syndrome diagnosis. <i>Physiological Measurement, 2012, 33, 1261-75</i>	2.9	35
27	Feature selection using a genetic algorithm in a motor imagery-based Brain Computer Interface. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2011, 2011, 7703-6</i>	0.9	21
26	Analysis of nocturnal oxygen saturation recordings using kernel entropy to assist in sleep apnea-hypopnea diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2011, 2011, 1745-8</i>	0.9	5
25	A Domotic Control System Using Brain-Computer Interface (BCI). <i>Lecture Notes in Computer Science, 2011, 345-352</i>	0.9	5
24	The classification of oximetry signals using Bayesian neural networks to assist in the detection of obstructive sleep apnoea syndrome. <i>Physiological Measurement, 2010, 31, 375-94</i>	2.9	19

23	Spectral analysis of single-channel airflow and oxygen saturation recordings in obstructive sleep apnea detection. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 847-50	0.9	5
22	Automated detection of obstructive sleep apnoea syndrome from oxygen saturation recordings using linear discriminant analysis. <i>Medical and Biological Engineering and Computing</i> , 2010 , 48, 895-902	3.1	36
21	Multivariate analysis of blood oxygen saturation recordings in obstructive sleep apnea diagnosis. <i>IEEE Transactions on Biomedical Engineering</i> , 2010 , 57, 2816-24	5	89
20	Assessment of four neural network based classifiers to automatically detect red lesions in retinal images. <i>Medical Engineering and Physics</i> , 2010 , 32, 1085-93	2.4	40
19	A classification algorithm based on spectral features from nocturnal oximetry and support vector machines to assist in the diagnosis of obstructive sleep apnea. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 5547-50	0.9	2
18	Nonlinear measure of synchrony between blood oxygen saturation and heart rate from nocturnal pulse oximetry in obstructive sleep apnoea syndrome. <i>Physiological Measurement</i> , 2009 , 30, 967-82	2.9	15
17	Assessment of four statistical pattern recognition techniques to assist in obstructive sleep apnoea diagnosis from nocturnal oximetry. <i>Medical Engineering and Physics</i> , 2009 , 31, 971-8	2.4	55
16	Spectral analysis of electroencephalogram and oximetric signals in obstructive sleep apnea diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 400-3	0.9	30
15	Utility of multilayer perceptron neural network classifiers in the diagnosis of the obstructive sleep apnoea syndrome from nocturnal oximetry. <i>Computer Methods and Programs in Biomedicine</i> , 2008 , 92, 79-89	6.9	38
14	Applying time, frequency and nonlinear features from nocturnal oximetry to OSA diagnosis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2008 , 2008, 3872-5	0.9	4
13	Single layer network classifiers to assist in the detection of obstructive sleep apnea syndrome from oximetry data. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2008 , 2008, 1651-4	0.9	1
12	Radial basis function classifiers to help in the diagnosis of the obstructive sleep apnoea syndrome from nocturnal oximetry. <i>Medical and Biological Engineering and Computing</i> , 2008 , 46, 323-32	3.1	25
11	Applying neural network classifiers in the diagnosis of the obstructive sleep apnea syndrome from nocturnal pulse oximetric recordings. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 5174-7		5
10	Improving diagnostic ability of blood oxygen saturation from overnight pulse oximetry in obstructive sleep apnea detection by means of central tendency measure. <i>Artificial Intelligence in Medicine</i> , 2007 , 41, 13-24	7.4	58
9	Utility of approximate entropy from overnight pulse oximetry data in the diagnosis of the obstructive sleep apnea syndrome. <i>IEEE Transactions on Biomedical Engineering</i> , 2007 , 54, 107-13	5	76
8	Obstructive sleep apnea detection using clustering classification of nonlinear features from nocturnal oximetry. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 1937-40		4
7	Oxygen saturation regularity analysis in the diagnosis of obstructive sleep apnea. <i>Artificial Intelligence in Medicine</i> , 2006 , 37, 111-8	7.4	40
6	Interpretation of the Lempel-Ziv complexity measure in the context of biomedical signal analysis. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 2282-8	5	233

5	Cross approximate entropy analysis of nocturnal oximetry signals in the diagnosis of the obstructive sleep apnea syndrome. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 6149-52		3
4	Nonlinear characteristics of blood oxygen saturation from nocturnal oximetry for obstructive sleep apnoea detection. <i>Physiological Measurement</i> , 2006 , 27, 399-412	2.9	67
3	Entropy analysis of the EEG background activity in Alzheimer's disease patients. <i>Physiological Measurement</i> , 2006 , 27, 241-53	2.9	213
2	Heart rate regularity analysis obtained from pulse oximetric recordings in the diagnosis of obstructive sleep apnea. <i>Sleep and Breathing</i> , 2006 , 10, 83-9	3.1	16
1	Approximate entropy from overnight pulse oximetry for the obstructive sleep apnea syndrome. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2005 , 2005, 6157-60		1