Unai Irusta

List of Publications by Year
in descending order

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103 papers	1,448 citations	361296 20 h-index	395590 33 g-index
105 all docs	105 docs citations	105 times ranked	806 citing authors

#	Article	IF	Citations
1	Physiological effects of providing supplemental air for avalanche victims. A randomised trial. Resuscitation, 2022, 172, 38-46.	1.3	4
2	Analysis of Few-Shot Techniques for Fungal Plant Disease Classification and Evaluation of Clustering Capabilities Over Real Datasets. Frontiers in Plant Science, 2022, 13, 813237.	1.7	9
3	Airway strategy and ventilation rates in the pragmatic airway resuscitation trial. Resuscitation, 2022, 176, 80-87.	1.3	6
4	End-tidal carbon dioxide (ETCO2) and ventricular fibrillation amplitude spectral area (AMSA) for shock outcome prediction in out-of-hospital cardiac arrest. Are they two sides of the same coin?. Resuscitation, 2021, 160, 142-149.	1.3	10
5	Multimodal Algorithms for the Classification of Circulation States During Out-of-Hospital Cardiac Arrest. IEEE Transactions on Biomedical Engineering, 2021, 68, 1913-1922.	2.5	13
6	Airway strategy and chest compression quality in the Pragmatic Airway Resuscitation Trial. Resuscitation, 2021, 162, 93-98.	1.3	6
7	A Machine Learning Model for the Prognosis of Pulseless Electrical Activity during Out-of-Hospital Cardiac Arrest. Entropy, 2021, 23, 847.	1.1	5
8	Shock decision algorithm for use during load distributing band cardiopulmonary resuscitation. Resuscitation, 2021, 165, 93-100.	1.3	3
9	Methodology and framework for the analysis of cardiopulmonary resuscitation quality in large and heterogeneous cardiac arrest datasets. Resuscitation, 2021, 168, 44-51.	1.3	7
10	Novel application of thoracic impedance to characterize ventilations during cardiopulmonary resuscitation in the pragmatic airway resuscitation trial. Resuscitation, 2021, 168, 58-64.	1.3	6
11	Recurrent Neural Networks to Predict the Outcome of Subsequent Defibrillation Shocks in Cardiac Arrest. , 2021, , .		0
12	A Machine Learning-Based Pulse Detection Algorithm for Use During Cardiopulmonary Resuscitation. , 2021, , .		2
13	Towards the Prediction of Rearrest during Out-of-Hospital Cardiac Arrest. Entropy, 2020, 22, 758.	1.1	11
14	Shock Decision Algorithms for Automated External Defibrillators Based on Convolutional Networks. IEEE Access, 2020, 8, 154746-154758.	2.6	8
15	A Machine Learning Framework for Pulse Detection During Out-of-Hospital Cardiac Arrest. IEEE Access, 2020, 8, 161031-161041.	2.6	7
16	Factors affecting the course of resuscitation from cardiac arrest with pulseless electrical activity in children and adolescents. Resuscitation, 2020, 152, 116-122.	1.3	6
17	Restoration of the electrocardiogram during mechanical cardiopulmonary resuscitation. Physiological Measurement, 2020, 41, 105006.	1.2	7
18	Few-Shot Learning approach for plant disease classification using images taken in the field. Computers and Electronics in Agriculture, 2020, 175, 105542.	3.7	175

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19	Rhythm Analysis during Cardiopulmonary Resuscitation Using Convolutional Neural Networks. Entropy, 2020, 22, 595.	1.1	24
20	Automatic Detection of Ventilations During Mechanical Cardiopulmonary Resuscitation. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 2580-2588.	3.9	12
21	WHY DEEP LEARNING PERFORMS BETTER THAN CLASSICAL MACHINE LEARNING?. Dyna (Spain), 2020, 95, 119-122.	0.1	8
22	A Multistage Algorithm for ECG Rhythm Analysis During Piston-Driven Mechanical Chest Compressions. IEEE Transactions on Biomedical Engineering, 2019, 66, 263-272.	2.5	17
23	Automatic Cardiac Rhythm Classification With Concurrent Manual Chest Compressions. IEEE Access, 2019, 7, 115147-115159.	2.6	22
24	Convolutional Recurrent Neural Networks to Characterize the Circulation Component in the Thoracic Impedance during Out-of-Hospital Cardiac Arrest. , 2019, 2019, 1921-1925.		3
25	Deep learning approach for a shock advise algorithm using short electrocardiogram analysis intervals. Resuscitation, 2019, 142, e85.	1.3	6
26	Transthoracic Impedance Measured with Defibrillator Padsâ€"New Interpretations of Signal Change Induced by Ventilations. Journal of Clinical Medicine, 2019, 8, 724.	1.0	10
27	Mixed convolutional and long short-term memory network for the detection of lethal ventricular arrhythmia. PLoS ONE, 2019, 14, e0216756.	1.1	50
28	Capnography: A support tool for the detection of return of spontaneous circulation in out-of-hospital cardiac arrest. Resuscitation, 2019, 142, 153-161.	1.3	17
29	Value of capnography to predict defibrillation success in out-of-hospital cardiac arrest. Resuscitation, 2019, 138, 74-81.	1.3	12
30	Deep Neural Networks for ECG-Based Pulse Detection during Out-of-Hospital Cardiac Arrest. Entropy, 2019, 21, 305.	1.1	50
31	Noninvasive Monitoring of Manual Ventilation during Out-of- Hospital Cardiopulmonary Resuscitation. , 2019, , .		0
32	Impedance Based Automatic Detection of Ventilations During Mechanical Cardiopulmonary Resuscitation. , 2019, 2019, 19-23.		1
33	ECG-based Random Forest Classifier for Cardiac Arrest Rhythms. , 2019, 2019, 1504-1508.		7
34	A Robust Machine Learning Architecture for a Reliable ECG Rhythm Analysis during CPR. , 2019, 2019, 1903-1907.		5
35	ECG-based pulse detection during cardiac arrest using random forest classifier. Medical and Biological Engineering and Computing, 2019, 57, 453-462.	1.6	28
36	A Machine Learning Shock Decision Algorithm for Use During Piston-Driven Chest Compressions. IEEE Transactions on Biomedical Engineering, 2019, 66, 1752-1760.	2.5	20

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37	Rhythm characteristics and patterns of change during cardiopulmonary resuscitation for in-hospital paediatric cardiac arrest. Resuscitation, 2019, 135, 45-50.	1.3	9
38	Evaluation of chest compression artefact removal based on rhythm assessments made by clinicians. Resuscitation, 2018, 125, 104-110.	1.3	2
39	An automatic system for the comprehensive retrospective analysis of cardiac rhythms in resuscitation episodes. Resuscitation, 2018, 122, 6-12.	1.3	8
40	ECG characteristics of Pulseless Electrical Activity associated with Return of Spontaneous Circulation in Out-of-Hospital Cardiac Arrest. Resuscitation, 2018, 130, e54.	1.3	2
41	Characterization of the thoracic impedance waveform fluctuations during controlled ventilation modes. Resuscitation, 2018, 130, e106.	1.3	0
42	Evaluation of the increase in cerebral oximeter saturation during out-of-hospital mechanical chest compression sequences. Resuscitation, 2018, 130, e105.	1.3	0
43	Feasibility of the finger photoplethysmography to give feedback on chest compression rate. Resuscitation, 2018, 130, e31.	1.3	1
44	Removing mechanical chest compression artefacts induced by a load distributing band device from the ECG. Resuscitation, 2018, 130, e41.	1.3	1
45	Fuzzy and Sample Entropies as Predictors of Patient Survival Using Short Ventricular Fibrillation Recordings during out of Hospital Cardiac Arrest. Entropy, 2018, 20, 591.	1.1	16
46	A novel technique to assess the quality of ventilation during pre-hospital cardiopulmonary resuscitation. Resuscitation, 2018, 132, 41-46.	1.3	22
47	Deep Learning for Pulse Detection in Out-of-Hospital Cardiac Arrest Using the ECG. , 2018, , .		2
48	ECG-Based Classification of Resuscitation Cardiac Rhythms for Retrospective Data Analysis. IEEE Transactions on Biomedical Engineering, 2017, 64, 2411-2418.	2.5	63
49	Characterization of the ECG compression artefact caused by the AutoPulse device. Resuscitation, 2017, 118, e38.	1.3	2
50	Feasibility of the capnogram to monitor ventilation rate during cardiopulmonary resuscitation. Resuscitation, 2017, 110, 162-168.	1.3	29
51	Removing Piston-driven Mechanical Chest Compression Artefacts from the ECG. , 2017, , .		2
52	Application of Entropy-Based Features to Predict Defibrillation Outcome in Cardiac Arrest. Entropy, 2016, 18, 313.	1.1	32
53	Machine Learning Techniques for the Detection of Shockable Rhythms in Automated External Defibrillators. PLoS ONE, 2016, 11, e0159654.	1.1	53
54	Automatic cardiac rhythm interpretation during resuscitation. Resuscitation, 2016, 102, 44-50.	1.3	12

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55	Filtering mechanical chest compression artefacts from out-of-hospital cardiac arrest data. Resuscitation, 2016, 98, 41-47.	1.3	14
56	Circulation detection using the electrocardiogram and the thoracic impedance acquired by defibrillation pads. Resuscitation, 2016, 99, 56-62.	1.3	35
57	To interrupt, or not to interrupt chest compressions for ventilation: that is the question!. Journal of Thoracic Disease, 2016, 8, E121-3.	0.6	0
58	Difference in survival from pre-hospital cardiac arrest between cities and villages in the Basque Autonomous Community. Resuscitation, 2015, 96, 114.	1.3	3
59	Quality of chest compressions for EMT CPR in the Basque Autonomous Community. Resuscitation, 2015, 96, 71-72.	1.3	0
60	A method to measure ventilation rate during cardiopulmonary resuscitation using the capnogram. , 2015, , .		0
61	Sample entropy as a shock outcome predictor during basis life support. , 2015, , .		1
62	Fully automatic rhythm analysis during chest compression pauses. Resuscitation, 2015, 89, 25-30.	1.3	16
63	Evolution of AMSA for shock success prediction during the pre-shock pause. Resuscitation, 2015, 96, 21-22.	1.3	1
64	Differences in AMSA based shock outcome prediction between shock success and hospital admission and discharge. Resuscitation, 2015, 96, 22.	1.3	0
65	Rhythm Analysis during Cardiopulmonary Resuscitation: Past, Present, and Future. BioMed Research International, 2014, 2014, 1-13.	0.9	47
66	A Reliable Method for Rhythm Analysis during Cardiopulmonary Resuscitation. BioMed Research International, 2014, 2014, 1-11.	0.9	34
67	A New Method for Feedback on the Quality of Chest Compressions during Cardiopulmonary Resuscitation. BioMed Research International, 2014, 2014, 1-7.	0.9	14
68	Automatic detection of chest compressions for the assessment of CPR-quality parameters. Resuscitation, 2014, 85, 957-963.	1.3	38
69	Automatic detection of chest compression pauses for rhythm analysis during 30:2 CPR in an ALS scenario. Resuscitation, 2014, 85, S9.	1.3	1
70	Generation of chest compression artefacts on the ECG and the thoracic impedance signals in a manikin model. Resuscitation, 2014, 85, S107.	1.3	0
71	Feasibility of automated rhythm assessment in chest compression pauses during cardiopulmonary resuscitation. Resuscitation, 2013, 84, 1223-1228.	1.3	26
72	Direct evaluation of the effect of filtering the chest compression artifacts on the uninterrupted cardiopulmonary resuscitation time. American Journal of Emergency Medicine, 2013, 31, 910-915.	0.7	8

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73	Recommendations of the American Heart Association on the rhythm library specifications for the development of shock advice algorithms: Do they reflect the real scenario?. Resuscitation, 2012, 83, e66-e67.	1.3	0
74	Suppression of the cardiopulmonary resuscitation artefacts using the instantaneous chest compression rate extracted from the thoracic impedance. Resuscitation, 2012, 83, 692-698.	1.3	46
75	A simple shock advice algorithm for automated external defibrillators compliant with the American Heart Association's recommendations. Resuscitation, 2012, 83, e67.	1.3	1
76	A high-temporal resolution algorithm to discriminate shockable from nonshockable rhythms in adults and children. Resuscitation, 2012, 83, 1090-1097.	1.3	42
77	AED for Paediatric Use, Implications in the Design of Shock Advice Algorithms. , 2011, , .		0
78	Cardiopulmonary resuscitation artefact suppression using a Kalman filter and the frequency of chest compressions as the reference signal. Resuscitation, 2010, 81, 1087-1094.	1.3	28
79	Rhythm analysis during chest compressions: An artefact suppression method using the compression force as the reference signal. Resuscitation, 2010, 81, S14-S15.	1.3	1
80	Use of the transthoracic impedance to determine CPR quality parameters. Resuscitation, 2010, 81, S52.	1.3	3
81	ECG spectral and morphological parameters reviewed and updated to detect adult and paediatric life-threatening arrhythmia. Physiological Measurement, 2010, 31, 749-761.	1.2	21
82	A Precise Analysis of the IEC Flickermeter When Subject to Rectangular Voltage Fluctuations. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 3839-3846.	2.4	10
83	A Least Mean-Square Filter for the Estimation of the Cardiopulmonary Resuscitation Artifact Based on the Frequency of the Compressions. IEEE Transactions on Biomedical Engineering, 2009, 56, 1052-1062.	2.5	72
84	An algorithm to discriminate supraventricular from ventricular tachycardia in automated external defibrillators valid for adult and paediatric patients. Resuscitation, 2009, 80, 1229-1233.	1.3	16
85	A method to remove CPR artefacts from human ECG using only the recorded ECG. Resuscitation, 2008, 76, 271-278.	1.3	43
86	A New Alternative for the Input-Voltage Adaptor of the IEC Flickermeter. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 923-930.	2.4	8
87	Parameters affecting shock decision in pediatric automated defibrillation. , 2008, , .		2
88	An algorithm to discriminate SVT from VT in pediatric AED based on spectral parameters. , 2008, , .		0
89	A pediatric shock advice algorithm based on the regularity of the detected beats. , 2008, , .		1
90	Comparative analysis of the parameters affecting AED rhythm analysis algorithm applied to pediatric and adult Ventricular Tachycardia. , 2007, , .		2

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91	Singular Frequencies in Rectangular Fluctuations in the IEC Flickermeter. IEEE Transactions on Power Delivery, 2007, 22, 1255-1256.	2.9	9
92	Detection of ventricular fibrillation in the presence of cardiopulmonary resuscitation artefacts. Resuscitation, 2007, 72, 115-123.	1.3	43
93	Sequential VT/VF discrimination algorithm based on wave mode sample entropy for adult and pediatric patients. , 2007, , .		1
94	A simple effective filtering method for removing CPR caused artefacts from surface ECG signals. , 2005, , .		5
95	A variable step size LMS algorithm for the suppression of the CPR artefact from a VF signal. , 2005, , .		4
96	CPR artefact removal from VF signals by means of an adaptive kalman filter using the chest compression frequency as reference signal. , 2005, , .		3
97	Design and characterization of a plastic optical fiber active coupler. IEEE Photonics Technology Letters, 1998, 10, 1578-1580.	1.3	8
98	An Accurate Shock/No-Shock Decision Algorithm for Use During Piston-Driven Chest Compressions. , 0, , .		0
99	ECG Rhythm Analysis During Manual Chest Compressions Using an Artefact Removal Filter and Random Forest Classifiers. , 0, , .		4
100	Monitoring the Heart Rate in Cerebral Oximetry Signals. , 0, , .		1
101	Cerebral Oximetry Versus Pulse Photoplethysmography to Monitor Respiration Rate. , 0, , .		1
102	Finger Photoplethysmography to Monitor Chest Compression Rate During Out-of-Hospital Cardiac Arrest. , 0, , .		1
103	A Hidden Markov Model Approach for Ventricular Fibrillation Detection. , 0, , .		0