

Roberto Sassi

List of Publications by Year in descending order

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Version: 2024-02-01

129
papers

2,817
citations

201385

27
h-index

205818

48
g-index

134
all docs

134
docs citations

134
times ranked

3187
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in heart rate variability signal analysis: joint position statement by the e-Cardiology ESC Working Group and the European Heart Rhythm Association co-endorsed by the Asia Pacific Heart Rhythm Society. <i>Europace</i> , 2015, 17, 1341-1353.	0.7	589
2	Deep-ECG: Convolutional Neural Networks for ECG biometric recognition. <i>Pattern Recognition Letters</i> , 2019, 126, 78-85.	2.6	198
3	Nonlinear Indices of Heart Rate Variability in Chronic Heart Failure Patients: Redundancy and Comparative Clinical Value. <i>Journal of Cardiovascular Electrophysiology</i> , 2007, 18, 425-433.	0.8	121
4	Bubble Entropy: An Entropy Almost Free of Parameters. <i>IEEE Transactions on Biomedical Engineering</i> , 2017, 64, 2711-2718.	2.5	95
5	Assessing nonlinear properties of heart rate variability from short-term recordings: are these measurements reliable?. <i>Physiological Measurement</i> , 2007, 28, 1067-1077.	1.2	78
6	Shallow viscoplastic flow on an inclined plane. <i>Journal of Fluid Mechanics</i> , 2002, 470, 1-29.	1.4	77
7	A shocking display of synchrony. <i>Physica D: Nonlinear Phenomena</i> , 2000, 143, 21-55.	1.3	73
8	Viscoplastic dam breaks and the Bostwick consistometer. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 142, 63-78.	1.0	70
9	Viscoplastic flow over an inclined surface. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 139, 103-127.	1.0	68
10	Multifractality and heart rate variability. <i>Chaos</i> , 2009, 19, 028507.	1.0	60
11	A preliminary study on continuous authentication methods for photoplethysmographic biometrics. , 2013, , .		48
12	Low Computational Cost for Sample Entropy. <i>Entropy</i> , 2018, 20, 61.	1.1	47
13	A fuzzy approach to multimodal biometric continuous authentication. <i>Fuzzy Optimization and Decision Making</i> , 2008, 7, 243-256.	3.4	46
14	A Signal Decomposition Model-Based Bayesian Framework for ECG Components Separation. <i>IEEE Transactions on Signal Processing</i> , 2016, 64, 665-674.	3.2	46
15	Privacy-Aware Biometrics: Design and Implementation of a Multimodal Verification System. , 2008, , .		45
16	Parameters influence on acceleration and deceleration capacity based on trans-abdominal ECG in early fetal growth restriction at different gestational age epochs. <i>European Journal of Obstetrics, Gynecology and Reproductive Biology</i> , 2015, 188, 104-112.	0.5	44
17	Parametric estimation of sample entropy in heart rate variability analysis. <i>Biomedical Signal Processing and Control</i> , 2014, 14, 141-147.	3.5	43
18	Long-term invariant parameters obtained from 24-h Holter recordings: A comparison between different analysis techniques. <i>Chaos</i> , 2007, 17, 015108.	1.0	40

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19	Brain sparing effect in growth-restricted fetuses is associated with decreased cardiac acceleration and deceleration capacities: a case-control study. BJOG: an International Journal of Obstetrics and Gynaecology, 2016, 123, 1947-1954.	1.1	40
20	Pilot Test of a New Personal Health System Integrating Environmental and Wearable Sensors for Telemonitoring and Care of Elderly People at Home (SMARTA Project). Gerontology, 2017, 63, 281-286.	1.4	39
21	Evaluation of the Tinetti score and fall risk assessment via accelerometry-based movement analysis. Artificial Intelligence in Medicine, 2019, 95, 38-47.	3.8	39
22	Viscoplastic flow over an inclined surface. Journal of Non-Newtonian Fluid Mechanics, 2007, 142, 219-243.	1.0	38
23	PDFâ€“ECG in clinical practice: A model for longâ€“term preservation of digital 12â€“lead ECG data. Journal of Electrocardiology, 2017, 50, 776-780.	0.4	38
24	Dynamics of cooling viscoplastic domes. Journal of Fluid Mechanics, 2004, 499, 149-182.	1.4	37
25	Performance comparison between wrist and chest actigraphy in combination with heart rate variability for sleep classification. Computers in Biology and Medicine, 2017, 89, 212-221.	3.9	35
26	ECG biometric recognition: Permanence analysis of QRS signals for 24 hours continuous authentication. , 2013, , .		34
27	Acceleration and Deceleration Capacity of Fetal Heart Rate in an In-Vivo Sheep Model. PLoS ONE, 2014, 9, e104193.	1.1	34
28	Convolutional neural networks performance comparison for handwritten Bengali numerals recognition. SN Applied Sciences, 2019, 1, 1.	1.5	30
29	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
30	An Estimate of the Dispersion of Repolarization Times Based on a Biophysical Model of the ECG. IEEE Transactions on Biomedical Engineering, 2011, 58, 3396-3405.	2.5	29
31	Recognition Bangla Sign Language using Convolutional Neural Network. , 2019, , .		29
32	The addition of entropy-based regularity parameters improves sleep stage classification based on heart rate variability. Medical and Biological Engineering and Computing, 2015, 53, 415-425.	1.6	28
33	A Multi-biometric Verification System for the Privacy Protection of Iris Templates. Advances in Soft Computing, 2009, , 227-234.	0.4	26
34	Reference values of heart rate variability. Heart Rhythm, 2017, 14, 302-303.	0.3	24
35	Analysis of T-wave alternans using the Ramanujan transform. , 2008, , .		23
36	A New Benchmark on American Sign Language Recognition using Convolutional Neural Network. , 2019, , .		23

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37	Signal processing methods for information enhancement in atrial fibrillation: Spectral analysis and non-linear parameters. Biomedical Signal Processing and Control, 2006, 1, 271-281.	3.5	22
38	Analysis of Surface Atrial Signals: Time Series with Missing Data?. Annals of Biomedical Engineering, 2009, 37, 2082-2092.	1.3	22
39	Theoretical Value of Deceleration Capacity Points to Deceleration Reserve of Fetal Heart Rate. IEEE Transactions on Biomedical Engineering, 2020, 67, 1176-1185.	2.5	22
40	Diagnostic and prognostic values of the V-index, a novel ECG marker quantifying spatial heterogeneity of ventricular repolarization, in patients with symptoms suggestive of non-ST-elevation myocardial infarction. International Journal of Cardiology, 2017, 236, 23-29.	0.8	16
41	A method for the evaluation of the change in volume of retrieved acetabular cups. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2000, 214, 577-587.	1.0	15
42	Automatic diagnosis of fetal heart rate: comparison of different methodological approaches. , 0, , .		15
43	Ventricular activity cancellation in electrograms during atrial fibrillation with constraints on residualsâ€™ power. Medical Engineering and Physics, 2013, 35, 1770-1777.	0.8	15
44	Clinical correlates of non-linear indices of heart rate variability in chronic heart failure patients. Biomedizinische Technik, 2006, 51, 220-223.	0.9	14
45	Spatial Repolarization Heterogeneity and Survival in Chagas Disease. Methods of Information in Medicine, 2014, 53, 464-468.	0.7	13
46	An Extended Bayesian Framework for Atrial and Ventricular Activity Separation in Atrial Fibrillation. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 1573-1580.	3.9	12
47	XIII Mediterranean Conference on Medical and Biological Engineering and Computing 2013. IFMBE Proceedings, 2014, , .	0.2	11
48	EyeNet: An Improved Eye States Classification System using Convolutional Neural Network. , 2020, , .		11
49	Working on the Noltisalis database: measurement of nonlinear properties in heart rate variability signals. , 0, , .		10
50	On predicting the spontaneous termination of atrial fibrillation episodes using linear and non-linear parameters of ECG signal and RR series. , 0, , .		10
51	Automated cortical thickness and skewness feature selection in bipolar disorder using a semi-supervised learning method. Journal of Affective Disorders, 2019, 256, 416-423.	2.0	10
52	Some theoretical results on the observability of repolarization heterogeneity on surface ECG. Journal of Electrocardiology, 2013, 46, 270-275.	0.4	9
53	Adaptive ECG biometric recognition: a study on re-enrollment methods for QRS signals. , 2014, , .		9
54	Hybrid machine learning to localize atrial flutter substrates using the surface 12-lead electrocardiogram. Europace, 2022, 24, 1186-1194.	0.7	9

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55	Classification of fetal pathologies through fuzzy inference systems based on a multiparametric analysis of fetal heart rate. , 0, , .		8
56	Personal identification and verification using multimodal biometric data. , 2006, , .		8
57	HRV Scaling Exponent Identifies Postinfarction Patients Who Might Benefit From Prophylactic Treatment With Amiodarone. IEEE Transactions on Biomedical Engineering, 2006, 53, 103-110.	2.5	8
58	A Fuzzy Approach to Multimodal Biometric Authentication. Lecture Notes in Computer Science, 2007, , 801-808.	1.0	8
59	Analysis of T-wave alternans using the dominant T-wave paradigm. Journal of Electrocardiology, 2011, 44, 119-125.	0.4	8
60	Quantification of ventricular repolarization heterogeneity during moxifloxacin or sotalol administration using \mathcal{V} -index. Physiological Measurement, 2015, 36, 803-811.	1.2	8
61	Opening the black box: interpretability of machine learning algorithms in electrocardiography. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200253.	1.6	8
62	A Biometric Verification System Addressing Privacy Concerns. , 2007, , .		7
63	Non-linear regularity of arterial blood pressure variability in patient with atrial fibrillation in tilt-test procedure. Europace, 2014, 16, iv141-iv147.	0.7	7
64	Effects of the series length on Lempel-Ziv Complexity during sleep. , 2014, 2014, 693-6.		6
65	Automatic vs. clinical assessment of fall risk in older individuals: A proof of concept. , 2015, 2015, 6935-8.		6
66	Biometrics and Privacy. Recent Patents on Computer Science, 2008, 1, 98-109.	0.5	6
67	Regularity patterns in heart rate variability signal: the approximate entropy approach. , 0, , .		5
68	A hierarchy of coupled maps. Chaos, 2002, 12, 719-731.	1.0	5
69	T-wave alternans: lessons learned from a biophysical ECG model. Journal of Electrocardiology, 2012, 45, 566-570.	0.4	5
70	Modeling and preventing inferences from sensitive value distributions in data release ¹ . Journal of Computer Security, 2012, 20, 393-436.	0.5	5
71	A Two-Steps-Ahead Estimator for Bubble Entropy. Entropy, 2021, 23, 761.	1.1	5
72	Automatic ECG-based Discrimination of 20 Atrial Flutter Mechanisms: Influence of Atrial and Torso Geometries. , 0, , .		5

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73	Relationship Between Deceleration Morphology and Phase Rectified Signal Averaging-Based Parameters During Labor. <i>Frontiers in Medicine</i> , 2021, 8, 626450.	1.2	5
74	Linear and non-linear indices of heart rate variability in chronic heart failure: mutual interrelationships and prognostic value. , 2005, , .		4
75	Amplitude of Dominant T-Wave Alternans assessment on ECGs obtained from a biophysical model. , 2011, 2011, 5872-5.		4
76	Dissecting Heart Failure Through the Multiscale Approach of Systems Medicine. <i>IEEE Transactions on Biomedical Engineering</i> , 2014, 61, 1593-1603.	2.5	4
77	Relation between Fetal HRV and Value of Umbilical Cord Artery pH in Labor, a Study with Entropy Measures. , 2017, , .		4
78	Atrial Flutter Mechanism Detection Using Directed Network Mapping. <i>Frontiers in Physiology</i> , 2021, 12, 749635.	1.3	4
79	Analysis of scaling behaviour of ECG signal during atrial fibrillation. , 2005, , .		3
80	Privacy in Biometrics. , 0, , 633-654.		3
81	Parametric estimation of sample entropy for physical activity recognition. , 2015, 2015, 470-3.		3
82	Assessing cardiac autonomic function via heart rate variability analysis requires monitoring respiration: reply. <i>Europace</i> , 2016, 18, 1280.2-1281.	0.7	3
83	Design and Validation of a Minimal Complexity Algorithm for Stair Step Counting. <i>Computers</i> , 2020, 9, 31.	2.1	3
84	Self-Reported Knee Symptoms Assessed by KOOS Questionnaire in Downhill Runners (Skyrunners). <i>PLoS ONE</i> , 2015, 10, e0126382.	1.1	3
85	Interpretability Analysis of Machine Learning Algorithms in the Detection of ST-Elevation Myocardial Infarction. , 0, , .		3
86	HeartCode: A novel binary ECG-based template. , 2014, , .		2
87	A signal decomposition based Kalman smoother for T-wave alternans detection. , 2015, , .		2
88	Development of PDF-ECG: Further steps towards the long-term preservation of clinical electrocardiograms. <i>Journal of Electrocardiology</i> , 2016, 49, 753-754.	0.4	2
89	Composition of Feature Extraction Methods Shows Interesting Performances in Discriminating Wakefulness and NREM Sleep. <i>IEEE Signal Processing Letters</i> , 2018, 25, 204-208.	2.1	2
90	Big Data and Signal Processing in mHealth. <i>EAI/Springer Innovations in Communication and Computing</i> , 2019, , 101-113.	0.9	2

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91	Analytical Formulation of Bubble Entropy for Autoregressive Processes. , 2020, , .		2
92	Non-Invasive Identification of Atrial Fibrillation Driver Location Using the 12-lead ECG: Pulmonary Vein Rotors vs. other Locations. , 2020, 2020, 410-413.		2
93	Assessment of spatial heterogeneity of ventricular repolarization after multi-channel blocker drugs in healthy subjects. Computer Methods and Programs in Biomedicine, 2020, 189, 105291.	2.6	2
94	Machine Learning to Find Areas of Rotors Sustaining Atrial Fibrillation From the ECG. , 0, , .		2
95	Machine Learning Using a Single-Lead ECG to Identify Patients With Atrial Fibrillation-Induced Heart Failure. Frontiers in Cardiovascular Medicine, 2022, 9, 812719.	1.1	2
96	Analysis of surface atrial signals using spectral methods for time series with missing data. , 2007, , .		1
97	Editing RR Series and computation of long-term scaling parameters. , 2008, , .		1
98	Theoretical comments on reproducibility and normalization of TWA measures. Journal of Electrocardiology, 2013, 46, 132-135.	0.4	1
99	Quantification of ventricular repolarization heterogeneity during moxifloxacin administration using V-index. , 2014, , .		1
100	A new algorithm for estimating the ν-index using sinusoidal basis functions. , 2015, 2015, 386-9.		1
101	Tolerance to Spikes: a Comparison of Sample and Bubble Entropy. , 2017, , .		1
102	Refined Ventricular Activity Cancellation in Electrograms During Atrial Fibrillation by Combining Average Beat Subtraction and Interpolation. , 2019, 2019, 24-27.		1
103	Quantification of Spatial Heterogeneity of Ventricular Repolarization During Early-Stage Cardiac Ischemia Induced by Coronary Angioplasty. , 2019, 2019, 4250-4253.		1
104	Improved low-cost recognition system for handwritten Bengali numerals. International Journal of Computer Applications in Technology, 2020, 62, 375.	0.3	1
105	Learning from Enhanced Contextual Similarity in Brain Imaging Data for Classification of Schizophrenia. Lecture Notes in Computer Science, 2017, , 265-275.	1.0	1
106	Biometrics and Privacy. Recent Patents on Computer Science, 2010, 1, 98-109.	0.5	1
107	Dominant Atrial Fibrillatory Frequency Estimation using an Extended Kalman Filter. , 0, , .		1
108	Regularity of Fetal HRV Changes in an In-vivo Sheep Model of Labor. , 0, , .		1

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109	A New Personalized Health System: TheÂSMARTA Project. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2017, , 375-380.	0.2	1
110	Assessment of Spatial Heterogeneity of Ventricular Repolarization after Quinidine in Healthy Subjects. , 0, , .		1
111	Theoretical and Empirical Estimates of V-index Variability. , 0, , .		1
112	Improved low-cost recognition system for handwritten Bengali numerals. International Journal of Computer Applications in Technology, 2020, 62, 375.	0.3	1
113	Classification of 12-lead ECG With an Ensemble Machine Learning Approach. , 0, , .		1
114	A Python Library with Fast Algorithms for Popular Entropy Definitions. , 2021, , .		1
115	Semi-Supervised vs. Supervised Learning for Discriminating Atrial Flutter Mechanisms Using the 12-lead ECG. , 2021, , .		1
116	HRV regularity during persistent atrial fibrillation: A parametric assessment using sample entropy. , 2014, , .		0
117	Analysis of T-wave Alternans in ambulatory recordings using the ADTWA index. , 2015, 2015, 402-5.		0
118	Validation of the V-index as a metric of ventricular repolarization dispersion using intracardiac recordings. , 2015, , .		0
119	A comparison of three methodologies for the computation of V-index. , 2015, , .		0
120	Measurements of Cardiovascular Signal Complexity for Advanced Clinical Applications. , 2017, , 291-299.		0
121	Linear-Sigmoidal modelling of accelerometer features and Tinetti score for automatic fall risk assessment. , 2017, 2017, 3810-3813.		0
122	Sensitivity Analysis of the QT and JTpeak Intervals from a High-resolution Human Left-ventricular Wedge Model. , 0, , .		0
123	Parametric Estimation of Entropy Using Higher Order Markov Chains for Heart Rate Variability Analysis. , 0, , .		0
124	B-PO05-151 AUTOMATIC CLASSIFICATION OF MACRO-REENTRANT ATRIAL TACHYCARDIA MECHANISMS USING 12-LEAD ECG. Heart Rhythm, 2021, 18, S433-S434.	0.3	0
125	Comparison Between Bivariate Phase-Rectified Signal Averaging and Sequence Method in Assessing the Baroreflex Sensitivity. , 0, , .		0
126	Effect of Ischemia on the Spatial Heterogeneity of Ventricular Repolarization: a Simulation Study. , 2021, , .		0

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127	Bubble Entropy of Fractional Gaussian Noise and Fractional Brownian Motion. , 2021, , .		0
128	Ranking of Different Wavelets in the Computation of Phase-Rectified Signal Averaging for Fetal Acidemia Identification. , 2021, , .		0
129	Association between ventricular repolarization parameters and cardiovascular death in patients of the SWISS-AF cohort. International Journal of Cardiology, 2022, , .	0.8	0