

Chandan Kumar Karmakar

List of Publications by Year in descending order

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Version: 2024-02-01

132
papers

3,185
citations

218381

26
h-index

189595

50
g-index

137
all docs

137
docs citations

137
times ranked

4652
citing authors

#	ARTICLE	IF	CITATIONS
1	Guidelines for Developing and Reporting Machine Learning Predictive Models in Biomedical Research: A Multidisciplinary View. <i>Journal of Medical Internet Research</i> , 2016, 18, e323.	2.1	590
2	Support Vector Machines for Automated Recognition of Obstructive Sleep Apnea Syndrome From ECG Recordings. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2009, 13, 37-48.	3.6	299
3	C-reactive protein concentrations across the mood spectrum in bipolar disorder: a systematic review and meta-analysis. <i>Lancet Psychiatry</i> , 2016, 3, 1147-1156.	3.7	169
4	Complex Correlation Measure: a novel descriptor for Poincaré plot. <i>BioMedical Engineering OnLine</i> , 2009, 8, 17.	1.3	127
5	Ensemble Empirical Mode Decomposition With Principal Component Analysis: A Novel Approach for Extracting Respiratory Rate and Heart Rate From Photoplethysmographic Signal. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2018, 22, 766-774.	3.9	90
6	Detection of epileptic seizure based on entropy analysis of short-term EEG. <i>PLoS ONE</i> , 2018, 13, e0193691.	1.1	76
7	Poincaré Plot Methods for Heart Rate Variability Analysis. , 2013, , .		74
8	Comparison of pulse rate variability with heart rate variability during obstructive sleep apnea. <i>Medical Engineering and Physics</i> , 2011, 33, 204-209.	0.8	72
9	Heart rate variability alterations in late life depression: A meta-analysis. <i>Journal of Affective Disorders</i> , 2018, 235, 456-466.	2.0	64
10	Automated recognition of patients with obstructive sleep apnoea using wavelet-based features of electrocardiogram recordings. <i>Computers in Biology and Medicine</i> , 2009, 39, 88-96.	3.9	63
11	Investigating Scale Invariant Dynamics in Minimum Toe Clearance Variability of the Young and Elderly During Treadmill Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2008, 16, 380-389.	2.7	58
12	Automated Detection of Convulsive Seizures Using a Wearable Accelerometer Device. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 66, 421-432.	2.5	58
13	Classification of 5-S Epileptic EEG Recordings Using Distribution Entropy and Sample Entropy. <i>Frontiers in Physiology</i> , 2016, 7, 136.	1.3	56
14	A Survey on Anomalous Behavior Detection for Elderly Care Using Dense-Sensing Networks. <i>IEEE Communications Surveys and Tutorials</i> , 2020, 22, 352-370.	24.8	53
15	Sensitivity of temporal heart rate variability in Poincaré plot to changes in parasympathetic nervous system activity. <i>BioMedical Engineering OnLine</i> , 2011, 10, 17.	1.3	50
16	Selection of Empirical Mode Decomposition Techniques for Extracting Breathing Rate From PPG. <i>IEEE Signal Processing Letters</i> , 2019, 26, 592-596.	2.1	44
17	Remote health diagnosis and monitoring in the time of COVID-19. <i>Physiological Measurement</i> , 2020, 41, 10TR01.	1.2	44
18	Defining asymmetry in heart rate variability signals using a Poincaré plot. <i>Physiological Measurement</i> , 2009, 30, 1227-1240.	1.2	43

#	ARTICLE	IF	CITATIONS
19	Detection of Respiratory Arousals Using Photoplethysmography (PPG) Signal in Sleep Apnea Patients. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1065-1073.	3.9	40
20	Validation and Acceptability of a Cuffless Wrist-Worn Wearable Blood Pressure Monitoring Device Among Users and Health Care Professionals: Mixed Methods Study. JMIR MHealth and UHealth, 2019, 7, e14706.	1.8	40
21	Approximate entropy profile: a novel approach to comprehend irregularity of short-term HRV signal. Nonlinear Dynamics, 2017, 88, 823-837.	2.7	39
22	A fusion framework based on multi-domain features and deep learning features of phonocardiogram for coronary artery disease detection. Computers in Biology and Medicine, 2020, 120, 103733.	3.9	38
23	Precision psychiatry with immunological and cognitive biomarkers: a multi-domain prediction for the diagnosis of bipolar disorder or schizophrenia using machine learning. Translational Psychiatry, 2020, 10, 162.	2.4	33
24	Phase asymmetry of heart rate variability signal. Physiological Measurement, 2015, 36, 303-314.	1.2	32
25	Understanding Irregularity Characteristics of Short-Term HRV Signals Using Sample Entropy Profile. IEEE Transactions on Biomedical Engineering, 2018, 65, 2569-2579.	2.5	32
26	Area asymmetry of heart rate variability signal. BioMedical Engineering OnLine, 2017, 16, 112.	1.3	31
27	Blockade of the angiotensin system improves mental health domain of quality of life: A meta-analysis of randomized clinical trials. Australian and New Zealand Journal of Psychiatry, 2018, 52, 24-38.	1.3	31
28	Analyzing temporal variability of standard descriptors of Poincaré plots. Journal of Electrocardiology, 2010, 43, 719-724.	0.4	28
29	Understanding Ageing Effects by Approximate Entropy Analysis of gait variability. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1965-8.	0.5	26
30	Stability, Consistency and Performance of Distribution Entropy in Analysing Short Length Heart Rate Variability (HRV) Signal. Frontiers in Physiology, 2017, 8, 720.	1.3	26
31	Impact of ECG Dataset Diversity on Generalization of CNN Model for Detecting QRS Complex. IEEE Access, 2019, 7, 93275-93285.	2.6	25
32	Predicting Risk of Suicide Attempt Using History of Physical Illnesses From Electronic Medical Records. JMIR Mental Health, 2016, 3, e19.	1.7	25
33	Toe clearance and velocity profiles of young and elderly during walking on sloped surfaces. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 18.	2.4	24
34	Risk stratification of cardiac autonomic neuropathy based on multi-lag Tone Entropy. Medical and Biological Engineering and Computing, 2013, 51, 537-546.	1.6	22
35	Non-invasive sensor based automated smoking activity detection. , 2017, 2017, 845-848.		21
36	PPG Derived Heart Rate Estimation During Intensive Physical Exercise. IEEE Access, 2019, 7, 56062-56069.	2.6	21

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37	Investigating the changes in heart rate asymmetry (HRA) with perturbation of parasympathetic nervous system. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2012, 35, 465-474.	1.4	20
38	Robustness of electrocardiogram signal quality indices. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20220012.	1.5	20
39	Automated Method for Detecting Acute Insomnia Using Multi-Night Actigraphy Data. <i>IEEE Access</i> , 2020, 8, 74413-74422.	2.6	19
40	Distribution Entropy (DistEn): A complexity measure to detect arrhythmia from short length RR interval time series. , 2015, 2015, 5207-10.		18
41	Wearable cuffless blood pressure monitoring devices: a systematic review and meta-analysis. <i>European Heart Journal Digital Health</i> , 2022, 3, 323-337.	0.7	18
42	An EEMD-PCA approach to extract heart rate, respiratory rate and respiratory activity from PPG signal. , 2016, 2016, 3817-3820.		16
43	Analyzing Systolic-Diastolic Interval Interaction Characteristics in Diabetic Cardiac Autonomic Neuropathy Progression. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2015, 3, 1-10.	2.2	15
44	Detecting Subclinical Diabetic Cardiac Autonomic Neuropathy by Analyzing Ventricular Repolarization Dynamics. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2016, 20, 64-72.	3.9	15
45	Novel features for capturing temporal variations of rhythmic limb movement to distinguish convulsive epileptic and psychogenic nonepileptic seizures. <i>Epilepsia</i> , 2019, 60, 165-174.	2.6	14
46	Detection of Coronary Artery Disease Using Multi-Domain Feature Fusion of Multi-Channel Heart Sound Signals. <i>Entropy</i> , 2021, 23, 642.	1.1	14
47	Detection of Smoking Events from Confounding Activities of Daily Living. , 2019, , .		13
48	Personalized Anatomic Modeling for Noninvasive Fetal ECG: Methodology and Applications. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-12.	2.4	13
49	Understanding ageing effects using complexity analysis of footâ€‘ground clearance during walking. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 554-564.	0.9	12
50	Temporal dynamics of the circadian heart rate following low and high volume exercise training in sedentary male subjects. <i>European Journal of Applied Physiology</i> , 2015, 115, 2069-2080.	1.2	12
51	Analysis of fetal heart rate asymmetry before and after 35 weeks of gestation. <i>Biomedical Signal Processing and Control</i> , 2015, 21, 43-48.	3.5	12
52	Methodological Comparisons of Heart Rate Variability Analysis in Patients With Type 2 Diabetes and Angiotensin Converting Enzyme Polymorphism. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2016, 20, 55-63.	3.9	12
53	Does the Temporal Asymmetry of Short-Term Heart Rate Variability Change during Regular Walking? A Pilot Study of Healthy Young Subjects. <i>Computational and Mathematical Methods in Medicine</i> , 2018, 1-9.	0.7	12
54	Power spectral analysis of ECG signals during obstructive sleep apnoea hypopnoea epochs. , 2007, , .		11

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55	Detection of generalized tonic-clonic seizures using short length accelerometry signal. , 2017, 2017, 4566-4569.		11
56	The effects of asymmetric volume conductor modeling on non-invasive fetal ECG extraction. Physiological Measurement, 2018, 39, 105013.	1.2	11
57	Automated Scoring of Hemiparesis in Acute Stroke From Measures of Upper Limb Co-Ordination Using Wearable Accelerometry. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 805-816.	2.7	11
58	Effect of ECG-derived respiration (EDR) on modeling ventricular repolarization dynamics in different physiological and psychological conditions. Medical and Biological Engineering and Computing, 2014, 52, 851-860.	1.6	10
59	Retinal artery and venular caliber grading: A semi-automated evaluation tool. Computers in Biology and Medicine, 2014, 44, 1-9.	3.9	10
60	Distribution entropy analysis of epileptic EEG signals. , 2015, 2015, 4170-3.		10
61	Short-term QT interval variability in patients with coronary artery disease and congestive heart failure: a comparison with healthy control subjects. Medical and Biological Engineering and Computing, 2019, 57, 389-400.	1.6	10
62	Identifying smoker subgroups with high versus low smoking cessation attempt probability: A decision tree analysis approach. Addictive Behaviors, 2020, 103, 106258.	1.7	10
63	Data Pattern Recognition using Neural Network with Back-Propagation Training. , 2006, , .		9
64	Deep learning algorithms for cyber security applications: A survey. Journal of Computer Security, 2021, 29, 447-471.	0.5	9
65	Robust Patient Information Embedding and Retrieval Mechanism for ECG Signals. IEEE Access, 2020, 8, 181233-181245.	2.6	9
66	Entropy Profiling: A Reduced-Parametric Measure of Kolmogorov-Sinai Entropy from Short-Term HRV Signal. Entropy, 2020, 22, 1396.	1.1	8
67	Automatic Recognition of Obstructive Sleep Apnoea Syndrome Using Power Spectral Analysis of Electrocardiogram and Hidden Markov Models. , 2008, , .		7
68	Effect of data length and bin numbers on distribution entropy (DistEn) measurement in analyzing healthy aging. , 2015, 2015, 7877-80.		7
69	Multiscale entropy profiling to estimate complexity of heart rate dynamics. Physical Review E, 2019, 100, 012405.	0.8	7
70	Sleep-Wake Classification using Statistical Features Extracted from Photoplethysmographic Signals. , 2019, 2019, 5564-5567.		7
71	Entropy Profiling for Detection of Fetal Arrhythmias in Short Length Fetal Heart Rate Recordings. , 2020, 2020, 621-624.		7
72	A machine learning model for multi-night actigraphic detection of chronic insomnia: development and validation of a pre-screening tool. Royal Society Open Science, 2021, 8, 202264.	1.1	7

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73	Averaging Methods using Dynamic Time Warping for Time Series Classification. , 2020, , .		7
74	A Self-Compassion Group Intervention for Patients Living With Chronic Medical Illness. primary care companion for CNS disorders, The, 2019, 21, .	0.2	7
75	Investigating Relative Respiratory Effort Signals During Mixed Sleep Apnea Using Photoplethysmogram. Annals of Biomedical Engineering, 2013, 41, 2229-2236.	1.3	6
76	Multi-task transfer learning for in-hospital-death prediction of ICU patients. , 2016, 2016, 3321-3324.		6
77	Identifying factors that conjointly influence nicotine vaping product relative harm perception among smokers and recent ex-smokers: Findings from the 2016 ITC Four Country Smoking and Vaping Survey. Drug and Alcohol Dependence, 2021, 218, 108370.	1.6	6
78	Upper limb movement profiles during spontaneous motion in acute stroke. Physiological Measurement, 2021, 42, 045005.	1.2	6
79	Regulation of Minimum Toe Clearance Variability in the Young and Elderly during Walking on Sloped Surfaces. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4887-90.	0.5	5
80	Identifying increased risk of post-infarct people with diabetes using multi-lag Tone-Entropy analysis. , 2012, 2012, 25-8.		5
81	Effect of gender and diabetes on major depressive disorder using heart rate asymmetry. , 2014, 2014, 6679-82.		5
82	Multi-lag HRV analysis discriminates disease progression of post-infarct people with no diabetes versus diabetes. , 2015, 2015, 2367-70.		5
83	Tone Entropy Analysis of Foetal Heart Rate Variability. Entropy, 2015, 17, 1042-1053.	1.1	5
84	Heart rate independent QT variability component can detect subclinical cardiac autonomic neuropathy in diabetes. , 2016, 2016, 928-931.		5
85	Robust Heart Rate Estimation During Physical Exercise Using Photoplethysmographic Signals. , 2018, 2018, 494-497.		5
86	Multi-lag toneâ€™entropy in neonatal stress. Journal of the Royal Society Interface, 2018, 15, 20180420.	1.5	5
87	Entropy Profiling to Detect ST Change in Heart Rate Variability Signals. , 2019, 2019, 4588-4591.		5
88	Novel Measures of Similarity and Asymmetry in Upper Limb Activities for Identifying Hemiparetic Severity in Stroke Survivors. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1964-1974.	3.9	5
89	Estimating relative respiratory effort from features of photo-plethysmography signal. , 2013, 2013, 6575-8.		4
90	Effect of using ECG derived respiration (EDR) signal in linear parametric QT-RR modeling. , 2013, 2013, 1968-71.		4

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91	Investigating foetal heart rate asymmetry. , 2014, 2014, 2261-4.		4
92	Impacts of reference points and reference lines on the slope- and area-based heart rate asymmetry analysis. Measurement: Journal of the International Measurement Confederation, 2019, 137, 515-526.	2.5	4
93	Modified Distribution Entropy as a Complexity Measure of Heart Rate Variability (HRV) Signal. Entropy, 2020, 22, 1077.	1.1	4
94	Performance Analysis of Entropy Methods in Detecting Epileptic Seizure from Surface Electroencephalograms. , 2021, 2021, 1082-1085.		4
95	Power spectral analysis for identifying the onset and termination of obstructive sleep apnoea events in ECG recordings. , 2008, , .		3
96	Identification of onset, maximum and termination of obstructive sleep apnoea events in single lead ECG recordings. , 2008, 2008, 1072-5.		3
97	Characterization of chimeric surface submental EMG activity during hypopneas in obstructive sleep apnea patients. , 2009, , .		3
98	Effect of premature activation in analyzing QT dynamics instability using QT-RR model for ventricular fibrillation and healthy subjects. , 2013, 2013, 2559-62.		3
99	Distribution entropy for short-term QT interval variability analysis: A comparison between the heart failure and normal control groups. , 2015, , .		3
100	The Role of Serious Games in Robot Exoskeleton-Assisted Rehabilitation of Stroke Patients. , 2015, , 233-254.		3
101	Effect of embedding dimension on complexity measures in identifying Arrhythmia. , 2016, 2016, 6230-6233.		3
102	Secondary measures of regularity from an entropy profile in detecting Arrhythmia. , 2017, 2017, 3485-3488.		3
103	Modified thresholding technique of MMSPCA for extracting respiratory activity from short length PPG signal. , 2017, 2017, 1804-1807.		3
104	Improved Detection and Classification of Convulsive Epileptic and Psychogenic Non-epileptic Seizures Using FLDA and Bayesian Inference. , 2018, 2018, 3402-3405.		3
105	Bivariate Entropy Analysis of Electrocardiographic RR-QT Time Series. Entropy, 2020, 22, 1439.	1.1	3
106	Detection of fetal arrhythmias in non-invasive fetal ECG recordings using data-driven entropy profiling. Physiological Measurement, 2022, , .	1.2	3
107	Interpretability and Optimisation of Convolutional Neural Networks Based on Sinc-Convolution. IEEE Journal of Biomedical and Health Informatics, 2023, 27, 1758-1769.	3.9	3
108	Wavelet-Based Multiscale Analysis of Minimum Toe Clearance Variability in the Young and Elderly during Walking. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1558-61.	0.5	2

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109	Analysing effect of heart rate and age on radial artery pressure derived systolic and diastolic durations in healthy adults. , 2015, , .		2
110	A novel technique to investigate the effect of ageing on ventricular repolarization characteristics in healthy and LQTS subjects. , 2015, 2015, 2796-9.		2
111	Onset Detection of Epileptic Seizures From Accelerometry Signal. , 2018, 2018, 1-4.		2
112	Cross Entropy Profiling to Test Pattern Synchrony in Short-Term Signals. , 2019, 2019, 737-740.		2
113	The Influence of Vectorcardiogram Orientation on the T/QRS Ratio Obtained Via Non-Invasive Fetal ECG. , 2019, 2019, 1883-1886.		2
114	PPG Derived Respiratory Rate Estimation in Daily living Conditions. , 2020, 2020, 2736-2739.		2
115	Lempel-Ziv complexity of the pNN<math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mi>x</mml:mi></mml:math> statistics â€“ an application to neonatal stress. Chaos, Solitons and Fractals, 2021, 146, 110703.	2.5	2
116	Relationship between Heart Rate Variability and angiotensinogen gene polymorphism in diabetic and control individuals. , 2014, 2014, 6683-6.		1
117	A novel technique for analysing beat-to-beat dynamical changes of QT-RR distribution for arrhythmia prediction. , 2015, , .		1
118	Influence of psychological stress on Systolic-Diastolic Interval (SDI) interaction characteristics measured from the electrocardiogram (ECG) signal. , 2015, , .		1
119	Influence of embedding dimension on distribution entropy in analyzing heart rate variability. , 2016, 2016, 6222-6225.		1
120	Increased beat-to-beat variation in diastolic phase percentages in patients with congestive heart failure. , 2017, 2017, 1328-1331.		1
121	Behaviour-based Intelligent Power Management of the eShepherd Virtual Fencing Collar for Cattle. , 2018, , .		1
122	PoincarÃ© Descriptors for Identifying Hemiparesis in Acute Stroke using Wearable Accelerometry. , 2020, 2020, 588-591.		1
123	Shapelet Based Visual Assessment of Cluster Tendency in Analyzing Complex Upper Limb Motion. , 2021, , .		1
124	Performance Analysis of TCP Over Long-Delay Path and Algorithm for Improvement. , 2006, , .		0
125	Lateral decubitus posture during sleep: Sub-groups of obstructive sleep apnea patients — therapeutic value of vertical position in OSA. , 2009, , .		0
126	Unravelling unique qualitative and quantitative characteristics of the surface submental EMG in OSA polysomnograms. , 2010, , .		0

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127	Multi-scale Tone Entropy in differentiating physiologic and synthetic RR time series. , 2013, 2013, 6135-8.		0
128	Changes in heart rate circadian rhythm following exercise in middle-aged men. , 2015, , .		0
129	Analyzing Distance Measures for Upper Limb Activity Measurement in Hemiparetic Stroke Patients. , 2020, 2020, 3735-3738.		0
130	The Influence of Pharmacological Autonomic Blockades on Multi-Scale Measures of Heart Rate Variability. IFMBE Proceedings, 2018, , 462-465.	0.2	0
131	Evaluation of Mesh and Sensor Resolution for Finite Element Modeling of Non-Invasive Fetal ECG Signals. , 2021, 2021, 4134-4138.		0
132	Measures of Bipedal Toe-Ground Clearance Asymmetry to Characterize Gait in Stroke Survivors. , 2021, 2021, 6015-6018.		0