

# Varun Bajaj

## List of Publications by Year in descending order

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125  
papers

4,607  
citations

101496

36  
h-index

123376

61  
g-index

127  
all docs

127  
docs citations

127  
times ranked

3091  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimized Tunable Q Wavelet Transform Based Drowsiness Detection from Electroencephalogram Signals. <i>Irbm</i> , 2022, 43, 13-21.	3.7	14
2	A hybrid decision support system for automatic detection of Schizophrenia using EEG signals. <i>Computers in Biology and Medicine</i> , 2022, 141, 105028.	3.9	29
3	OSACN-Net: Automated Classification of Sleep Apnea Using Deep Learning Model and Smoothed Gabor Spectrograms of ECG Signal. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-9.	2.4	13
4	Classification of mental states from rational dilation wavelet transform and bagged tree classifier using EEG signals. , 2022, , 217-235.		5
5	An Improved Deep Learning Model for Automated Detection of BBB Using S-T Spectrograms of Smoothed VCG Signal. <i>IEEE Sensors Journal</i> , 2022, 22, 8830-8837.	2.4	11
6	Timeâ€“Frequency Representation and Convolutional Neural Network-Based Emotion Recognition. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021, 32, 2901-2909.	7.2	139
7	Design of digital IIR filter: A research survey. <i>Applied Acoustics</i> , 2021, 172, 107669.	1.7	40
8	An Evolutionary Optimized Variational Mode Decomposition for Emotion Recognition. <i>IEEE Sensors Journal</i> , 2021, 21, 2035-2042.	2.4	47
9	SPWVD-CNN for Automated Detection of Schizophrenia Patients Using EEG Signals. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-9.	2.4	90
10	Entropy-Based Drowsiness Detection Using Adaptive Variational Mode Decomposition. <i>IEEE Sensors Journal</i> , 2021, 21, 6421-6428.	2.4	26
11	PDCNNet: An Automatic Framework for the Detection of Parkinsonâ€™s Disease Using EEG Signals. <i>IEEE Sensors Journal</i> , 2021, 21, 17017-17024.	2.4	60
12	A new technique for guided filter based image denoising using modified cuckoo search optimization. <i>Expert Systems With Applications</i> , 2021, 176, 114884.	4.4	24
13	Improving the separability of drowsiness and alert EEG signals using analytic form of wavelet transform. <i>Applied Acoustics</i> , 2021, 181, 108164.	1.7	18
14	Sleep Apnea Detection Using Artificial Bee Colony Optimize Hermite Basis Functions for EEG Signals. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 608-616.	2.4	30
15	Environmental sound classification using optimum allocation sampling based empirical mode decomposition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 537, 122613.	1.2	30
16	An Improved Fuzzy Minâ€“Max Neural Network for Data Classification. <i>IEEE Transactions on Fuzzy Systems</i> , 2020, 28, 1910-1924.	6.5	14
17	Flexible Analytic Wavelet Transform Based Features for Physical Action Identification Using sEMG Signals. <i>Irbm</i> , 2020, 41, 18-22.	3.7	26
18	Image Segmentation Using Multilevel Thresholding: A Research Review. <i>Iranian Journal of Science and Technology - Transactions of Electrical Engineering</i> , 2020, 44, 1-29.	1.5	75

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19	Efficient approach for digitization of the cardiocography signals. Physica A: Statistical Mechanics and Its Applications, 2020, 537, 122725.	1.2	8
20	Convolutional neural networks based efficient approach for classification of lung diseases. Health Information Science and Systems, 2020, 8, 4.	3.4	103
21	An efficient approach for physical actions classification using surface EMG signals. Health Information Science and Systems, 2020, 8, 3.	3.4	10
22	Automatic sleep stages classification using optimize flexible analytic wavelet transform. Knowledge-Based Systems, 2020, 192, 105367.	4.0	27
23	A facile and flexible motor imagery classification using electroencephalogram signals. Computer Methods and Programs in Biomedicine, 2020, 197, 105722.	2.6	27
24	Automated Cognitive Workload Assessment Using Logical Teaching Learning-Based Optimization and PROMETHEE Multi-Criteria Decision Making Approach. IEEE Sensors Journal, 2020, 20, 13629-13637.	2.4	14
25	McCulloch's algorithm inspired cuckoo search optimizer based mammographic image segmentation. Multimedia Tools and Applications, 2020, 79, 30453-30488.	2.6	4
26	Histopathology Image Classification using Enhanced Fuzzy Min-Max network. , 2020, , .		0
27	A Computerized Method for Automatic Detection of Schizophrenia Using EEG Signals. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2390-2400.	2.7	109
28	Bidimensional Empirical Mode Decomposition-Based Diffusion Filtering for Image Denoising. Circuits, Systems, and Signal Processing, 2020, 39, 5127-5147.	1.2	7
29	Adaptive Tunable $Q$ Wavelet Transform-Based Emotion Identification. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9609-9617.	2.4	62
30	Hybrid Computerized Method for Environmental Sound Classification. IEEE Access, 2020, 8, 124055-124065.	2.6	31
31	Constrained based tunable $Q$ wavelet transform for efficient decomposition of EEG signals. Applied Acoustics, 2020, 163, 107234.	1.7	25
32	A new design approach for nearly linear phase stable IIR filter using fractional derivative. IEEE/CAA Journal of Automatica Sinica, 2020, 7, 527-538.	8.5	10
33	Feature extraction method for classification of alertness and drowsiness states EEG signals. Applied Acoustics, 2020, 163, 107224.	1.7	55
34	A flexible analytic wavelet transform based approach for motor-imagery tasks classification in BCI applications. Computer Methods and Programs in Biomedicine, 2020, 187, 105325.	2.6	56
35	Design of Infinite Impulse Response Filter Using Fractional Derivative Constraints and Hybrid Particle Swarm Optimization. Circuits, Systems, and Signal Processing, 2020, 39, 6162-6190.	1.2	13
36	Classification of emotions from EEG signals using time-order representation based on the S-transform and convolutional neural network. Electronics Letters, 2020, 56, 1359-1361.	0.5	30

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37	Classification of epileptic EEG signals using sparse spectrum based empirical wavelet transform. Electronics Letters, 2020, 56, 1370-1372.	0.5	10
38	Tunable Q wavelet transform based emotion classification in Parkinson's disease using Electroencephalography. PLoS ONE, 2020, 15, e0242014.	1.1	28
39	Guest Editorial: Current Trends in Cognitive Science and Brain Computing Research and Applications. Electronics Letters, 2020, 56, 1354-1355.	0.5	0
40	A context sensitive multilevel thresholding using swarm based algorithms. IEEE/CAA Journal of Automatica Sinica, 2019, 6, 1471-1486.	8.5	19
41	Motor imagery tasks-based EEG signals classification using tunable-Q wavelet transform. Neural Computing and Applications, 2019, 31, 6925-6932.	3.2	68
42	Towards the classification of heart sounds based on convolutional deep neural network. Health Information Science and Systems, 2019, 7, 16.	3.4	46
43	An Effective Hybrid Model for EEG-Based Drowsiness Detection. IEEE Sensors Journal, 2019, 19, 7624-7631.	2.4	94
44	K-highest Fuzzy Min-Max Network to Classify Histopathological Images. , 2019, , .		1
45	Surface EMG signals and deep transfer learning-based physical action classification. Neural Computing and Applications, 2019, 31, 8455-8462.	3.2	48
46	A novel pectoral muscle segmentation from scanned mammograms using EMO algorithm. Biomedical Engineering Letters, 2019, 9, 481-496.	2.1	11
47	Emotion classification using EEG signals based on tunable-Q wavelet transform. IET Science, Measurement and Technology, 2019, 13, 375-380.	0.9	36
48	Exploring Hermite transformation in brain signal analysis for the detection of epileptic seizure. IET Science, Measurement and Technology, 2019, 13, 35-41.	0.9	57
49	An Advanced Analysis System for Identifying Alcoholic Brain State Through EEG Signals. International Journal of Automation and Computing, 2019, 16, 737-747.	4.5	27
50	Emotion recognition from single-channel EEG signals using a two-stage correlation and instantaneous frequency-based filtering method. Computer Methods and Programs in Biomedicine, 2019, 173, 157-165.	2.6	77
51	Robust Approach Based on Convolutional Neural Networks for Identification of Focal EEG Signals. , 2019, 3, 1-4.		11
52	Convolutional Neural Network Based Approach Towards Motor Imagery Tasks EEG Signals Classification. IEEE Sensors Journal, 2019, 19, 4494-4500.	2.4	139
53	A Fuzzy Min-Max Neural Network based Classification of Histopathology Images. , 2019, , .		1
54	Automatic Environment Sounds Classification Using Optimum Allocation Sampling. , 2019, , .		1

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55	A New Method for Designing of Stable Digital IIR Filter Using Hybrid Method. Circuits, Systems, and Signal Processing, 2019, 38, 2187-2226.	1.2	20
56	Computer-aided diagnosis of breast cancer using bi-dimensional empirical mode decomposition. Neural Computing and Applications, 2019, 31, 3307-3315.	3.2	32
57	Design of Bandpass and Bandstop Infinite Impulse Response Filters Using Fractional Derivative. IEEE Transactions on Industrial Electronics, 2019, 66, 1285-1295.	5.2	30
58	Rhythm-based identification of alcohol EEG signals. IET Science, Measurement and Technology, 2018, 12, 343-349.	0.9	36
59	A new design approach for enhancement of DC/RF characteristics with improved ambipolar conduction of charge plasma TFET: proposal, and optimization. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	4
60	Design of digital IIR filter with low quantization error using hybrid optimization technique. Soft Computing, 2018, 22, 2953-2971.	2.1	22
61	DeepEMGNet: An Application for Efficient Discrimination of ALS and Normal EMG Signals. Advances in Intelligent Systems and Computing, 2018, , 619-625.	0.5	13
62	A systematic investigation of the integrated effects of gate underlapping, dual work functionality and hetero gate dielectric for improved performance of CP TFETs. Journal of Computational Electronics, 2018, 17, 118-128.	1.3	7
63	Riemann Liouville Fractional Integral Based Empirical Mode Decomposition for ECG Denoising. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1133-1139.	3.9	52
64	Backtracking search algorithm for color image multilevel thresholding. Signal, Image and Video Processing, 2018, 12, 385-392.	1.7	25
65	Features based on analytic IMF for classifying motor imagery EEG signals in BCI applications. Measurement: Journal of the International Measurement Confederation, 2018, 116, 68-76.	2.5	68
66	Phase Optimization based Design of Infinite Impulse Response Filter using Fractional Derivative. , 2018, , .		0
67	Bidimensional Empirical Mode Decomposition based Intrinsically Augmented Gamma Correction for Quality Restoration of Textural Images. , 2018, , .		1
68	Drowsiness Detection using Instantaneous Frequency based Rhythms Separation for EEG Signals. , 2018, , .		5
69	Fractional-Order Darwinian Swarm Intelligence Inspired Multilevel Thresholding for Mammogram Segmentation. , 2018, , .		7
70	Physical Actions Classification of Surface EMG Signals Using VMD. , 2018, , .		9
71	Transfer learning based histopathologic image classification for breast cancer detection. Health Information Science and Systems, 2018, 6, 18.	3.4	201
72	Features based on variational mode decomposition for identification of neuromuscular disorder using EMG signals. Health Information Science and Systems, 2018, 6, 13.	3.4	17

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73	Clustering Variational Mode Decomposition for Identification of Focal EEG Signals. , 2018, 2, 1-4.		33
74	Drowsiness Detection Using Adaptive Hermite Decomposition and Extreme Learning Machine for Electroencephalogram Signals. IEEE Sensors Journal, 2018, 18, 8855-8862.	2.4	38
75	Emotion classification using flexible analytic wavelet transform for electroencephalogram signals. Health Information Science and Systems, 2018, 6, 12.	3.4	42
76	Efficient method for classification of alcoholic and normal EEG signals using EMD. Journal of Engineering, 2018, 2018, 166-172.	0.6	33
77	Effective de-noising of ECG by optimised adaptive thresholding on noisy modes. IET Science, Measurement and Technology, 2018, 12, 640-644.	0.9	12
78	A hybrid method based on time-frequency images for classification of alcohol and control EEG signals. Neural Computing and Applications, 2017, 28, 3717-3723.	3.2	37
79	Time-frequency image based features for classification of epileptic seizures from EEG signals. Biomedical Physics and Engineering Express, 2017, 3, 015012.	0.6	24
80	Performance investigation of hetero material (InAs/Si)-based charge plasma TFET. Micro and Nano Letters, 2017, 12, 358-363.	0.6	14
81	An efficient method for analysis of EMG signals using improved empirical mode decomposition. AEU - International Journal of Electronics and Communications, 2017, 72, 200-209.	1.7	51
82	An optimum allocation sampling based feature extraction scheme for distinguishing seizure and seizure-free EEG signals. Health Information Science and Systems, 2017, 5, 7.	3.4	21
83	Classification of amyotrophic lateral sclerosis disease based on convolutional neural network and reinforcement sample learning algorithm. Health Information Science and Systems, 2017, 5, 9.	3.4	57
84	Real-time detection of electrocardiograph peaks: A genetic algorithm based approach. , 2017, , .		3
85	An efficient method for multilevel color image thresholding using cuckoo search algorithm based on minimum cross entropy. Applied Soft Computing Journal, 2017, 61, 570-592.	4.1	80
86	Robust Hermite decomposition algorithm for classification of sleep apnea EEG signals. Electronics Letters, 2017, 53, 1182-1184.	0.5	23
87	A New Design Method for Stable IIR Filters With Nearly Linear-Phase Response Based on Fractional Derivative and Swarm Intelligence. IEEE Transactions on Emerging Topics in Computational Intelligence, 2017, 1, 464-477.	3.4	23
88	High order stable infinite impulse response filter design using cuckoo search algorithm. International Journal of Automation and Computing, 2017, 14, 589-602.	4.5	14
89	QRS detection using adaptive filters: A comparative study. ISA Transactions, 2017, 66, 362-375.	3.1	49
90	Discrimination of alcohol and normal EEG signal using EMD. , 2017, , .		0

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91	QRS complex detection using cuckoo search optimization algorithm. , 2017, , .		1
92	Rhythmâ€based features for classification of focal and nonâ€focal EEG signals. IET Signal Processing, 2017, 11, 743-748.	0.9	21
93	Temperature based performance analysis of doping-less tunnel field effect transistor. , 2017, , .		10
94	TEO separated AM-FM components for identification of apnea EEG signals. , 2017, , .		7
95	An EMD based approach for discrimination of apnea and normal EEG signals. , 2017, , .		1
96	Digital IIR filter design with controlled ripple using cuckoo search algorithm. , 2016, , .		5
97	Controlled ripple based design of digital IIR filter. , 2016, , .		5
98	Discrimination between Myopathy and normal EMG signals using intrinsic mode functions. , 2016, , .		8
99	Analysis of focal and non-focal EEG signals using bivariate empirical mode decomposition. , 2016, , .		3
100	Dual workfunction hetero gate dielectric tunnel field-effect transistor performance analysis. , 2016, , .		11
101	Impactful study of dual work function, underlap and hetero gate dielectric on TFET with different drain doping profile for high frequency performance estimation and optimization. Superlattices and Microstructures, 2016, 96, 36-46.	1.4	49
102	Multi-category EEG signal classification developing time-frequency texture features based Fisher Vector encoding method. Neurocomputing, 2016, 218, 251-258.	3.5	54
103	Analysis of ALS and normal EMG signals based on empirical mode decomposition. IET Science, Measurement and Technology, 2016, 10, 963-971.	0.9	55
104	Efficient algorithm for classification of electrocardiogram beats based on artificial bee colonyâ€based leastâ€squares support vector machines classifier. Electronics Letters, 2016, 52, 1198-1200.	0.5	23
105	Technique for QRS complex detection using particle swarm optimisation. IET Science, Measurement and Technology, 2016, 10, 626-636.	0.9	31
106	Classification of normal, ALS, and myopathy EMG signals using ELM classifier. , 2016, , .		16
107	Time Frequency Image based features for detection of focal EEG signals. , 2016, , .		0
108	A multilevel color image segmentation technique based on cuckoo search algorithm and energy curve. Applied Soft Computing Journal, 2016, 47, 76-102.	4.1	100

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109	Hilbert-Huang transform based classification of sleep and wake EEG signals using fuzzy c-means algorithm. , 2015, , .		6
110	Features based on intrinsic mode functions for classification of EMG signals. International Journal of Biomedical Engineering and Technology, 2015, 18, 156.	0.2	18
111	Detection of Human Emotions Using Features Based on the Multiwavelet Transform of EEG Signals. Intelligent Systems Reference Library, 2015, , 215-240.	1.0	32
112	Optimized design of digital IIR filter using artificial bee colony algorithm. , 2015, , .		7
113	HHT Based Features for Discrimination of EMG Signals. Advances in Intelligent Systems and Computing, 2015, , 95-103.	0.5	8
114	Features extraction for classification of focal and non-focal EEG signals. Lecture Notes in Electrical Engineering, 2015, , 599-605.	0.3	12
115	Novel feature for identification of focal EEG signals with k-Means and fuzzy c-means algorithms. , 2015, , .		11
116	Hybrid method based optimized design of digital IIR filter. , 2015, , .		7
117	Human Emotion Classification from EEG Signals Using Multiwavelet Transform. , 2014, , .		33
118	Automatic classification of sleep stages based on the time-frequency image of EEG signals. Computer Methods and Programs in Biomedicine, 2013, 112, 320-328.	2.6	194
119	Epileptic seizure detection based on the instantaneous area of analytic intrinsic mode functions of EEG signals. Biomedical Engineering Letters, 2013, 3, 17-21.	2.1	115
120	EEG Signal Classification Using Empirical Mode Decomposition and Support Vector Machine. Advances in Intelligent and Soft Computing, 2012, , 623-635.	0.2	31
121	Separation of Rhythms of EEG Signals Based on Hilbert-Huang Transformation with Application to Seizure Detection. Lecture Notes in Computer Science, 2012, , 493-500.	1.0	24
122	Classification of Seizure and Nonseizure EEG Signals Using Empirical Mode Decomposition. IEEE Transactions on Information Technology in Biomedicine, 2012, 16, 1135-1142.	3.6	407
123	Analysis of normal and epileptic seizure EEG signals using empirical mode decomposition. Computer Methods and Programs in Biomedicine, 2011, 104, 373-381.	2.6	201
124	Classification of schizophrenia patients through empirical wavelet transformation using electroencephalogram signals. , 0, , 1-1-1-26.		24
125	Automatic drowsiness detection based on variational non-linear chirp mode decomposition using electroencephalogram signals. , 0, , 5-1-5-25.		8