

Ganesh R Naik

List of Publications by Year in descending order

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147
papers

3,692
citations

136885

32
h-index

168321

53
g-index

149
all docs

149
docs citations

149
times ranked

3427
citing authors

#	ARTICLE	IF	CITATIONS
1	Single Channel Surface Electromyogram Deconvolution is a Useful Pre-Processing for Myoelectric Control. IEEE Transactions on Biomedical Engineering, 2022, 69, 1767-1775.	2.5	1
2	Design of a 3D-Printed Hand Exoskeleton Based on Force-Myography Control for Assistance and Rehabilitation. Machines, 2022, 10, 57.	1.2	27
3	Multinight Prevalence, Variability, and Diagnostic Misclassification of Obstructive Sleep Apnea. American Journal of Respiratory and Critical Care Medicine, 2022, 205, 563-569.	2.5	72
4	Progress in Brain Computer Interface: Challenges and Opportunities. Frontiers in Systems Neuroscience, 2021, 15, 578875.	1.2	128
5	Implementation of the Biological Muscle Mechanism in HASEL Actuators to Leverage Electrohydraulic Principles and Create New Geometries. Actuators, 2021, 10, 38.	1.2	3
6	Epilepsy attacks recognition based on 1D octal pattern, wavelet transform and EEG signals. Multimedia Tools and Applications, 2021, 80, 25197-25218.	2.6	21
7	Respiration Monitoring via Forcecardiography Sensors. Sensors, 2021, 21, 3996.	2.1	25
8	New and Emerging Approaches to Better Define Sleep Disruption and Its Consequences. Frontiers in Neuroscience, 2021, 15, 751730.	1.4	18
9	Biosignal-Based Human-Machine Interfaces for Assistance and Rehabilitation: A Survey. Sensors, 2021, 21, 6863.	2.1	28
10	Enhanced forensic speaker verification performance using the ICA-EBM algorithm under noisy and reverberant environments. Evolutionary Intelligence, 2021, 14, 1475-1494.	2.3	2
11	The Fusion of MRI and CT Medical Images Using Variational Mode Decomposition. Applied Sciences (Switzerland), 2021, 11, 10975.	1.3	7
12	A Novel Broadband Forcecardiography Sensor for Simultaneous Monitoring of Respiration, Infrasonic Cardiac Vibrations and Heart Sounds. Frontiers in Physiology, 2021, 12, 725716.	1.3	30
13	Wearable Bluetooth Triage Healthcare Monitoring System. Sensors, 2021, 21, 7586.	2.1	15
14	A new technique for the prediction of heart failure risk driven by hierarchical neighborhood component-based learning and adaptive multi-layer networks. Future Generation Computer Systems, 2020, 110, 781-794.	4.9	22
15	Characterisation of Morphic Sensors for Body Volume and Shape Applications. Sensors, 2020, 20, 90.	2.1	4
16	Locomo-Net: A Low-Complex Deep Learning Framework for sEMG-Based Hand Movement Recognition for Prosthetic Control. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-12.	2.2	38
17	Forcecardiography: A Novel Technique to Measure Heart Mechanical Vibrations onto the Chest Wall. Sensors, 2020, 20, 3885.	2.1	32
18	Detection of Atrial Fibrillation from Single Lead ECG Signal Using Multirate Cosine Filter Bank and Deep Neural Network. Journal of Medical Systems, 2020, 44, 114.	2.2	36

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19	Laparoscopic Robotic Surgery: Current Perspective and Future Directions. Robotics, 2020, 9, 42.	2.1	28
20	A Customized VGG19 Network with Concatenation of Deep and Handcrafted Features for Brain Tumor Detection. Applied Sciences (Switzerland), 2020, 10, 3429.	1.3	84
21	Continuous Vital Monitoring During Sleep and Light Activity Using Carbon-Black Elastomer Sensors. Sensors, 2020, 20, 1583.	2.1	15
22	A supervised blood vessel segmentation technique for digital Fundus images using Zernike Moment based features. PLoS ONE, 2020, 15, e0229831.	1.1	47
23	Comparison of Independence of Triceps Brachii and Biceps Brachii Between Paretic and Non-paretic Side During Different MVCs—A Case Study. Series in Bioengineering, 2020, , 71-79.	0.3	3
24	Bilingual text detection in natural scene images using invariant moments. Journal of Intelligent and Fuzzy Systems, 2019, 37, 6773-6784.	0.8	3
25	Real-Time EMG Based Pattern Recognition Control for Hand Prostheses: A Review on Existing Methods, Challenges and Future Implementation. Sensors, 2019, 19, 4596.	2.1	195
26	Groundtruth: A Matlab GUI for Artifact and Feature Identification in Physiological Signals. Frontiers in Physiology, 2019, 10, 850.	1.3	2
27	A Comparison of Reflective Photoplethysmography for Detection of Heart Rate, Blood Oxygen Saturation, and Respiration Rate at Various Anatomical Locations. Sensors, 2019, 19, 1874.	2.1	84
28	Automated detection of congestive heart failure from electrocardiogram signal using Stockwell transform and hybrid classification scheme. Computer Methods and Programs in Biomedicine, 2019, 173, 53-65.	2.6	49
29	Low Cost Analogue Front End for Electronic Stethoscopes Application with Silicone Enclosure. , 2019, , .		0
30	Electrodeless FSR Linear Envelope Signal for Muscle Contraction Measurement. , 2019, , .		2
31	Comparison of Bi-Wavelength and Tri-Wavelength Photoplethysmography Sensors Placed on the Forehead. , 2019, , .		4
32	Towards Real-Time Heartbeat Classification: Evaluation of Nonlinear Morphological Features and Voting Method. Sensors, 2019, 19, 5079.	2.1	41
33	A Piezoresistive Array Armband With Reduced Number of Sensors for Hand Gesture Recognition. Frontiers in Neurorobotics, 2019, 13, 114.	1.6	48
34	Accuracy of Heart Rate estimation from DC polarised elastomer respiratory sensors. , 2019, , .		0
35	Low-complexity hardware design methodology for reliable and automated removal of ocular and muscular artifact from EEG. Computer Methods and Programs in Biomedicine, 2018, 158, 123-133.	2.6	20
36	An ICA-EBM-Based sEMG Classifier for Recognizing Lower Limb Movements in Individuals With and Without Knee Pathology. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 675-686.	2.7	55

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37	Changes in lower limb muscle synchronisation during walking on high-heeled shoes. Healthcare Technology Letters, 2018, 5, 236-238.	1.9	3
38	Nonparametric dynamical model of cardiorespiratory responses at the onset and offset of treadmill exercises. Medical and Biological Engineering and Computing, 2018, 56, 2337-2351.	1.6	2
39	Detection of Life Threatening Ventricular Arrhythmia Using Digital Taylor Fourier Transform. Frontiers in Physiology, 2018, 9, 722.	1.3	42
40	A Piezoresistive Sensor to Measure Muscle Contraction and Mechanomyography. Sensors, 2018, 18, 2553.	2.1	83
41	Prediction of Freezing of Gait in Patients with Parkinson's Disease Using EEG Signals. Studies in Health Technology and Informatics, 2018, 246, 124-131.	0.2	11
42	Driver Fatigue Classification With Independent Component by Entropy Rate Bound Minimization Analysis in an EEG-Based System. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 715-724.	3.9	205
43	Dynamically identifying relevant EEG channels by utilizing channels classification behaviour. Expert Systems With Applications, 2017, 83, 273-282.	4.4	21
44	Hybrid brain-computer interface for biomedical cyber-physical system application using wireless embedded EEG systems. BioMedical Engineering OnLine, 2017, 16, 5.	1.3	25
45	Enhanced Forensic Speaker Verification Using a Combination of DWT and MFCC Feature Warping in the Presence of Noise and Reverberation Conditions. IEEE Access, 2017, 5, 15400-15413.	2.6	53
46	Detection of turning freeze in Parkinson's disease based on S-transform decomposition of EEG signals. , 2017, 2017, 3044-3047.		20
47	Optimized phase-space reconstruction for accurate musical-instrument signal classification. Multimedia Tools and Applications, 2017, 76, 20719-20737.	2.6	7
48	A system for accelerometer-based gesture classification using artificial neural networks. , 2017, 2017, 4187-4190.		3
49	Enhanced forensic speaker verification using multi-run ICA in the presence of environmental noise and reverberation conditions. , 2017, , .		7
50	Differences in lower limb muscle activation patterns during Sit to Stand Task for different heel heights. , 2017, 2017, 2486-2489.		1
51	Shape memory effect of nano-ferromagnetic particle doped NiTi for orthopedic devices and rehabilitation techniques. , 2017, 2017, 950-953.		1
52	Channels selection using independent component analysis and scalp map projection for EEG-based driver fatigue classification. , 2017, 2017, 1808-1811.		8
53	CNN based approach for activity recognition using a wrist-worn accelerometer. , 2017, 2017, 2438-2441.		85
54	Detection of gait initiation Failure in Parkinson's disease based on wavelet transform and Support Vector Machine. , 2017, 2017, 3048-3051.		10

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55	Does Heel Height Cause Imbalance during Sit-to-Stand Task: Surface EMG Perspective. <i>Frontiers in Physiology</i> , 2017, 8, 626.	1.3	10
56	Improving EEG-Based Driver Fatigue Classification Using Sparse-Deep Belief Networks. <i>Frontiers in Neuroscience</i> , 2017, 11, 103.	1.4	109
57	Computational Algorithms Underlying the Time-Based Detection of Sudden Cardiac Arrest via Electrocardiographic Markers. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 954.	1.3	16
58	Ponseti method in the management of clubfoot under 2 years of age: A systematic review. <i>PLoS ONE</i> , 2017, 12, e0178299.	1.1	63
59	A dynamic channel selection algorithm for the classification of EEG and EMG data. , 2016, , .		13
60	Wavelet PCA for automatic identification of walking with and without an exoskeleton on a treadmill using pressure and accelerometer sensors. , 2016, 2016, 1999-2002.		4
61	Selecting optimal EEG channels for mental tasks classification: An approach using ICA. , 2016, , .		6
62	Low Complexity Single Channel ICA Architecture Design Methodology for Pervasive Healthcare Applications. , 2016, , .		8
63	Retinal Fundus Image Analysis for Diagnosis of Glaucoma: A Comprehensive Survey. <i>IEEE Access</i> , 2016, 4, 4327-4354.	2.6	71
64	Principal Component Analysis Applied to Surface Electromyography: A Comprehensive Review. <i>IEEE Access</i> , 2016, 4, 4025-4037.	2.6	58
65	Reconfigurable hardware-software codesign methodology for protein identification. , 2016, 2016, 2456-2459.		3
66	Novel Ti-Nb alloys with improved wear resistance for biomedical implant application. , 2016, 2016, 4208-4211.		3
67	Shape memory alloy smart knee spacer to enhance knee functionality: Model design and finite element analysis. , 2016, 2016, 6046-6049.		4
68	Classification of EEG based-mental fatigue using principal component analysis and Bayesian neural network. , 2016, 2016, 4654-4657.		35
69	Validity and everyday clinical applicability of lumbar muscle fatigue assessment methods in patients with chronic non-specific low back pain: a systematic review. <i>Disability and Rehabilitation</i> , 2016, 38, 1859-1871.	0.9	39
70	Non-negative Matrix Factorization Techniques. <i>Signals and Communication Technology</i> , 2016, , .	0.4	19
71	Transradial Amputee Gesture Classification Using an Optimal Number of sEMG Sensors: An Approach Using ICA Clustering. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2016, 24, 837-846.	2.7	127
72	Single-Channel EMG Classification With Ensemble-Empirical-Mode-Decomposition-Based ICA for Diagnosing Neuromuscular Disorders. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2016, 24, 734-743.	2.7	125

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73	Independence Between Two Channels of Surface Electromyogram Signal to Measure the Loss of Motor Units. <i>Measurement Science Review</i> , 2015, 15, 152-155.	0.6	10
74	Multiscale PCA to distinguish regular and irregular surfaces using tri axial head and trunk acceleration signals. , 2015, 2015, 4122-5.		2
75	A Wearable Contactless Sensor Suitable for Continuous Simultaneous Monitoring of Respiration and Cardiac Activity. <i>Journal of Sensors</i> , 2015, 2015, 1-6.	0.6	19
76	Affordable low complexity heart/brain monitoring methodology for remote health care. , 2015, 2015, 5082-5.		4
77	An accurate clustering algorithm for fast protein-profiling using SCICA on MALDI-TOF. , 2015, , .		4
78	Fast underdetermined BSS architecture design methodology for real time applications. , 2015, 2015, 5408-11.		2
79	Classification of driver fatigue in an electroencephalography-based countermeasure system with source separation module. , 2015, 2015, 514-7.		2
80	Online and automated reliable system design to remove blink and muscle artefact in EEG. , 2015, 2015, 6784-7.		33
81	Dependence Independence Measure for Posterior and Anterior EMG Sensors Used in Simple and Complex Finger Flexion Movements: Evaluation Using SDICA. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2015, 19, 1689-1696.	3.9	28
82	Electro-resistive bands for non-invasive cardiac and respiration monitoring, a feasibility study. <i>Physiological Measurement</i> , 2015, 36, N35-N49.	1.2	20
83	Nonlinear multiscale Maximal Lyapunov Exponent for accurate myoelectric signal classification. <i>Applied Soft Computing Journal</i> , 2015, 36, 633-640.	4.1	50
84	Nonnegative Matrix Factorization for the Identification of EMG Finger Movements: Evaluation Using Matrix Analysis. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2015, 19, 478-485.	3.9	107
85	A Methodology for Synthesizing Interdependent Multichannel EEG Data with a Comparison Among Three Blind Source Separation Techniques. <i>Lecture Notes in Computer Science</i> , 2015, , 154-161.	1.0	1
86	Computation and Evaluation of Features of Surface Electromyogram to Identify the Force of Muscle Contraction and Muscle Fatigue. <i>BioMed Research International</i> , 2014, 2014, 1-6.	0.9	32
87	Problems in Assessment of Novel Biopotential Front-End with Dry Electrode: A Brief Review. <i>Machines</i> , 2014, 2, 87-98.	1.2	77
88	Classification of finger extension and flexion of EMG and Cyberglove data with modified ICA weight matrix. , 2014, 2014, 3829-32.		19
89	Automated detection and correction of eye blink and muscular artefacts in EEG signal for analysis of Autism Spectrum Disorder. , 2014, 2014, 1881-4.		41
90	Using Blind Source Separation on accelerometry data to analyze and distinguish the toe walking gait from normal gait in ITW children. <i>Biomedical Signal Processing and Control</i> , 2014, 13, 41-49.	3.5	38

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91	Signal processing evaluation of myoelectric sensor placement in low-level gestures: sensitivity analysis using independent component analysis. <i>Expert Systems</i> , 2014, 31, 91-99.	2.9	46
92	Edge Effect Elimination in Single-Mixture Blind Source Separation. <i>Circuits, Systems, and Signal Processing</i> , 2013, 32, 2317-2334.	1.2	51
93	Single channel blind source separation based local mean decomposition for Biomedical applications. , 2013, 2013, 6812-5.		28
94	A new approach to improve the quality of biosensor signals using Fast Independent Component Analysis: Feasibility study using EMG recordings. , 2013, 2013, 1927-9.		6
95	Design and assessment of a low-cost, electromyographically controlled, prosthetic hand. <i>Medical Devices: Evidence and Research</i> , 2013, 6, 97.	0.4	15
96	SUBTLE ELECTROMYOGRAPHIC PATTERN RECOGNITION FOR FINGER MOVEMENTS: A PILOT STUDY USING BSS TECHNIQUES. <i>Journal of Mechanics in Medicine and Biology</i> , 2012, 12, 1250078.	0.3	8
97	Enhancement of the ill-conditioned original recordings using novel ICA technique. <i>International Journal of Electronics</i> , 2012, 99, 899-906.	0.9	4
98	Remote rapid prototyping manufacturing network using optimization recurrent hidden Markov models. <i>JVC/Journal of Vibration and Control</i> , 2012, 18, 2122-2128.	1.5	1
99	Investigating the role of combined acoustic-visual feedback in one-dimensional synchronous brain computer interfaces, a preliminary study. <i>Medical Devices: Evidence and Research</i> , 2012, 5, 81.	0.4	12
100	Audio analysis of statistically instantaneous signals with mixed Gaussian probability distributions. <i>International Journal of Electronics</i> , 2012, 99, 1333-1350.	0.9	16
101	Measure of increase in motor unit synchronisation for young and old using sEMG. , 2012, , .		0
102	Investigation of age and gender related changes in force of isometric contraction, muscle endurance and muscle strength among young and old healthy people. , 2012, , .		1
103	Identification of Hand and Finger Movements Using Multi Run ICA of Surface Electromyogram. <i>Journal of Medical Systems</i> , 2012, 36, 841-851.	2.2	39
104	ICA as Pattern Recognition Technique for Gesture Identification. <i>Advances in Computational Intelligence and Robotics Book Series</i> , 2012, , 367-387.	0.4	0
105	Semi Blind Source Separation for Application in Machine Learning. , 2012, , 30-46.		0
106	Kurtosis and negentropy investigation of myo electric signals during different MVCs. , 2011, , .		9
107	Towards classification of low-level finger movements using forearm muscle activation: a comparative study based on ICA and Fractal theory. <i>International Journal of Biomedical Engineering and Technology</i> , 2011, 6, 150.	0.2	5
108	A comparison of ICA algorithms in surface EMG signal processing. <i>International Journal of Biomedical Engineering and Technology</i> , 2011, 6, 363.	0.2	15

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109	Measuring Increase in Synchronization to Identify Muscle Endurance Limit. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 578-587.	2.7	35
110	Applications of ICA and fractal dimension in sEMG signal processing for subtle movement analysis: a review. Australasian Physical and Engineering Sciences in Medicine, 2011, 34, 179-193.	1.4	30
111	Improving the quality of the audio sources using Gaussianity reduction technique. International Journal of Electronics, 2011, 98, 949-959.	0.9	3
112	Evaluation of higher order statistics parameters for multi channel sEMG using different force levels. , 2011, 2011, 3869-72.		10
113	Spectral properties of surface EMG and muscle conduction velocity: A study based on sEMG model. , 2011, , .		1
114	Estimation of independent and dependent components of non-invasive EMG using fast ICA: validation in recognising complex gestures. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 1105-1111.	0.9	26
115	Twin SVM for Gesture Classification Using the Surface Electromyogram. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 301-308.	3.6	117
116	FEATURES OF sEMG BASED ON SOURCE SEPARATION AND FRACTAL PROPERTIES TO DETECT WRIST MOVEMENTS. Biomedical Engineering - Applications, Basis and Communications, 2010, 22, 293-300.	0.3	4
117	Hybrid independent component analysis and twin support vector machine learning scheme for subtle gesture recognition. Biomedizinische Technik, 2010, 55, 301-307.	0.9	11
118	Inter-experimental discrepancy in facial muscle activity during vowel utterance. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 215-223.	0.9	3
119	A machine learning based method for classification of fractal features of forearm sEMG using Twin Support vector machines. , 2010, 2010, 4821-4.		17
120	Fractal feature of sEMG from Flexor digitorum superficialis muscle correlated with levels of contraction during low-level finger flexions. , 2010, 2010, 4614-7.		5
121	Hybrid Feature Selection for Myoelectric Signal Classification Using MICA. Journal of Electrical Engineering, 2010, 61, 93-99.	0.4	11
122	Classification of low level surface electromyogram using independent component analysis. IET Signal Processing, 2010, 4, 479.	0.9	6
123	Pattern classification of Myo-Electrical signal during different Maximum Voluntary Contractions: A study using BSS techniques. Measurement Science Review, 2010, 10, 1-6.	0.6	28
124	Title is missing!. Journal of Medical and Biological Engineering, 2010, 30, 367.	1.0	2
125	Use of sEMG in identification of low level muscle activities: Features based on ICA and fractal dimension. , 2009, 2009, 364-7.		7
126	Testing of motor unit synchronization model for localized muscle fatigue. , 2009, 2009, 360-3.		11

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127	Estimation of Muscle Fatigue during Cyclic Contractions Using Source Separation Techniques. , 2009, , .		8
128	Determining Number of Independent Sources in Undercomplete Mixture. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.0	16
129	Multi run ICA and surface EMG based signal processing system for recognising hand gestures. , 2008, , .		28
130	Source Identification and Separation Using Global Matrix Parameters of ICA. , 2008, , .		0
131	Reliability of facial muscle activity to identify vowel utterance. , 2008, , .		1
132	Identification of independent biological sensors-electromyogram example. , 2008, 2008, 1112-5.		1
133	Source identification and separation using sub-band ICA of sEMG. , 2008, , .		1
134	LIMITATIONS AND APPLICATIONS OF ICA FOR SURFACE ELECTROMYOGRAM FOR IDENTIFYING HAND GESTURES. International Journal of Computational Intelligence and Applications, 2008, 07, 281-300.	0.6	3
135	Multi modal gesture identification for HCI using surface EMG. , 2008, , .		7
136	INDEPENDENT COMPONENT APPROACH TO THE ANALYSIS OF HAND GESTURE sEMG AND FACIAL sEMG. Biomedical Engineering - Applications, Basis and Communications, 2008, 20, 83-93.	0.3	1
137	Addressing source separation and identification issues in surface EMG using blind source separation. , 2008, 2008, 1124-7.		5
138	Recognition of Human Voice Utterances from Facial Surface EMG without Using Audio Signals. Lecture Notes in Business Information Processing, 2008, , 366-378.	0.8	1
139	Performance comparison of ICA algorithms for Isometric Hand gesture identification using Surface EMG. , 2007, , .		8
140	Subtle Hand Gesture Identification for HCI Using Temporal Decorrelation Source Separation BSS of Surface EMG. , 2007, , .		16
141	ICA based identification of sources in sEMG. , 2007, , .		10
142	Limitations and Applications of ICA in Facial sEMG and Hand Gesture sEMG for Human Computer Interaction. , 2007, , .		5
143	Limitations and Applications of ICA for Surface Electromyogram. , 2006, 2006, 5739-42.		6
144	ICA as Pattern Recognition Technique for Gesture Identification. , 0, , 530-549.		0

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145	Facial Muscle Activity Patterns for Recognition of Utterances in Native and Foreign Language. , 0, , 1462-1480.		0
146	Neuroprosthetics. Advances in Bioinformatics and Biomedical Engineering Book Series, 0, , 1-7.	0.2	0
147	Surface electromyography classification using extreme learning machines and echo state networks. Research on Biomedical Engineering, 0, , 1.	1.5	2