Vinod Chandran

List of Publications by Year
in descending order

171 papers	4,349 citations

172443
29
h-index

138468
58
g-index

174 all docs	174 docs citations

174
times ranked

3777
citing authors

#	Article	IF	Citations
1	Facial Expression Analysis under Partial Occlusion. ACM Computing Surveys, 2019, 51, 1-49.	23.0	719
2	Application of higher order statistics/spectra in biomedical signals—A review. Medical Engineering and Physics, 2010, 32, 679-689.	1.7	194
3	Evolutionary computation algorithms for feature selection of EEG-based emotion recognition using mobile sensors. Expert Systems With Applications, 2018, 93, 143-155.	7.6	166
4	Pattern Recognition Using Invariants Defined From Higher Order Spectra- One Dimensional Inputs. IEEE Transactions on Signal Processing, 1993, 41, 205.	5.3	131
5	Application of Higher Order Spectra to Identify Epileptic EEG. Journal of Medical Systems, 2011, 35, 1563-1571.	3.6	129
6	Cardiac state diagnosis using higher order spectra of heart rate variability. Journal of Medical Engineering and Technology, 2008, 32, 145-155.	1.4	121
7	Analysis of epileptic EEG signals using higher order spectra. Journal of Medical Engineering and Technology, 2009, 33, 42-50.	1.4	106
8	Automatic driver stress level classification using multimodal deep learning. Expert Systems With Applications, 2019, 138, 112793.	7.6	106
9	Long Short Term Memory Hyperparameter Optimization for a Neural Network Based Emotion Recognition Framework. IEEE Access, 2018, 6, 49325-49338.	4.2	97
10	Pattern recognition using invariants defined from higher order spectra: 2-D image inputs. IEEE Transactions on Image Processing, 1997, 6, 703-712.	9.8	96
11	Breast cancer detection from thermal images using bispectral invariant features. International Journal of Thermal Sciences, 2013, 69, 21-36.	4.9	91
12	Biometric Based Cryptographic Key Generation from Faces. , 2007, , .		77
13	Random Gabor based templates for facial expression recognition in images with facial occlusion. Neurocomputing, 2014, 145, 451-464.	5.9	74
14	An adaptive optical flow technique for person tracking systems. Pattern Recognition Letters, 2007, 28, 1232-1239.	4.2	72
15	A Critical Review of Proactive Detection of Driver Stress Levels Based on Multimodal Measurements. ACM Computing Surveys, 2019, 51, 1-35.	23.0	72
16	Application of wavelet techniques for cancer diagnosis using ultrasound images: A Review. Computers in Biology and Medicine, 2016, 69, 97-111.	7.0	68
17	Ensemble Methods for Classification of Physical Activities from Wrist Accelerometry. Medicine and Science in Sports and Exercise, 2017, 49, 1965-1973.	0.4	64
18	Physical Activity Recognition Using Posterior-Adapted Class-Based Fusion of Multiaccelerometer Data. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 678-685.	6.3	64

#	Article	IF	Citations
19	Automatic identification of epileptic electroencephalography signals using higher-order spectra. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2009, 223, 485-495.	1.8	58
20	Automated diagnosis of Age-related Macular Degeneration using greyscale features from digital fundus images. Computers in Biology and Medicine, 2014, 53, 55-64.	7.0	57
21	Evaluation of image resolution and super-resolution on face recognition performance. Journal of Visual Communication and Image Representation, 2012, 23, 75-93.	2.8	56
22	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.	4.2	53
23	A general procedure for the derivation of principal domains of higher-order spectra. IEEE Transactions on Signal Processing, 1994, 42, 229-233.	5.3	52
24	3D Face Recognition using Log-Gabor Templates. , 2006, , .		52
25	Face authentication test on the BANCA database. , 2004, , .		51
26	Separable and non-separable discrete wavelet transform based texture features and image classification of breast thermograms. Infrared Physics and Technology, 2013, 61, 274-286.	2.9	49
27	Decision support system for age-related macular degeneration using discrete wavelet transform. Medical and Biological Engineering and Computing, 2014, 52, 781-796.	2.8	42
28	Automatic Emotion Recognition Using Temporal Multimodal Deep Learning. IEEE Access, 2020, 8, 225463-225474.	4.2	38
29	Detection of mines in acoustic images using higher order spectral features. IEEE Journal of Oceanic Engineering, 2002, 27, 610-618.	3.8	37
30	An approach to statistical lip modelling for speaker identification via chromatic feature extraction. , 0, , .		35
31	Combined 2D/3D Face Recognition Using Log-Gabor Templates. , 2006, , .		35
32	Combining multi-channel color space with local binary co-occurrence feature descriptors for accurate smoke detection from surveillance videos. Fire Safety Journal, 2018, 102, 1-10.	3.1	35
33	Super-Resolved Faces for Improved Face Recognition from Surveillance Video. Lecture Notes in Computer Science, 2007, , 1-10.	1.3	35
34	Cardiac Health Diagnosis Using Higher Order Spectra and Support Vector Machine. Open Medical Informatics Journal, 2009, 3, 1-8.	1.0	34
35	Integration strategies for audio-visual speech processing: applied to text-dependent speaker recognition. IEEE Transactions on Multimedia, 2005, 7, 495-506.	7.2	30
36	Computer-based analysis of cardiac state using entropies, recurrence plots and Poincare geometry. Journal of Medical Engineering and Technology, 2008, 32, 263-272.	1.4	30

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37	Higher Order Spectral (HOS) Analysis Of Epileptic EEG Signals. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6496-9.	0.5	28
38	Automatic identification of epilepsy by HOS and power spectrum parameters using EEG signals: A comparative study. , 2008, 2008, 3824-7.		28
39	Face recognition from 3d data using iterative closest point algorithm and gaussian mixture models. , 0, , .		27
40	Facial expression recognition experiments with data from television broadcasts and the World Wide Web. Image and Vision Computing, 2014, 32, 107-119.	4.5	27
41	Multi-spectral fusion for surveillance systems. Computers and Electrical Engineering, 2010, 36, 643-663.	4.8	26
42	Benchmarking HEp-2 specimen cells classification using linear discriminant analysis on higher order spectra features of cell shape. Pattern Recognition Letters, 2019, 125, 534-541.	4.2	25
43	Mean and variance of estimates of the bispectrum of a harmonic random process-an analysis including leakage effects. IEEE Transactions on Signal Processing, 1991, 39, 2640-2651.	5.3	24
44	HIGHER-ORDER SPECTRAL ANALYSIS TO DETECT NONLINEAR INTERACTIONS IN MEASURED TIME SERIES AND AN APPLICATION TO CHUAâ€™S CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1993, 03, 19-34.	1.7	24
45	Application of higher-order spectra for automated grading of diabetic maculopathy. Medical and Biological Engineering and Computing, 2015, 53, 1319-1331.	2.8	24
46	White Blood Cell Nuclei Segmentation Using Level Set Methods and Geometric Active Contours. , 2016, , .		24
47	Higher-order spectral analysis of nonlinear ocean surface gravity waves. Journal of Geophysical Research, 1995, 100, 4977.	3.3	23
48	Adaptive mouth segmentation using chromatic features. Pattern Recognition Letters, 2002, 23, 1293-1302.	4.2	23
49	Near-surface Interface Detection for Coal Mining Applications using Bispectral Features and GPR. Subsurface Sensing Technologies and Applications, 2005, 6, 125-149.	0.9	23
50	Segmentation of White Blood Cell, Nucleus and Cytoplasm in Digital Haematology Microscope Images: A Reviewâ€"Challenges, Current and Future Potential Techniques. IEEE Reviews in Biomedical Engineering, 2021, 14, 290-306.	18.0	23
51	Identification of gastroenteric viruses by electron microscopy using higher order spectral features. Journal of Clinical Virology, 2005, 34, 195-206.	3.1	21
52	Prediction of Relative Physical Activity Intensity Using Multimodal Sensing of Physiological Data. Sensors, 2019, 19, 4509.	3.8	21
53	Statistics of tricoherence. IEEE Transactions on Signal Processing, 1994, 42, 3430-3440.	5.3	20
54	A biomechanical approach to iris normalization. , 2015, , .		20

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55	Optical techniques for real-time binary multiplication. Applied Optics, 1986, 25, 2272.	2.1	19
56	BISPECTRAL AND TRISPECTRAL CHARACTERIZATION OF TRANSITION TO CHAOS IN THE DUFFING OSCILLATOR. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1993, 03, 551-557.	1.7	19
57	Towards robust automatic affective classification of images using facial expressions for practical applications. Multimedia Tools and Applications, 2016, 75, 4669-4695.	3.9	18
58	Bispectral analysis of two-dimensional random processes. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1990, 38, 2181-2186.	2.0	17
59	Position, rotation, and scale invariant recognition of images using higher-order spectra. , 1992, , .		17
60	Face recognition using fractal codes. , 0, , .		17
61	Multiscale Representation for 3-D Face Recognition. IEEE Transactions on Information Forensics and Security, 2007, 2, 529-536.	6.9	17
62	Representation of facial expression categories in continuous arousal–valence space: Feature and correlation. Image and Vision Computing, 2014, 32, 1067-1079.	4.5	17
63	Multispectral Periocular Classification With Multimodal Compact Multi-Linear Pooling. IEEE Access, 2017, 5, 14572-14578.	4.2	17
64	Machine recognition of hand-drawn circuit diagrams. , 0, , .		16
65	Evaluation and benchmarking of level set-based three forces via geometric active contours for segmentation of white blood cell nuclei shape. Computers in Biology and Medicine, 2020, 116, 103568.	7.0	16
66	Geometry vs. Appearance for Discriminating between Posed and Spontaneous Emotions. Lecture Notes in Computer Science, 2011, , 431-440.	1.3	16
67	Classification of White Blood Cells using Bispectral Invariant Features of Nuclei Shape. , 2018, , .		15
68	Adaptive Optical Flow for Person Tracking. , 0, , .		14
69	Robust speaker verification via fusion of speech and lip modalities. , 1999, , .		13
70	Initialised eigenlip estimator for fast lip tracking using linear regression. , 0, , .		13
71	Vector quantization based Gaussian modeling for speaker verification. , 0, , .		13
72	Asphalt Concrete Surfaces Macrotexture Determination From Still Images. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 857-869.	8.0	13

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73	Discovering the Best Feature Extraction and Selection Algorithms for Spontaneous Facial Expression Recognition. , 2012, , .		13
74	The use of temporal speech and lip information for multi-modal speaker identification via multi-stream HMMs. , 0, , .		12
75	Interpretability performance assessment of JPEG2000 and part 1 compliant region of interest coding. IEEE Transactions on Consumer Electronics, 2003, 49, 808-817.	3.6	12
76	Gabor Filter Bank Representation for 3D Face Recognition. , 0, , .		12
77	Gaze tracking for region of interest coding in JPEG 2000. Signal Processing: Image Communication, 2006, 21, 359-377.	3.2	12
78	3D face verification using a free-parts approach. Pattern Recognition Letters, 2008, 29, 1190-1196.	4.2	11
79	Higher order spectral analysis of Chua's circuit. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1993, 40, 689-692.	0.1	10
80	Shape discrimination using invariants defined from higher-order spectra. , 1991, , .		9
81	The use of speech and lip modalities for robust speaker verification under adverse conditions. , 0, , .		9
82	Biometric template security using Higher Order Spectra. , 2010, , .		9
83	Evaluation of Texture and Geometry for Dimensional Facial Expression Recognition. , 2011, , .		9
84	Using Viewer's Facial Expression and Heart Rate for Sports Video Highlights Detection. , 2015, , .		9
85	Elliptical Higher-Order-Spectra Periocular Code. IEEE Access, 2017, 5, 6978-6988.	4.2	9
86	Classification of White Blood Cells Using L-Moments Invariant Features of Nuclei Shape. , 2018, , .		9
87	Face recognition from super-resolved images. , 0, , .		8
88	Automatic Identification of Sports Video Highlights using Viewer Interest Features. , 2016, , .		8
89	Improved Facial-Feature Detection for AVSP via Unsupervised Clustering and Discriminant Analysis. Eurasip Journal on Advances in Signal Processing, 2003, 2003, 1.	1.7	7
90	Time-varying bispectral analysis of visually evoked multi-channel EEG. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.7	7

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91	Effect of Pupil Dilation and Constriction on the Distribution of Bit Errors within the Iris. , 2014, , .		7
92	Investigating the impact of drug induced pupil dilation on automated iris recognition. , 2016, , .		7
93	Detection and Tracking of Faces in 3D Using a Stereo Camera Arrangements. International Journal of Machine Learning and Computing, 2019, 9, 35-43.	0.6	7
94	Automated recognition of drunk driving on highways from video sequences. , 0, , .		6
95	Improved speech recognition using adaptive audio-visual fusion via a stochastic secondary classifier. , 0, , .		6
96	Robustness to expression variations in fractal-based face recognition. , 0, , .		6
97	Sequential decision fusion for controlled detection errors. , 2010, , .		6
98	Toward a more robust facial expression recognition in occluded images using randomly sampled Gabor based templates. , 2011, , .		6
99	Content-Based Image (object) Retrieval with Rotational Invariant Bag-of-Visual Words representation. , 2015, , .		6
100	3D Face Tracking Using Stereo Cameras: A Review. IEEE Access, 2020, 8, 94373-94393.	4.2	6
101	Hierarchical fusion network for periocular and iris by neural network approximation and sparse autoencoder. Machine Vision and Applications, 2021, 32, 1.	2.7	6
102	Detection of sea mines in sonar imagery using higher-order spectral features. , 1999, , .		5
103	A suitability metric for mouth tracking through chromatic segmentation. , 0, , .		5
104	Techniques for improving stereo depth maps of faces. , 0, , .		5
105	Automatic segmentation of HEp-2 cell Fluorescence microscope images using level set method via geometric active contours. , 2016, , .		5
106	3D Face Tracking Using Stereo Camera. , 2018, , .		5
107	The development of a new signal processing program at the Queensland University of Technology. IEEE Transactions on Education, 1996, 39, 186-191.	2.4	4
108	Higher-Order Spectra of Nonlinear Polynomial Models for Chua's Circuit. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 2425-2431.	1.7	4

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109	Chromatic colour spaces for skin detection using GMMS. , 2002, , .		4
110	Visual attention based roi maps from gaze tracking data. , 0, , .		4
111	Coal seam thickness estimation using GPR and higher order statistics - the near-surface case. , 0, , .		4
112	Probabilistic Matching of Image Sets for Video-Based Face Recognition. , 2012, , .		4
113	A motor controller using field oriented control and Hall effect rotor position sensors: Simulation and implementation. , 2014, , .		4
114	Periocular recognition under expression variation using Higher Order Spectral features. , 2015, , .		4
115	A Model Integrating Fire Prediction and Detection for Rural-Urban Interface. , 2015, , .		4
116	Part based bit error analysis of iris codes. Pattern Recognition, 2016, 60, 306-317.	8.1	4
117	Towards Generic Modelling of Viewer Interest Using Facial Expression and Heart Rate Features. IEEE Access, 2018, 6, 62490-62502.	4.2	4
118	Contactless Finger Recognition Using Invariants from Higher Order Spectra of Ridge Orientation Profiles. , 2018, , .		4
119	Higher Order Spectra based Support Vector Machine for Arrhythmia Classification. IFMBE Proceedings, 2009, , 231-234.	0.3	4
120	Robust 3D Face Recognition from Expression Categorisation. Lecture Notes in Computer Science, 2007, , 271-280.	1.3	4
121	Importance assignment to regions in surveillance imagery to aid visual examination and interpretation of compressed images. , 0, , .		3
122	<title>Importance prioritization coding in JPEG2000 for interpretability with application to surveillance imagery</title>. , 2003, , .		3
123	Application of Ground Penetrating Radar Technology for Near-Surface Interface Determination in Coal Mining. , 0, , .		3
124	The Role of Motion Models in Super-Resolving Surveillance Video for Face Recognition. , 2006, , .		3
125	An effective Content Based Image Retrieval system based on global representation and multi-level searching. , 2015, , .		3
126	Speaker verification with multi-run ICA based speech enhancement. , 2017, , .		3

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127	Automatic classification of physical exercises from wearable sensors using small dataset from non-laboratory settings. , 2017, , .		3
128	On the computation and interpretation of auto- and cross-trispectra. , 0, , .		2
129	Digit recognition using trispectral features. , 0, , .		2
130	Improving visual noise insensitivity in small vocabulary audio visual speech recognition applications. , 0, , .		2
131	An Application of Fractal Image-Set Coding in Facial Recognition. Lecture Notes in Computer Science, 2004, , 178-186.	1.3	2
132	Feature Modelling of PCA Difference Vectors for 2D and 3D Face Recognition. , 2006, , .		2
133	A Multi-Class Tracker Using a Scalable Condensation Filter. , 2006, , .		2
134	Object tracking using multiple motion modalities. , 2008, , .		2
135	Robust Image Hashing Using Higher Order Spectral Features. , 2010, , .		2
136	Analysis of detection performance in spectrum sensing optimisation for long sensing periods. , 2011, , .		2
137	Decision fusion from parts and samples for robust iris recognition. , 2013, , .		2
138	Hybrid DWT and MFCC feature warping for noisy forensic speaker verification in room reverberation. , 2017, , .		2
139	Face recognition. , 2018, , .		2
140	Three-Dimensional Head Pose Estimation Using a Stereo Camera Arrangement. , 2018, , .		2
141	Enhanced forensic speaker verification performance using the ICA-EBM algorithm under noisy and reverberant environments. Evolutionary Intelligence, 2021, 14, 1475-1494.	3.6	2
142	HOS-FingerCode: Bispectral invariants based contactless multi-finger recognition system using ridge orientation and feature fusion. Expert Systems With Applications, 2022, 201, 117054.	7.6	2
143	The design and development of an undergraduate signal processing laboratory. , 0, , .		1
144	Postcode segmentation and recognition using projections and bispectral features. , 0, , .		1

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145	Speech recognition in adverse environments using lip information. , 0, , .		1
146	Speech compaction using temporal decomposition. Electronics Letters, 1998, 34, 2317.	1.0	1
147	A new view of shape. , 1999, , .		1
148	Learning object dynamics for smooth tracking of moving lip contours. Electronics Letters, 2000, 36, 520.	1.0	1
149	Importance coding of still imagery based on importance maps of visually interpretable regions. , 0, , .		1
150	Recognition of viruses by electron microscopy using higher order spectral features. , 2003, , .		1
151	Importance prioritisation in JPEG 2000 for improved interpretability. Signal Processing: Image Communication, 2004, 19, 1005-1028.	3.2	1
152	Tracking people in 3D using position, size and shape. , 0, , .		1
153	Classifier selection using sequential error ratio criterion for multi-instance and multi-sample fusion. , 2012, , .		1
154	Time-varying bispectral analysis of auditory evoked multi-channel scalp EEG. , 2012, , .		1
155	Sequential fusion of decisions from adaptive and random samples for controlled verification errors. , 2012, , .		1
156	A pilot study on affective classification of facial images for emerging news topics. , 2014, , .		1
157	Improving Retrieval Quality Using Pseudo Relevance Feedback in Content-Based Image Retrieval. , 2016, , .		1
158	Contactless Multiple Finger Segments based Identity Verification using Information Fusion from Higher Order Spectral Invariants. , 2018, , .		1
159	Minutiae Triangle Graphs: A New Fingerprint Representation with Invariance Properties. , 2019, , .		1
160	Instantaneous phase of the autocorrelation and robustness to signal-dependent noise. , 0, , .		0
161	A link between shape and phase. , 0, , .		0
162	Hybrid coding of mixed signals for digital covert audio surveillance. , 0, , .		0

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163	Importance coding of surveillance imagery for interpretability using quadtree dynamic importance maps. , 0, , .		0
164	Texture classification using gabor energy features and higher order spectral features: a comparative study. , 0, , .		0
165	Object Recognition Using Stereo Vision and Higher Order Spectra. , 0, , .		0
166	A Virtual Test Assessment Tool for Second Year Signal Processing Students. , 2007, , .		0
167	Sequential fusion of decisions with favourable dependence for controlled verification errors. , 2012, , .		0
168	Effective User Relevance Feedback for Image Retrieval with Image Signatures. , 2016, , .		0
169	Rotation and Scale Invariant Bispectral Feature based Recognition of Contactless Palmprints. , 2019, , .		0
170	Investigating the Efficiency of a Three-Dimensional Facial Tracker Using Stereo Camera Arrangements. , 2021, , .		0
171	Improved Subject Identification in Surveillance Video Using Super-Resolution. , 2013, , 315-358.		0