Selin Aviyente

List of Publications by Year
in descending order

154 papers	2,282 citations	304368 22 h-index	253896 43 g-index
155 all docs	155 docs citations	155 times ranked	2554 citing authors

#	Article	IF	Citations
1	Extended Kalman Filtering for Remaining-Useful-Life Estimation of Bearings. IEEE Transactions on Industrial Electronics, 2015, 62, 1781-1790.	5.2	268
2	Evidence of disrupted functional connectivity in the brain after combat-related blast injury. NeuroImage, 2011, 54, S21-S29.	2.1	138
3	Wavelet Feature Selection for Image Classification. IEEE Transactions on Image Processing, 2008, 17, 1709-1720.	6.0	136
4	Time–Frequency Analysis for Efficient Fault Diagnosis and Failure Prognosis for Interior Permanent-Magnet AC Motors. IEEE Transactions on Industrial Electronics, 2008, 55, 4191-4199.	5.2	126
5	Identification of Intermittent Electrical and Mechanical Faults in Permanent-Magnet AC Drives Based on Time–Frequency Analysis. IEEE Transactions on Industry Applications, 2007, 43, 971-980.	3.3	125
6	Compressed Sensing Framework for EEG Compression. , 2007, , .		115
7	A phase synchrony measure for quantifying dynamic functional integration in the brain. Human Brain Mapping, 2011, 32, 80-93.	1.9	96
8	Prognosis of Gear Failures in DC Starter Motors Using Hidden Markov Models. IEEE Transactions on Industrial Electronics, 2011, 58, 1695-1706.	5.2	81
9	The Use of Bearing Currents and Vibrations in Lifetime Estimation of Bearings. IEEE Transactions on Industrial Informatics, 2017, 13, 1301-1309.	7.2	70
10	Extension of PCA to Higher Order Data Structures: An Introduction to Tensors, Tensor Decompositions, and Tensor PCA. Proceedings of the IEEE, 2018, 106, 1341-1358.	16.4	69
11	Scale Invariant Feature Extraction Algorithm for the Automatic Diagnosis of Rotor Asymmetries in Induction Motors. IEEE Transactions on Industrial Informatics, 2013, 9, 100-108.	7.2	65
12	A Time-Frequency-Based Approach to Phase and Phase Synchrony Estimation. IEEE Transactions on Signal Processing, 2011, 59, 3086-3098.	3.2	63
13	Time-Frequency Based Phase-Amplitude Coupling Measure For Neuronal Oscillations. Scientific Reports, 2019, 9, 12441.	1.6	55
14	A weighted small world network measure for assessing functional connectivity. Journal of Neuroscience Methods, 2013, 212, 133-142.	1.3	52
15	Sending mixed signals: worry is associated with enhanced initial error processing but reduced call for subsequent cognitive control. Social Cognitive and Affective Neuroscience, 2015, 10, 1548-1556.	1.5	43
16	A Tensor Decomposition-Based Approach for Detecting Dynamic Network States From EEG. IEEE Transactions on Biomedical Engineering, 2017, 64, 225-237.	2.5	41
17	Information-theoretic wavelet packet subband selection for texture classification. Signal Processing, 2006, 86, 1410-1420.	2.1	40
18	The Effect of Failure Prognosis and Mitigation on the Reliability of Permanent-Magnet AC Motor Drives. IEEE Transactions on Industrial Electronics, 2013, 60, 3519-3528.	5.2	39

#	ARTICLE	IF	CITATIONS
19	Tensor Based Temporal and Multilayer Community Detection for Studying Brain Dynamics During Resting State fMRI. IEEE Transactions on Biomedical Engineering, 2019, 66, 695-709.	2.5	32
20	A Signal-Processing-Based Approach to Time-Varying Graph Analysis for Dynamic Brain Network Identification. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-10.	0.7	31
21	Hierarchical Spectral Consensus Clustering for Group Analysis of Functional Brain Networks. IEEE Transactions on Biomedical Engineering, 2015, 62, 2158-2169.	2.5	30
22	Recursive Tensor Subspace Tracking for Dynamic Brain Network Analysis. IEEE Transactions on Signal and Information Processing Over Networks, 2017, 3, 669-682.	1.6	24
23	Multivariate Empirical Mode Decomposition for Quantifying Multivariate Phase Synchronization. Eurasip Journal on Advances in Signal Processing, 2011, 2011, .	1.0	23
24	Network Community Structure Detection for Directional Neural Networks Inferred From Multichannel Multisubject EEG Data. IEEE Transactions on Biomedical Engineering, 2014, 61, 1919-1930.	2.5	22
25	Quantification of Effective Connectivity in the Brain Using a Measure of Directed Information. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-16.	0.7	21
26	Characterization of Event Related Potentials Using Information Theoretic Distance Measures. IEEE Transactions on Biomedical Engineering, 2004, 51, 737-743.	2.5	19
27	Rotation Invariant Texture Classification with Ridgelet Transform and Fourier Transform. , 2006, , .		18
28	Time-frequency phase-synchrony approaches with ERPs. International Journal of Psychophysiology, 2017, 111, 88-97.	0.5	18
29	An EMD-based invariant feature extraction algorithm for rotor bar condition monitoring. , 2011, , .		17
30	Time-frequency complexity based remaining useful life (RUL) estimation for bearing faults. , 2013, , .		17
31	Markov and multifractal wavelet models for wireless MAC-to-MAC channels. Performance Evaluation, 2007, 64, 298-314.	0.9	16
32	GLOSS: Tensor-based anomaly detection in spatiotemporal urban traffic data. Signal Processing, 2022, 192, 108370.	2.1	13
33	Improving the reliability of electrical drives through failure prognosis. , 2011, , .		12
34	The relationship between transfer entropy and directed information. , 2012, , .		12
35	Utilizing time-frequency amplitude and phase synchrony measure to assess feedback processing in a gambling task. International Journal of Psychophysiology, 2018, 132, 203-212.	0.5	12
36	The Relationship Between Two Directed Information Measures. IEEE Signal Processing Letters, 2008, 15, 801-804.	2.1	11

#	Article	IF	Citations
37	Underdetermined Source Separation in the Time-Frequency Domain. , 2007, , .		10
38	Detecting and Tracking Community Structure in Temporal Networks: A Low-Rank + Sparse Estimation Based Evolutionary Clustering Approach. IEEE Transactions on Signal and Information Processing Over Networks, 2019, 5, 723-738.	1.6	10
39	Failure prognosis of DC starter motors using hidden Markov models. , 2009, , .		9
40	Time-Frequency Data Reduction for Event Related Potentials: Combining Principal Component Analysis and Matching Pursuit. Eurasip Journal on Advances in Signal Processing, 2010, 2010, 289571.	1.0	9
41	Graph entropy rate minimization and the compressibility of undirected binary graphs. , 2012, , .		9
42	Discovering the hidden health states in bearing vibration signals for fault prognosis. , 2014, , .		9
43	A tensor based framework for community detection in dynamic networks. , 2017, , .		9
44	Spatially Adaptive Wavelet Thresholding for Image Watermarking. , 2006, , .		8
45	Prognosis of electrical faults in permanent magnet AC machines using the hidden Markov model. , 2010, , .		8
46	A Measure of Multivariate Phase Synchrony Using Hyperdimensional Geometry. IEEE Transactions on Signal Processing, 2016, 64, 2774-2787.	3.2	8
47	Graph Regularized Tensor Train Decomposition. , 2020, , .		8
48	A Centrosymmetric Kernel Decomposition for Time-Frequency Distribution Computation. IEEE Transactions on Signal Processing, 2004, 52, 1574-1584.	3.2	7
49	Comparison of Wavelet and RID-Rihaczek Based Methods for Phase-Amplitude Coupling. IEEE Signal Processing Letters, 2019, 26, 1897-1901.	2.1	7
50	Multivariate Analysis of Bivariate Phase-Amplitude Coupling in EEG Data Using Tensor Robust PCA. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1268-1279.	2.7	7
51	Multitaper marginal time–frequency distributions. Signal Processing, 2006, 86, 279-295.	2.1	6
52	Analysis of Event Related Potentials using PCA and Matching Pursuit on the Time-Frequency Plane. , 2006, 2006, 2454-7.		6
53	Information theoretic approach to quantify causal neural interactions from EEG. , 2010, , .		6
54	Community Detection in Dynamic Networks: Equivalence Between Stochastic Blockmodels and Evolutionary Spectral Clustering. IEEE Transactions on Signal and Information Processing Over Networks, 2021, 7, 130-143.	1.6	6

#	Article	IF	Citations
55	A Measure of Mutual Information on the Time-Frequency Plane. , 0, , .		5
56	Image encryption scheme based on using least square approximation techniques. , 2008, , .		5
57	Inferring effective connectivity in the brain from EEG time series using dynamic bayesian networks. , 2009, 2009, 4739-42.		5
58	Identification of dynamic functional brain network states through tensor decomposition. , 2014, , .		5
59	A graph theoretic approach to dynamic functional connectivity tracking and network state identification. , 2014, 2014, 6004-7.		5
60	Multi-scale higher order singular value decomposition (MS-HoSVD) for resting-state FMRI compression and analysis. , 2017, , .		5
61	A Two-Stage Approach to Robust Tensor Decomposition. , 2018, , .		5
62	scSGL: kernelized signed graph learning for single-cell gene regulatory network inference. Bioinformatics, 2022, 38, 3011-3019.	1.8	5
63	Source Separation in the Time-Frequency Domain by Maximizing an Information-Theoretic Criterion. , 2006, , .		4
64	Information Theoretic Measures for Quantifying the Integration of Neural Activity. , 2007, , .		4
65	Comparative Study of Time-Frequency Methods for the Detection and Categorization of Intermittent Faults in Electrical Drives. , 2007, , .		4
66	The multi-bit watermarking method for speech signals in the time-frequency domain. Integrated Computer-Aided Engineering, 2010, 17, 59-67.	2.5	4
67	Subspace analysis for characterizing dynamic functional brain networks. , 2013, , .		4
68	Locally linear low-rank tensor approximation. , 2015, , .		4
69	Multiscale tensor decomposition. , 2016, , .		4
70	A multiscale approach for tensor denoising. , 2016, , .		4
71	Hierarchical distributed compressive sensing for simultaneous sparse approximation and common component extraction. , 2017, 60, 230-241.		4
72	Intermittent fault identification for permanent magnet AC drives based on the Short-Time Fourier Transform. , 2005, , .		3

#	Article	IF	Citations
73	Large Margin Dimension Reduction for Sparse Image Classification. , 2007, , .		3
74	A Time-Varying Phase Coherence Measure for Quantifying Functional Integration in the Brain. , 2007, , .		3
75	Underdetermined source separation of EEG signals in the time-frequency domain. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	3
76	A high dimensional Directed information estimation using data-dependent partitioning. , 2009, , .		3
77	Directed information measure for quantifying the information flow in the brain. , 2009, 2009, 2188-91.		3
78	Hyperspherical phase synchrony for quantifying multivariate phase synchronization. , 2012, , .		3
79	Dynamic network summarization using convex optimization. , 2012, , .		3
80	Low-rank tensor decomposition based dynamic network tracking. , 2014, , .		3
81	Failure prognosis methods in electrical drives - State of the art and future directions. , 2015, , .		3
82	A Time-frequency Based Multivariate Phase-amplitude Coupling Measure. , 2019, , .		3
83	Community Detection in Fully-Connected Multi-layer Networks Through Joint Nonnegative Matrix Factorization. IEEE Access, 2022, 10, 43022-43043.	2.6	3
84	<title>Fingerprint verification based on wavelet subbands</title>. , 2004, , .		2
85	Identification of small world topologies in neural functional connections quantified by phase synchrony measures. , 2009, 2009, 5308-11.		2
86	Directed network inference using a measure of directed information. , 2010, , .		2
87	Quantifying the functional importance of neuronal assemblies in the brain using Laplacian Hückel graph Energy. , 2011, , .		2
88	Multivariate synchrony modules identified through multiple subject community detection in functional brain networks. , 2011, 2011, 2534-7.		2
89	Two-dimensional SVD for event detection in dynamic functional brain networks. , 2013, , .		2
90	A multi-scale energy detector for anomaly detection in dynamic networks. , 2013, , .		2

#	ARTICLE	IF	CITATIONS
91	Multiple subject analysis of functional brain network communities through co-regularized spectral clustering. , 2014, 2014, 5992-5.		2
92	Graph information theoretic measures on functional connectivity networks based on graph-to-signal transform. , 2016, , .		2
93	Dynamic Graph Fourier Transform on temporal functional connectivity networks. , 2017, , .		2
94	Sparse Discriminative Tensor Dictionary Learning for Object Classification. , 2018, , .		2
95	Graph Signal Processing on Neuronal Networks. , 2018, , 799-816.		2
96	Graph-to-signal transformation based classification of functional connectivity brain networks. PLoS ONE, 2019, 14, e0212470.	1.1	2
97	Low-rank Estimation Based Evolutionary Clustering for Community Detection in Temporal Networks. , 2019, , .		2
98	Strength Adjusted Multilayer Spectral Clustering. , 2019, , .		2
99	Constrained Spectral Clustering for Dynamic Community Detection. , 2020, , .		2
100	Matching Pursuit Based Dynamic Phase-Amplitude Coupling Measure. , 2020, , .		2
101	A signal processing perspective to community detection in dynamic networks. , 2021, 119, 103192.		2
102	Graph Theoretic Analysis of Multilayer EEG Connectivity Networks. , 2021, 2021, 475-479.		2
103	<title>Minimum entropy approach to denoising time-frequency distributions</title>. , 2001, , .		1
104	Toward a theory of information processing on the time-frequency plane. , 2004, , .		1
105	Robust Watermarking in the Wigner Domain. , 2006, , .		1
106	Multiple trial processing of multivariate phase synchronization in brain signals. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	1
107	Quantifying the causal interactions in the brain using a measure of directed transinformation. , 2008, 2008, 3828-31.		1
108	Graph analysis of neuronal interactions for the error-related negativity. , 2010, 2010, 2794-7.		1

#	ARTICLE	IF	CITATIONS
109	Time-lagged Directed Information. , 2011, , .		1
110	Investigation of phase-locked neuronal oscillation with optical stimulation based on a time-frequency approach. , 2013, , .		1
111	Hyperspherical phase synchrony measure for quantifying global synchronization in the brain. , 2013, , .		1
112	Graph wavelet transform: Application to image segmentation. , 2014, , .		1
113	Fourier transform for signals on dynamic graphs. , 2014, , .		1
114	Evolutionary spectral graph clustering through subspace distance measure. , 2016, , .		1
115	Temporal network tracking based on tensor factor analysis of graph signal spectrum. , 2016, , .		1
116	Multiscale analysis for higher-order tensors. , 2019, , .		1
117	Multi-Branch Tensor Network Structure for Tensor-Train Discriminant Analysis. IEEE Transactions on Image Processing, 2021, 30, 8926-8938.	6.0	1
118	Information–Theoretic Nonstationary Source Separation. Lecture Notes in Computer Science, 2006, , 885-892.	1.0	1
119	Detecting brain dynamics during resting state: a tensor based evolutionary clustering approach. , 2017, , .		1
120	Graph Regularized Low-Rank Tensor-Train for Robust Principal Component Analysis. IEEE Signal Processing Letters, 2022, 29, 1152-1156.	2.1	1
121	Assessment of dynamic phase amplitude coupling using matching pursuit. Journal of Neuroscience Methods, 2022, 376, 109610.	1.3	1
122	Coupled support tensor machine classification for multimodal neuroimaging data. Statistical Analysis and Data Mining, 2022, 15, 797-818.	1.4	1
123	<title>Discrete scale vectors and decomposition of time-frequency kernels</title>. , 2000, , .		0
124	Information theoretic signal detection on the time-frequency plane. , 2003, 5205, 86.		0
125	<title>An information theoretic approach to digital image watermarking</title>. , 2003, , .		0
126	Embedding Multi-Bit Message in the Joint Time-Frequency Domain. , 2006, , .		0

#	ARTICLE	IF	CITATIONS
127	Time-frequency decomposition based on information. , 2006, 6313, 210.		0
128	Image watermarking in the autocorrelation domain. , 2006, , .		0
129	Time-Frequency Based Feature Extraction and Classification for Fault Diagnosis in Electric Drives. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	0
130	A new class of complex time-frequency distributions for estimating phase synchrony between signals. , 2009, , .		0
131	Watermarking of speech signals in the time-frequency domain. , 2009, , .		0
132	Identifying centralized hubs within neural functional connections. , 2009, , .		0
133	Computationally Efficient Scale Covariant Time-Frequency Distributions. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.0	0
134	Identifying functional clusters in the brain using phase synchrony. , 2010, , .		0
135	Comparison of nonparametric and parametric time-varying methods for quantifying phase synchrony. , 2010, , .		0
136	Multichannel EEG analysis based on multi-scale multi-information. , 2011, , .		0
137	Community detection for directional neural networks inferred from EEG data. , 2011, 2011, 7155-8.		0
138	Identifying multivariate EEG synchronization networks through multiple subject community detection. , 2011, , .		0
139	Joint frequency spectral lag representation for cross-frequency modulation analysis in the brain. , 2011, , .		0
140	Discriminative sparse image representation for classification based on a greedy algorithm. , 2012, , .		0
141	Multi-scale anomaly detection in complex dynamic networks. , 2013, , .		0
142	Computation of resting state networks from fMRI through a measure of phase synchrony. , 2014, 2014, 1456-9.		0
143	Effective connectivity in FMRI from mutual prediction approach. , 2014, , .		0
144	A time-frequency based bivariate synchrony measure for reducing volume conduction effects in EEG. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
145	A Tucker decomposition based approach for topographic functional connectivity state summarization. , 2015, , .		0
146	Functional connectivity brain network analysis through network to signal transform based on the resistance distance. , 2016, , .		0
147	Online low-rank + sparse structure learning for dynamic network tracking. , 2016, , .		0
148	Structured dictionary learning for sparse common component and innovation model. , 2017, , .		0
149	Functional Connectivity States of the Brain Using Restricted Boltzmann Machines. , 2018, , .		0
150	Temporal Block Spectral Clustering for Multi-Layer Temporal Functional Connectivity Networks. , 2018, , .		0
151	Tensor-Train Discriminant Analysis. , 2019, , .		0
152	Granger Causality Based Directional Phase-Amplitude Coupling Measure. , 2021, , .		0
153	Analysis of Event Related Potentials using PCA and Matching Pursuit on the Time-Frequency Plane. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
154	Explainability in Graph Data Science: Interpretability, replicability, and reproducibility of community detection. IEEE Signal Processing Magazine, 2022, 39, 25-39.	4.6	0