Javier Escudero

List of Publications by Year
in descending order

142 papers	4,627 citations	109311 35 h-index	118840 62 g-index
152 all docs	152 docs citations	152 times ranked	4501 citing authors

#	Article	IF	Citations
1	Deep Transfer Learning for Improved Detection of Keratoconus using Corneal Topographic Maps. Cognitive Computation, 2022, 14, 1627-1642.	5.2	15
2	Flow rate measurement of oil-gas-water wavy flow through a combined electrical and ultrasonic sensor. Chemical Engineering Journal, 2022, 427, 131982.	12.7	24
3	Permutation Entropy for Graph Signals. IEEE Transactions on Signal and Information Processing Over Networks, 2022, 8, 288-300.	2.8	6
4	Editorial: Current Trends in Deep Learning for Movement Analysis and Prosthesis Control. Frontiers in Neuroscience, 2022, 16, 889202.	2.8	1
5	Hierarchical Complexity of the Macro-Scale Neonatal Brain. Cerebral Cortex, 2021, 31, 2071-2084.	2.9	18
6	Selective Motion Artefact Reduction via Radiomics and k-space Reconstruction for Improving Perivascular Space Quantification in Brain Magnetic Resonance Imaging. Lecture Notes in Computer Science, 2021, , 151-164.	1.3	1
7	Canonical polyadic and block term decompositions to fuse EEG, phenotypic scores, and structural MRI of children with early-onset epilepsy. , 2021, , .		3
8	Assessment of Outliers and Detection of Artifactual Network Segments Using Univariate and Multivariate Dispersion Entropy on Physiological Signals. Entropy, 2021, 23, 244.	2.2	0
9	A four-dimensional computational model of dynamic contrast-enhanced magnetic resonance imaging measurement of subtle blood-brain barrier leakage. NeuroImage, 2021, 230, 117786.	4.2	15
10	Measures of resting state EEG rhythms for clinical trials in Alzheimer's disease: Recommendations of an expert panel. Alzheimer's and Dementia, 2021, 17, 1528-1553.	0.8	64
11	Higher order tensor decomposition for proportional myoelectric control based on muscle synergies. Biomedical Signal Processing and Control, 2021, 67, 102523.	5.7	2
12	Deep learning of resting-state electroencephalogram signals for three-class classification of Alzheimerâ€™s disease, mild cognitive impairment and healthy ageing. Journal of Neural Engineering, 2021, 18, 046087.	3.5	37
13	Impact of Visual Design Elements and Principles in Human Electroencephalogram Brain Activity Assessed with Spectral Methods and Convolutional Neural Networks. Sensors, 2021, 21, 4695.	3.8	1
14	Functional, structural, and phenotypic data fusion to predict developmental scores of pre-school children based on Canonical Polyadic Decomposition. Biomedical Signal Processing and Control, 2021, 70, 102889.	5.7	2
15	An Efficient Mixture of Deep and Machine Learning Models for COVID-19 and Tuberculosis Detection Using X-Ray Images in Resource Limited Settings. Studies in Systems, Decision and Control, 2021, , 77-100.	1.0	13
16	What electrophysiology tells us about Alzheimer's disease: a window into the synchronization and connectivity of brain neurons. Neurobiology of Aging, 2020, 85, 58-73.	3.1	150
17	Analysis of dynamic texture and spatial spectral descriptors of dynamic contrast-enhanced brain magnetic resonance images for studying small vessel disease. Magnetic Resonance Imaging, 2020, 66, 240-247.	1.8	6
18	Normalised degree variance. Applied Network Science, 2020, 5, 32.	1.5	8

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19	Examining the Relationship between Semiquantitative Methods Analysing Concentration-Time and Enhancement-Time Curves from Dynamic-Contrast Enhanced Magnetic Resonance Imaging and Cerebrovascular Dysfunction in Small Vessel Disease. Journal of Imaging, 2020, 6, 43.	3.0	1
20	Augmentation of Dispersion Entropy for Handling Missing and Outlier Samples in Physiological Signal Monitoring. Entropy, 2020, 22, 319.	2.2	7
21	Early diagnosis of Alzheimerâ€™s disease: the role of biomarkers including advanced EEG signal analysis. Report from the IFCN-sponsored panel of experts. Clinical Neurophysiology, 2020, 131, 1287-1310.	1.5	123
22	A Framework for Jointly Assessing and Reducing Imaging Artefacts Automatically Using Texture Analysis and Total Variation Optimisation for Improving Perivascular Spaces Quantification in Brain Magnetic Resonance Imaging. Communications in Computer and Information Science, 2020, , 171-183.	0.5	4
23	Analysis of Spatial Spectral Features of Dynamic Contrast-Enhanced Brain Magnetic Resonance Images for Studying Small Vessel Disease. Communications in Computer and Information Science, 2020, , 282-293.	0.5	1
24	Weighted Network Estimation by the Use of Topological Graph Metrics. IEEE Transactions on Network Science and Engineering, 2019, 6, 576-586.	6.4	3
25	Muscle Activity Analysis Using Higher-Order Tensor Decomposition: Application to Muscle Synergy Extraction. IEEE Access, 2019, 7, 27257-27271.	4.2	13
26	Fuzzy Entropy Metrics for the Analysis of Biomedical Signals: Assessment and Comparison. IEEE Access, 2019, 7, 104833-104847.	4.2	29
27	Danger to science of no-deal Brexit. Nature, 2019, 572, 312-312.	27.8	0
28	Multivariate Multiscale Dispersion Entropy of Biomedical Times Series. Entropy, 2019, 21, 913.	2.2	48
29	Consistency of Muscle Synergies Extracted via Higher-Order Tensor Decomposition Towards Myoelectric Control. , 2019, , .		2
30	Multiscale Fluctuation-Based Dispersion Entropy and Its Applications to Neurological Diseases. IEEE Access, 2019, 7, 68718-68733.	4.2	66
31	Network analysis through the use of jointâ€distribution entropy on EEG recordings of MCI patients during a visual shortâ€term memory binding task. Healthcare Technology Letters, 2019, 6, 27-31.	3.3	9
32	Gasâ€"Liquid Flow Pattern Analysis Based on Graph Connectivity and Graph-Variate Dynamic Connectivity of ERT. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1590-1601.	4.7	22
33	Hierarchical complexity of the adult human structural connectome. NeuroImage, 2019, 191, 205-215.	4.2	16
34	Application of Dispersion Entropy to Healthy and Pathological Heartbeat ECG Segments. , 2019, 2019, 2269-2272.		3
35	Tensor decomposition of TMS-induced EEG oscillations reveals data-driven profiles of antiepileptic drug effects. Scientific Reports, 2019, 9, 17057.	3.3	8
36	Preliminary fusion of EEG and MRI with phenotypic scores in children with epilepsy based on the Canonical Polyadic Decomposition. , 2019, 2019, 3884-3887.		1

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37	Graph-Variate Signal Analysis. IEEE Transactions on Signal Processing, 2019, 67, 293-305.	5.3	8
38	Introducing the Joint EEG-Development Inference (JEDI) Model: A Multi-Way, Data Fusion Approach for Estimating Paediatric Developmental Scores via EEG. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 348-357.	4.9	11
39	Complex Tensor Factorization With PARAFAC2 for the Estimation of Brain Connectivity From the EEG. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1-12.	4.9	16
40	Analysis of EEG networks and their correlation with cognitive impairment in preschool children with epilepsy. Epilepsy and Behavior, 2019, 90, 45-56.	1.7	17
41	Differential Effects of Simulated Cortical Network Lesions on Synchrony and EEG Complexity. International Journal of Neural Systems, 2019, 29, 1850024.	5.2	12
42	Discrimination of stroke-related mild cognitive impairment and vascular dementia using EEG signal analysis. Medical and Biological Engineering and Computing, 2018, 56, 137-157.	2.8	45
43	Fusion of EEG and fMRI via Soft Coupled Tensor Decompositions. , 2018, , .		19
44	Phenotyping Ex-Combatants From EEG Scalp Connectivity. IEEE Access, 2018, 6, 55090-55098.	4.2	5
45	Measuring Complexity of Biomedical Signals. Complexity, 2018, 2018, 1-3.	1.6	3
46	Amplitude- and Fluctuation-Based Dispersion Entropy. Entropy, 2018, 20, 210.	2.2	132
47	Medical Mechatronics for Healthcare. Journal of Healthcare Engineering, 2018, 2018, 1-3.	1.9	2
48	Gas-water two-phase flow pattern recognition based on ERT and ultrasound Doppler. , 2018, , .		5
49	Building a Tensor Framework for the Analysis and Classification of Steady-State Visual Evoked Potentials in Children. , 2018, , .		3
50	Tensor-driven extraction of developmental features from varying paediatric EEG datasets. Journal of Neural Engineering, 2018, 15, 046024.	3.5	17
51	Adaptive Windowing Framework for Surface Electromyogram-Based Pattern Recognition System for Transradial Amputees. Sensors, 2018, 18, 2402.	3.8	23
52	Coarse-Graining Approaches in Univariate Multiscale Sample and Dispersion Entropy. Entropy, 2018, 20, 138.	2.2	47
53	Evaluation of matrix factorisation approaches for muscle synergy extraction. Medical Engineering and Physics, 2018, 57, 51-60.	1.7	48
54	Complexity analysis of spontaneous brain activity in mood disorders: A magnetoencephalography study of bipolar disorder and major depression. Comprehensive Psychiatry, 2018, 84, 112-117.	3.1	32

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55	Machine-learning based identification of undiagnosed dementia in primary care: a feasibility study. BJGP Open, 2018, 2, bjgpopen18X101589.	1.8	44
56	Refined Composite Multiscale Dispersion Entropy and its Application to Biomedical Signals. IEEE Transactions on Biomedical Engineering, 2017, 64, 2872-2879.	4.2	198
57	Locating Temporal Functional Dynamics of Visual Short-Term Memory Binding using Graph Modular Dirichlet Energy. Scientific Reports, 2017, 7, 42013.	3.3	19
58	The complex hierarchical topology of EEG functional connectivity. Journal of Neuroscience Methods, 2017, 276, 1-12.	2.5	20
59	Classification enhancement for post-stroke dementia using fuzzy neighborhood preserving analysis with QR-decomposition. , 2017, 2017, 3174-3177.		9
60	Bidimensional Distribution Entropy to Analyze the Irregularity of Small-Sized Textures. IEEE Signal Processing Letters, 2017, 24, 1338-1342.	3.6	28
61	Refined multiscale fuzzy entropy based on standard deviation for biomedical signal analysis. Medical and Biological Engineering and Computing, 2017, 55, 2037-2052.	2.8	120
62	Graph regularised tensor factorisation of EEG signals based on network connectivity measures. , 2017, , .		1
63	Refined composite multivariate generalized multiscale fuzzy entropy: A tool for complexity analysis of multichannel signals. Physica A: Statistical Mechanics and Its Applications, 2017, 465, 261-276.	2.6	72
64	Stroke-related mild cognitive impairment detection during working memory tasks using EEG signal processing. , 2017, , .		7
65	On the use of higher-order tensors to model muscle synergies. , 2017, 2017, 1792-1795.		4
66	Multiscale dispersion entropy for the regional analysis of resting-state magnetoencephalogram complexity in Alzheimer's disease. , 2017, 2017, 3182-3185.		15
67	Elucidating age-specific patterns from background electroencephalogram pediatric datasets via PARAFAC. , 2017, 2017, 3797-3800.		5
68	Automatic Artifact Removal in EEG of Normal and Demented Individuals Using ICAâ€"WT during Working Memory Tasks. Sensors, 2017, 17, 1326.	3.8	56
69	Accounting for the complex hierarchical topology of EEG phase-based functional connectivity in network binarisation. PLoS ONE, 2017, 12, e0186164.	2.5	25
70	Univariate and Multivariate Generalized Multiscale Entropy to Characterise EEG Signals in Alzheimerâ€™s Disease. Entropy, 2017, 19, 31.	2.2	47
71	Characterisation of Resting Brain Network Topologies across the Human Lifespan with Magnetoencephalogram Recordings: A Phase Slope Index and Granger Causality Comparison Study. , 2017, , .		0
72	Inspection of short-time resting-state electroencephalogram functional networks in Alzheimer's disease. , 2016, 2016, 2810-2813.		2

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73	EEG markers for early detection and characterization of vascular dementia during working memory tasks. , 2016, , .		14
74	MEMD-enhanced multivariate fuzzy entropy for the evaluation of complexity in biomedical signals. , 2016, 2016, 3761-3764.		4
75	Refined composite multivariate multiscale entropy based on variance for analysis of resting-state magnetoencephalograms in Alzheimer's disease. , 2016, , .		1
76	Open your eyes and you will see. Changes in â€œeyes-openâ€•versus â€œeyes-closedâ€•small-world properties of EEG functional connectivity in amnesic mild cognitive impairment. Clinical Neurophysiology, 2016, 127, 999-1000.	1.5	2
77	A comparison of post-processing techniques on the performance of EMG based pattern recognition system for the transradial amputees. , 2016, , .		2
78	Expanding the (kaleido)scope: exploring current literature trends for translating electroencephalography (EEG) based brainâ€"computer interfaces for motor rehabilitation in children. Journal of Neural Engineering, 2016, 13, 061002.	3.5	19
79	Effect of importance sampling on robust segmentation of audio-cough events in noisy environments. , 2016, 2016, 3740-3744.		7
80	A comparison of the cluster-span threshold and the union of shortest paths as objective thresholds of EEG functional connectivity networks from Beta activity in Alzheimer's disease. , 2016, 2016, 2826-2829.		10
81	Selecting the optimal movement subset with different pattern recognition based EMG control algorithms. , 2016, 2016, 315-318.		3
82	Discriminative analysis of schizophrenia using support vector machine and recursive feature elimination on structural MRI images. Medicine (United States), 2016, 95, e3973.	1.0	75
83	Improving the Performance Against Force Variation of EMG Controlled Multifunctional Upper-Limb Prostheses for Transradial Amputees. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 650-661.	4.9	231
84	Amplitude-aware permutation entropy: Illustration in spike detection and signal segmentation. Computer Methods and Programs in Biomedicine, 2016, 128, 40-51.	4.7	126
85	Improved multiscale permutation entropy for biomedical signal analysis: Interpretation and application to electroencephalogram recordings. Biomedical Signal Processing and Control, 2016, 23, 28-41.	5.7	125
86	Dispersion entropy for the analysis of resting-state MEG regularity in Alzheimer's disease. , 2016, 2016, 6417-6420.		16
87	Combination of signal segmentation approaches using fuzzy decision making. , 2015, 2015, 101-4.		2
88	USING NHS PRIMARY CARE DATA TO IDENTIFY UNDIAGNOSED DEMENTIA. Journal of Neurology, Neurosurgery and Psychiatry, 2015, 86, e4.134-e4.	1.9	5
89	Selection of Mother Wavelet Functions for Multi-Channel EEG Signal Analysis during a Working Memory Task. Sensors, 2015, 15, 29015-29035.	3.8	114
90	Multiscale entropy analysis of resting-state magnetoencephalogram with tensor factorisations in Alzheimer's disease. Brain Research Bulletin, 2015, 119, 136-144.	3.0	34

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91	Effect of the average delay and mean connectivity of the Kuramoto model on the complexity of the output electroencephalograms. , 2015, 2015, 7873-6.		5
92	Evaluation of resting-state magnetoencephalogram complexity in Alzheimer's disease with multivariate multiscale permutation and sample entropies. , 2015, 2015, 7422-5.		9
93	Comparison of network analysis approaches on EEG connectivity in beta during Visual Short-term Memory binding tasks. , 2015, 2015, 2207-10.		4
94	Cluster-span threshold: An unbiased threshold for binarising weighted complete networks in functional connectivity analysis. , 2015, 2015, 2840-3.		22
95	Inspecting temporal scales with non-linear signal features: A way to extract more information from brain activity?. Clinical Neurophysiology, 2015, 126, 435-436.	1.5	1
96	Principal Dynamic Mode Analysis of EEG Data for Assisting the Diagnosis of Alzheimer’s Disease. IEEE Journal of Translational Engineering in Health and Medicine, 2015, 3, 1-10.	3.7	21
97	Classification of Alzheimer's disease from quadratic sample entropy of electroencephalogram. Healthcare Technology Letters, 2015, 2, 70-73.	3.3	33
98	A comparative study of breast cancer diagnosis based on neural network ensemble via improved training algorithms. , 2015, 2015, 2836-9.		5
99	An intelligent approach for variable size segmentation of non-stationary signals. Journal of Advanced Research, 2015, 6, 687-698.	9.5	24
100	Extracellular spike detection from multiple electrode array using novel intelligent filter and ensemble fuzzy decision making. Journal of Neuroscience Methods, 2015, 239, 129-138.	2.5	18
101	LiveWell â€“ Promoting Healthy Living and Wellbeing for Parkinson Patients through Social Network and ICT Training. International Journal of Healthcare Information Systems and Informatics, 2015, 10, 24-41.	0.9	5
102	Role of EEG as Biomarker in the Early Detection and Classification of Dementia. Scientific World Journal, The, 2014, 2014, 1-16.	2.1	120
103	Spectral analysis of resting state magnetoencephalogram activity in patients with bipolar disorder. , 2014, 2014, 2197-200.		24
104	Post-processing for spectral coherence of magnetoencephalogram background activity: Application to Alzheimer's disease. , 2014, 2014, 6345-8.		1
105	Development of a Highly Dexterous Robotic Hand with Independent Finger Movements for Amputee Training. Lecture Notes in Computer Science, 2014, , 291-293.	1.3	2
106	Machine Learning-Based Method for Personalized and Cost-Effective Detection of Alzheimer's Disease. IEEE Transactions on Biomedical Engineering, 2013, 60, 164-168.	4.2	68
107	Classification of Finger Movements for the Dexterous Hand Prosthesis Control With Surface Electromyography. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 608-618.	6.3	268
108	Changes in the MEG background activity in patients with positive symptoms of schizophrenia: spectral analysis and impact of age. Physiological Measurement, 2013, 34, 265-279.	2.1	9

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109	A preliminary investigation of the effect of force variation for myoelectric control of hand prosthesis. , 2013, 2013, 5758-61.		29
110	Protocol for site selection and movement assessment for the myoelectric control of a multi-functional upper-limb prosthesis. , 2013, 2013, 5817-20.		2
111	Complexity analysis of spontaneous brain activity: effects of depression and antidepressant treatment. Journal of Psychopharmacology, 2012, 26, 636-643.	4.0	96
112	Bioprofile Analysis: A New Approach for the Analysis of Biomedical Data in Alzheimer's Disease. Journal of Alzheimer's Disease, 2012, 32, 997-1010.	2.6	6
113	Machine Learning classification of MRI features of Alzheimer's disease and mild cognitive impairment subjects to reduce the sample size in clinical trials. , 2011, 2011, 7957-60.		18
114	Regional coherence evaluation in mild cognitive impairment and Alzheimer's disease based on adaptively extracted magnetoencephalogram rhythms. Physiological Measurement, 2011, 32, 1163-1180.	2.1	39
115	Single channel-based myoelectric control of hand movements with Empirical Mode Decomposition. , 2011, 2011, 6059-62.		3
116	Quantitative Evaluation of Artifact Removal in Real Magnetoencephalogram Signals with Blind Source Separation. Annals of Biomedical Engineering, 2011, 39, 2274-2286.	2.5	65
117	Early detection and characterization of Alzheimer's disease in clinical scenarios using Bioprofile concepts and K-means. , 2011, 2011, 6470-3.		30
118	Consistency of the blind source separation computed with five common algorithms for magnetoencephalogram background activity. Medical Engineering and Physics, 2010, 32, 1137-1144.	1.7	6
119	Electroencephalogram background activity characterization with Detrended Moving Average in Alzheimer's disease patients. , 2009, , .		1
120	Interpretation of the auto-mutual information rate of decrease in the context of biomedical signal analysis. Application to electroencephalogram recordings. Physiological Measurement, 2009, 30, 187-199.	2.1	58
121	Analysis of MEG Background Activity in Alzheimerâ€™s Disease Using Nonlinear Methods and ANFIS. Annals of Biomedical Engineering, 2009, 37, 586-594.	2.5	64
122	Blind source separation to enhance spectral and non-linear features of magnetoencephalogram recordings. Application to Alzheimer's disease. Medical Engineering and Physics, 2009, 31, 872-879.	1.7	24
123	Complexity Analysis of Spontaneous Brain Activity in Attention-Deficit/Hyperactivity Disorder: Diagnostic Implications. Biological Psychiatry, 2009, 65, 571-577.	1.3	87
124	Nonlinear analysis of electroencephalogram and magnetoencephalogram recordings in patients with Alzheimer's disease. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 317-336.	3.4	155
125	Approximate entropy and auto mutual information analysis of the electroencephalogram in Alzheimerâ€™s disease patients. Medical and Biological Engineering and Computing, 2008, 46, 1019-1028.	2.8	111
126	Regional Analysis of Spontaneous MEG Rhythms in Patients with Alzheimerâ€™s Disease Using Spectral Entropies. Annals of Biomedical Engineering, 2008, 36, 141-152.	2.5	45

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127	Spectral and Nonlinear Analyses of MEG Background Activity in Patients With Alzheimer's Disease. IEEE Transactions on Biomedical Engineering, 2008, 55, 1658-1665.	4.2	69
128	A Study on the Possible Usefulness of Detrended Fluctuation Analysis of the Electroencephalogram Background Activity in Alzheimer's Disease. IEEE Transactions on Biomedical Engineering, 2008, 55, 2171-2179.	4.2	55
129	Assessment of classification improvement in patients with Alzheimer's disease based on magnetoencephalogram blind source separation. Artificial Intelligence in Medicine, 2008, 43, 75-85.	6.5	20
130	On the application of the auto mutual information rate of decrease to biomedical signals. , 2008, 2008, 2137-40.		0
131	Analysis of spontaneous MEG activity in Alzheimer's disease using time-frequency parameters. , 2008, 2008, 5712-5.		6
132	Electroencephalogram Background Activity Characterization with Approximate Entropy and Auto Mutual Information in Alzheimer's Disease Patients. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6192-5.	0.5	8
133	Analysis of Spontaneous MEG Activity in Patients with Alzheimer's Disease using Spectral Entropies. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6180-3.	0.5	15
134	Magnetoencephalogram Blind Source Separation and Component Selection Procedure to Improve the Diagnosis of Alzheimer's Disease Patients. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5437-40.	0.5	1
135	Analysis of MEG recordings from Alzheimer's disease patients with sample and multiscale entropies. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6184-7.	0.5	8
136	Reply to â€œComment on â€˜Analysis of electroencephalograms in Alzheimer's disease patients with multiscale entropyâ€™â€• Physiological Measurement, 2007, 28, L3-L7.	2.1	1
137	Analysis of the magnetoencephalogram background activity in Alzheimer's disease patients with auto-mutual information. Computer Methods and Programs in Biomedicine, 2007, 87, 239-247.	4.7	38
138	Artifact Removal in Magnetoencephalogram Background Activity With Independent Component Analysis. IEEE Transactions on Biomedical Engineering, 2007, 54, 1965-1973.	4.2	65
139	Magnetoencephalogram background activity analysis in Alzheimer's disease patients using auto mutual information. , 2006, 2006, 6181-4.		8
140	Analysis of electroencephalograms in Alzheimer's disease patients with multiscale entropy. Physiological Measurement, 2006, 27, 1091-1106.	2.1	209
141	Abnormal Functional Hierarchies of EEG Networks in Familial and Sporadic Prodromal Alzheimer's Disease During Visual Short-Term Memory Binding. , 0, 1, .		0
142	Robust Assessment of EEG Connectivity Patterns in Mild Cognitive Impairment and Alzheimer's Disease. , 0, 1, .		0