

Mario Chavez

List of Publications by Year in descending order

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84
papers

14,122
citations

117453

34
h-index

64668

79
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87
all docs

87
docs citations

87
times ranked

13109
citing authors

#	ARTICLE	IF	CITATIONS
1	Complex networks: Structure and dynamics. <i>Physics Reports</i> , 2006, 424, 175-308.	10.3	8,661
2	Wavelet analysis of ecological time series. <i>Oecologia</i> , 2008, 156, 287-304.	0.9	552
3	Synchronization is Enhanced in Weighted Complex Networks. <i>Physical Review Letters</i> , 2005, 94, 218701.	2.9	418
4	Graph analysis of functional brain networks: practical issues in translational neuroscience. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130521.	1.8	313
5	Time-dependent spectral analysis of epidemiological time-series with wavelets. <i>Journal of the Royal Society Interface</i> , 2007, 4, 625-636.	1.5	257
6	Nonstationary Influence of El Niño on the Synchronous Dengue Epidemics in Thailand. <i>PLoS Medicine</i> , 2005, 2, e106.	3.9	239
7	Functional Modularity of Background Activities in Normal and Epileptic Brain Networks. <i>Physical Review Letters</i> , 2010, 104, 118701.	2.9	215
8	Remote Synchronization Reveals Network Symmetries and Functional Modules. <i>Physical Review Letters</i> , 2013, 110, 174102.	2.9	209
9	Preictal state identification by synchronization changes in long-term intracranial EEG recordings. <i>Clinical Neurophysiology</i> , 2005, 116, 559-568.	0.7	190
10	Statistical assessment of nonlinear causality: application to epileptic EEG signals. <i>Journal of Neuroscience Methods</i> , 2003, 124, 113-128.	1.3	167
11	Synchronization in Complex Networks with Age Ordering. <i>Physical Review Letters</i> , 2005, 94, 138701.	2.9	167
12	Multilayer motif analysis of brain networks. <i>Chaos</i> , 2017, 27, 047404.	1.0	141
13	Activity of Ventral Medial Thalamic Neurons during Absence Seizures and Modulation of Cortical Paroxysms by the Nigrothalamic Pathway. <i>Journal of Neuroscience</i> , 2007, 27, 929-941.	1.7	130
14	Spatio-temporal dynamics prior to neocortical seizures: amplitude versus phase couplings. <i>IEEE Transactions on Biomedical Engineering</i> , 2003, 50, 571-583.	2.5	115
15	Dynamic small-world behavior in functional brain networks unveiled by an event-related networks approach. <i>Physical Review E</i> , 2008, 77, 050905.	0.8	115
16	Inactivation of the Somatosensory Cortex Prevents Paroxysmal Oscillations in Cortical and Related Thalamic Neurons in a Genetic Model of Absence Epilepsy. <i>Cerebral Cortex</i> , 2009, 19, 2078-2091.	1.6	110
17	Frequency flows and the time-frequency dynamics of multivariate phase synchronization in brain signals. <i>NeuroImage</i> , 2006, 31, 209-227.	2.1	106
18	Chronic but not Acute Dopaminergic Transmission Interruption Promotes a Progressive Increase in Cortical Beta Frequency Synchronization: Relationships to Vigilance State and Akinesia. <i>Cerebral Cortex</i> , 2009, 19, 1616-1630.	1.6	100

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19	On the Activity of the Corticostriatal Networks during Spike-and-Wave Discharges in a Genetic Model of Absence Epilepsy. <i>Journal of Neuroscience</i> , 2004, 24, 6816-6825.	1.7	91
20	Synchronization in dynamical networks: Evolution along commutative graphs. <i>Physical Review E</i> , 2006, 74, 016102.	0.8	91
21	Anatomical Connectivity Influences both Intra- and Inter-Brain Synchronizations. <i>PLoS ONE</i> , 2012, 7, e36414.	1.1	90
22	A Topological Criterion for Filtering Information in Complex Brain Networks. <i>PLoS Computational Biology</i> , 2017, 13, e1005305.	1.5	89
23	Wavelet analysis in ecology and epidemiology: impact of statistical tests. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20130585.	1.5	84
24	Lucid Dreaming in Narcolepsy. <i>Sleep</i> , 2015, 38, 487-497.	0.6	81
25	Towards a proper estimation of phase synchronization from time series. <i>Journal of Neuroscience Methods</i> , 2006, 154, 149-160.	1.3	80
26	Surrogate-Based Artifact Removal From Single-Channel EEG. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018, 26, 540-550.	2.7	77
27	Loss of brain inter-frequency hubs in Alzheimer's disease. <i>Scientific Reports</i> , 2017, 7, 10879.	1.6	75
28	Complex modular structure of large-scale brain networks. <i>Chaos</i> , 2009, 19, 023119.	1.0	73
29	Integrating EEG and MEG Signals to Improve Motor Imagery Classification in Brain-Computer Interface. <i>International Journal of Neural Systems</i> , 2019, 29, 1850014.	3.2	57
30	Synchronizing weighted complex networks. <i>Chaos</i> , 2006, 16, 015106.	1.0	55
31	A simple measure of correlation across time, frequency and space between continuous brain signals. <i>Journal of Neuroscience Methods</i> , 2003, 123, 175-188.	1.3	40
32	Dynamic Granger-causal networks of electricity spot prices: A novel approach to market integration. <i>Energy Economics</i> , 2014, 44, 422-432.	5.6	40
33	Detection of time reversibility in time series by ordinal patterns analysis. <i>Chaos</i> , 2018, 28, 123111.	1.0	39
34	Multiplex core-periphery organization of the human connectome. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20180514.	1.5	39
35	Association of Clinical, Biological, and Brain Magnetic Resonance Imaging Findings With Electroencephalographic Findings for Patients With COVID-19. <i>JAMA Network Open</i> , 2021, 4, e211489.	2.8	38
36	Degree mixing and the enhancement of synchronization in complex weighted networks. <i>Physical Review E</i> , 2006, 74, 066107.	0.8	35

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37	Neurophysiological Evidence for a Cortical Contribution to the Wakefulness-Related Drive to Breathe Explaining Hypocapnia-Resistant Ventilation in Humans. <i>Journal of Neuroscience</i> , 2016, 36, 10673-10682.	1.7	35
38	Detecting dynamic spatial correlation patterns with generalized wavelet coherence and non-stationary surrogate data. <i>Scientific Reports</i> , 2019, 9, 7389.	1.6	34
39	COMPLEX NETWORKS: NEW TRENDS FOR THE ANALYSIS OF BRAIN CONNECTIVITY. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2010, 20, 1677-1686.	0.7	33
40	An algebraic topological method for multimodal brain networks comparisons. <i>Frontiers in Psychology</i> , 2015, 6, 904.	1.1	32
41	Electroencephalographic detection of respiratory-related cortical activity in humans: from event-related approaches to continuous connectivity evaluation. <i>Journal of Neurophysiology</i> , 2016, 115, 2214-2223.	0.9	29
42	Subthalamic Nucleus High-Frequency Stimulation Restores Altered Electrophysiological Properties of Cortical Neurons in Parkinsonian Rat. <i>PLoS ONE</i> , 2013, 8, e83608.	1.1	29
43	Riemannian Geometry Applied to Detection of Respiratory States From EEG Signals: The Basis for a Brain-Ventilator Interface. <i>IEEE Transactions on Biomedical Engineering</i> , 2017, 64, 1138-1148.	2.5	28
44	Excitability and responsiveness of rat barrel cortex neurons in the presence and absence of spontaneous synaptic activity <i>in vivo</i> . <i>Journal of Physiology</i> , 2014, 592, 3577-3595.	1.3	27
45	Cortical neurons and networks are dormant but fully responsive during isoelectric brain state. <i>Brain</i> , 2017, 140, 2381-2398.	3.7	27
46	Functional disconnection of associative cortical areas predicts performance during BCI training. <i>NeuroImage</i> , 2020, 209, 116500.	2.1	27
47	Abnormal functional connectivity between motor cortex and pedunculopontine nucleus following chronic dopamine depletion. <i>Journal of Neurophysiology</i> , 2014, 111, 434-440.	0.9	26
48	Integrative properties and transfer function of cortical neurons initiating absence seizures in a rat genetic model. <i>Journal of Physiology</i> , 2016, 594, 6733-6751.	1.3	25
49	On the intrinsic time scales involved in synchronization: A data-driven approach. <i>Chaos</i> , 2005, 15, 023904.	1.0	24
50	Quality Assessment of Single-Channel EEG for Wearable Devices. <i>Sensors</i> , 2019, 19, 601.	2.1	24
51	Experience, circuit dynamics, and forebrain recruitment in larval zebrafish prey capture. <i>ELife</i> , 2020, 9, .	2.8	24
52	Hierarchy of Neural Organization in the Embryonic Spinal Cord: Granger-Causality Graph Analysis of In Vivo Calcium Imaging Data. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2015, 23, 333-341.	2.7	22
53	Interhemispheric Connectivity Characterizes Cortical Reorganization in Motor-Related Networks After Cerebellar Lesions. <i>Cerebellum</i> , 2017, 16, 358-375.	1.4	21
54	Functional brain networks reveal the existence of cognitive reserve and the interplay between network topology and dynamics. <i>Scientific Reports</i> , 2018, 8, 10525.	1.6	21

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55	Parsimonious Approximation of Streamline Trajectories in White Matter Fiber Bundles. IEEE Transactions on Medical Imaging, 2016, 35, 2609-2619.	5.4	20
56	Disrupted core-periphery structure of multimodal brain networks in Alzheimer's disease. Network Neuroscience, 2019, 3, 635-652.	1.4	20
57	Exploring the nonlinear dynamics of the brain. Journal of Physiology (Paris), 2003, 97, 629-639.	2.1	19
58	Functional Cortical Network in Alpha Band Correlates with Social Bargaining. PLoS ONE, 2014, 9, e109829.	1.1	17
59	Abnormal Activity of Neck Inspiratory Muscles during Sleep as a Prognostic Indicator in Chronic Obstructive Pulmonary Disease. American Journal of Respiratory and Critical Care Medicine, 2020, 201, 414-422.	2.5	15
60	Nonparametric resampling of random walks for spectral network clustering. Physical Review E, 2014, 89, 012802.	0.8	14
61	Role of inter-hemispheric connections in functional brain networks. Scientific Reports, 2018, 8, 10246.	1.6	14
62	Adjusting ventilator settings to relieve dyspnoea modifies brain activity in critically ill patients: an electroencephalogram pilot study. Scientific Reports, 2019, 9, 16572.	1.6	14
63	Identifying neuronal correlates of dying and resuscitation in a model of reversible brain anoxia. Progress in Neurobiology, 2020, 185, 101733.	2.8	14
64	Synchronization processes in complex networks. European Physical Journal: Special Topics, 2007, 146, 129-144.	1.2	13
65	Preictal state detection using prodromal symptoms: A machine learning approach. Epilepsia, 2021, 62, e42-e47.	2.6	11
66	CARE-rCortex: A Matlab toolbox for the analysis of Cardio-REspiratory-related activity in the Cortex. Journal of Neuroscience Methods, 2018, 308, 309-316.	1.3	10
67	Alpha activity neuromodulation induced by individual alpha-based neurofeedback learning in ecological context: a double-blind randomized study. Scientific Reports, 2021, 11, 18489.	1.6	10
68	Clinico-biological markers for the prognosis of status epilepticus in adults. Journal of Neurology, 2022, 269, 5868-5882.	1.8	9
69	Community structure in large-scale cortical networks during motor acts. Chaos, Solitons and Fractals, 2012, 45, 603-610.	2.5	8
70	Comparing complex networks: in defence of the simple. New Journal of Physics, 2019, 21, 013033.	1.2	8
71	Node Accessibility in Cortical Networks During Motor Tasks. Neuroinformatics, 2013, 11, 355-366.	1.5	7
72	BCI learning induces core-periphery reorganization in M/EEG multiplex brain networks. Journal of Neural Engineering, 2021, 18, 056002.	1.8	6

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73	Ways of making-sense: Local gamma synchronization reveals differences between semantic processing induced by music and language. <i>Brain and Language</i> , 2016, 152, 44-49.	0.8	5
74	Dynamics of excitable neural networks with heterogeneous connectivity. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 105, 29-33.	1.4	4
75	A Prototype Representation to Approximate White Matter Bundles with Weighted Currents. <i>Lecture Notes in Computer Science</i> , 2014, 17, 289-296.	1.0	4
76	Multi-feature classifiers for burst detection in single EEG channels from preterm infants. <i>Journal of Neural Engineering</i> , 2017, 14, 046015.	1.8	3
77	Using symbolic networks to analyse dynamical properties of disease outbreaks. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20190777.	1.0	3
78	Neuronal excitability and sensory responsiveness in the thalamo-cortical network in a novel rat model of isoelectric brain state. <i>Journal of Physiology</i> , 2021, 599, 609-629.	1.3	3
79	A Robust Method for the Individual Alpha Frequency Detection in EEG. , 2018, , .		2
80	Induction of an Isoelectric Brain State to Investigate the Impact of Endogenous Synaptic Activity on Neuronal Excitability & In Vivo. <i>Journal of Visualized Experiments</i> , 2016, , e53576.	0.2	1
81	Combined head accelerometry and <scp>EEG</scp> improves the detection of respiratory-related cortical activity during inspiratory loading in healthy participants. <i>Physiological Reports</i> , 2022, 10, .	0.7	1
82	DYNAMICAL BEHAVIOR AND CONTROL OF COUPLED THRESHOLD ELEMENTS WITH SELF-INHIBITION. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 3119-3128.	0.7	0
83	Outliers in clinical symptoms as preictal biomarkers. <i>Epilepsy Research</i> , 2021, 177, 106774.	0.8	0
84	NON-STATIONARY INFLUENCE OF EL NIÑO ON THE SYNCHRONOUS DENGUE EPIDEMICS IN THAILAND. <i>Epidemiology</i> , 2005, 16, S156-S157.	1.2	0