

Ralph Gregor Andrzejak

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

7,201
citations

136950

32
h-index

133252

59
g-index

72
all docs

72
docs citations

72
times ranked

4939
citing authors

#	ARTICLE	IF	CITATIONS
1	Indications of nonlinear deterministic and finite-dimensional structures in time series of brain electrical activity: Dependence on recording region and brain state. <i>Physical Review E</i> , 2001, 64, 061907.	2.1	2,068
2	Seizure prediction: the long and winding road. <i>Brain</i> , 2007, 130, 314-333.	7.6	919
3	On the predictability of epileptic seizures. <i>Clinical Neurophysiology</i> , 2005, 116, 569-587.	1.5	442
4	Epileptic seizures are preceded by a decrease in synchronization. <i>Epilepsy Research</i> , 2003, 53, 173-185.	1.6	407
5	Nonrandomness, nonlinear dependence, and nonstationarity of electroencephalographic recordings from epilepsy patients. <i>Physical Review E</i> , 2012, 86, 046206.	2.1	297
6	Hierarchical clustering using mutual information. <i>Europhysics Letters</i> , 2005, 70, 278-284.	2.0	194
7	Automated detection of a preseizure state based on a decrease in synchronization in intracranial electroencephalogram recordings from epilepsy patients. <i>Physical Review E</i> , 2003, 67, 021912.	2.1	184
8	Its Possible Use for Interictal Focus Localization, Seizure Anticipation, and Prevention. <i>Journal of Clinical Neurophysiology</i> , 2001, 18, 209-222.	1.7	173
9	Measuring synchronization in coupled model systems: A comparison of different approaches. <i>Physica D: Nonlinear Phenomena</i> , 2007, 225, 29-42.	2.8	171
10	The epileptic process as nonlinear deterministic dynamics in a stochastic environment: an evaluation on mesial temporal lobe epilepsy. <i>Epilepsy Research</i> , 2001, 44, 129-140.	1.6	159
11	All together now: Analogies between chimera state collapses and epileptic seizures. <i>Scientific Reports</i> , 2016, 6, 23000.	3.3	133
12	Seizure prediction by nonlinear EEG analysis. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2003, 22, 57-63.	0.8	127
13	Monitoring spike train synchrony. <i>Journal of Neurophysiology</i> , 2013, 109, 1457-1472.	1.8	127
14	Testing the null hypothesis of the nonexistence of a preseizure state. <i>Physical Review E</i> , 2003, 67, 010901.	2.1	122
15	Bivariate surrogate techniques: Necessity, strengths, and caveats. <i>Physical Review E</i> , 2003, 68, 066202.	2.1	107
16	Cross recurrence quantification for cover song identification. <i>New Journal of Physics</i> , 2009, 11, 093017.	2.9	100
17	Reliable detection of directional couplings using rank statistics. <i>Physical Review E</i> , 2009, 80, 026217.	2.1	95
18	Seizure Cycles in Focal Epilepsy. <i>JAMA Neurology</i> , 2021, 78, 454.	9.0	91

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19	Detection of weak directional coupling: Phase-dynamics approach versus state-space approach. <i>Physical Review E</i> , 2005, 71, 036207.	2.1	90
20	Seizure prediction: Any better than chance?. <i>Clinical Neurophysiology</i> , 2009, 120, 1465-1478.	1.5	87
21	Nonlinear EEG Analysis and Its Potential Role in Epileptology. <i>Epilepsia</i> , 2000, 41, S34-S38.	5.1	77
22	Improved spatial characterization of the epileptic brain by focusing on nonlinearity. <i>Epilepsy Research</i> , 2006, 69, 30-44.	1.6	74
23	Measure profile surrogates: A method to validate the performance of epileptic seizure prediction algorithms. <i>Physical Review E</i> , 2004, 69, 061915.	2.1	66
24	Generalized synchronization between chimera states. <i>Chaos</i> , 2017, 27, 053114.	2.5	65
25	Independent delta/theta rhythms in the human hippocampus and entorhinal cortex. <i>Frontiers in Human Neuroscience</i> , 2008, 2, 3.	2.0	64
26	Time-resolved and time-scale adaptive measures of spike train synchrony. <i>Journal of Neuroscience Methods</i> , 2011, 195, 92-106.	2.5	62
27	Localization of Epileptogenic Zone on Pre-surgical Intracranial EEG Recordings: Toward a Validation of Quantitative Signal Analysis Approaches. <i>Brain Topography</i> , 2015, 28, 832-837.	1.8	58
28	Measuring multiple spike train synchrony. <i>Journal of Neuroscience Methods</i> , 2009, 183, 287-299.	2.5	51
29	Using bivariate signal analysis to characterize the epileptic focus: The benefit of surrogates. <i>Physical Review E</i> , 2011, 83, 046203.	2.1	49
30	Measuring Nonstationarity by Analyzing the Loss of Recurrence in Dynamical Systems. <i>Physical Review Letters</i> , 2002, 88, 244102.	7.8	47
31	Resected Brain Tissue, Seizure Onset Zone and Quantitative EEG Measures: Towards Prediction of Post-Surgical Seizure Control. <i>PLoS ONE</i> , 2015, 10, e0141023.	2.5	43
32	Seizure prediction: making mileage on the long and winding road. <i>Brain</i> , 2016, 139, 1625-1627.	7.6	37
33	Discerning nonstationarity from nonlinearity in seizure-free and pre-seizure EEG recordings from epilepsy patients. <i>IEEE Transactions on Biomedical Engineering</i> , 2003, 50, 634-639.	4.2	32
34	Detecting event-related time-dependent directional couplings. <i>New Journal of Physics</i> , 2006, 8, 6-6.	2.9	31
35	Ictal time-irreversible intracranial EEG signals as markers of the epileptogenic zone. <i>Clinical Neurophysiology</i> , 2016, 127, 3051-3058.	1.5	30
36	Sleep modulation of epileptic activity in mesial and neocortical temporal lobe epilepsy: A study with depth and subdural electrodes. <i>Epilepsy and Behavior</i> , 2013, 28, 185-190.	1.7	28

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37	Characterizing unidirectional couplings between point processes and flows. Europhysics Letters, 2011, 96, 50012.	2.0	27
38	What can spike train distances tell us about the neural code?. Journal of Neuroscience Methods, 2011, 199, 146-165.	2.5	26
39	Controlling chimera states via minimal coupling modification. Chaos, 2019, 29, 051103.	2.5	25
40	Remote pacemaker control of chimera states in multilayer networks of neurons. Physical Review E, 2020, 102, 052216.	2.1	25
41	Mean field phase synchronization between chimera states. Chaos, 2018, 28, 091101.	2.5	19
42	A distributed computing system for multivariate time series analyses of multichannel neurophysiological data. Journal of Neuroscience Methods, 2006, 152, 190-201.	2.5	18
43	Improved statistical test for nonstationarity using recurrence time statistics. Physical Review E, 2004, 69, 046111.	2.1	15
44	Predictability of Music Descriptor Time Series and its Application to Cover Song Detection. IEEE Transactions on Audio Speech and Language Processing, 2011, , .	3.2	14
45	Editorial: Chimera States in Complex Networks. Frontiers in Applied Mathematics and Statistics, 2019, 5, .	1.3	14
46	Detecting determinism with improved sensitivity in time series: Rank-based nonlinear predictability score. Physical Review E, 2014, 90, 032913.	2.1	13
47	Evolutionary optimization of network reconstruction from derivative-variable correlations. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 334001.	2.1	11
48	Inferring directed networks using a rank-based connectivity measure. Physical Review E, 2019, 99, 012319.	2.1	11
49	Coupling strength versus coupling impact in nonidentical bidirectionally coupled dynamics. Physical Review E, 2017, 95, 012210.	2.1	8
50	What Models and Tools can Contribute to a Better Understanding of Brain Activity?. Frontiers in Network Physiology, 0, 2, .	1.8	8
51	Robustness and versatility of a nonlinear interdependence method for directional coupling detection from spike trains. Physical Review E, 2017, 96, 022203.	2.1	7
52	Inferring and quantifying causality in neuronal networks. BMC Neuroscience, 2011, 12, .	1.9	6
53	Methodological Advances in Brain Connectivity. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-2.	1.3	6
54	Detecting determinism from point processes. Physical Review E, 2014, 90, 062906.	2.1	6

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55	Two populations of coupled quadratic maps exhibit a plentitude of symmetric and symmetry broken dynamics. <i>Chaos</i> , 2020, 30, 033125.	2.5	6
56	Seizure Anticipation: Do Mathematical Measures Correlate with Video-EEG Evaluation?. <i>Epilepsia</i> , 2005, 46, 1335-1336.	5.1	5
57	Nonlinear audio recurrence analysis with application to genre classification. , 2011, , .		5
58	Chimeras confined by fractal boundaries in the complex plane. <i>Chaos</i> , 2021, 31, 053104.	2.5	5
59	Reliability of ICA Estimates with Mutual Information. <i>Lecture Notes in Computer Science</i> , 2004, , 209-216.	1.3	4
60	Seizure Onset Zone Lateralization Using a Non-linear Analysis of Micro vs. Macro Electroencephalographic Recordings During Seizure-Free Stages of the Sleep-Wake Cycle From Epilepsy Patients. <i>Frontiers in Neurology</i> , 2020, 11, 553885.	2.4	4
61	Characterizing the spatio-temporal dynamics of the epileptogenic process with nonlinear EEG analyses. , 0, , .		2
62	Phase irregularity: A conceptually simple and efficient approach to characterize electroencephalographic recordings from epilepsy patients. <i>Physical Review E</i> , 2022, 105, 034212.	2.1	2
63	Model-based cover song detection via threshold autoregressive forecasts. , 2010, , .		1
64	Analysis of coupled decision-making modules for multisensory integration. <i>BMC Neuroscience</i> , 2007, 8, .	1.9	0
65	A new measure for the detection of directional couplings based on rank statistics. <i>BMC Neuroscience</i> , 2008, 9, .	1.9	0
66	Measuring spike train reliability. <i>BMC Neuroscience</i> , 2008, 9, .	1.9	0
67	Studying the precision of temporal neural code: some limitations of spike train distances. <i>BMC Neuroscience</i> , 2009, 10, .	1.9	0
68	Measuring spike train synchrony between neuronal populations. <i>BMC Neuroscience</i> , 2009, 10, .	1.9	0
69	Evaluation of causality measures based on non-uniform embedding schemes with application to the cardiovascular system. , 2014, , .		0
70	ANALYSIS OF EEG IN EPILEPSY. , 2002, , .		0
71	Detecting couplings between point processes and flows. <i>IEICE Proceeding Series</i> , 2014, 1, 381-381.	0.0	0