

Gordon Pipa

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4031489/publications.pdf>

Version: 2024-02-01

88
papers

3,990
citations

257450

24
h-index

133252

59
g-index

102
all docs

102
docs citations

102
times ranked

4873
citing authors

#	ARTICLE	IF	CITATIONS
1	Transfer entropy—a model-free measure of effective connectivity for the neurosciences. <i>Journal of Computational Neuroscience</i> , 2011, 30, 45-67.	1.0	753
2	Neural synchrony in cortical networks: history, concept and current status. <i>Frontiers in Integrative Neuroscience</i> , 2009, 3, 17.	2.1	571
3	Untangling cross-frequency coupling in neuroscience. <i>Current Opinion in Neurobiology</i> , 2015, 31, 51-61.	4.2	455
4	Dynamical relaying can yield zero time lag neuronal synchrony despite long conduction delays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 17157-17162.	7.1	310
5	SORN: a Self-organizing Recurrent Neural Network. <i>Frontiers in Computational Neuroscience</i> , 2009, 3, 23.	2.1	178
6	A new look at gamma- (>60ÅHz) ð³-band activity in cortical networks: Function, mechanisms and impairment. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 105, 14-28.	2.9	173
7	Fading memory and time series prediction in recurrent networks with different forms of plasticity. <i>Neural Networks</i> , 2007, 20, 312-322.	5.9	107
8	Forced-choice decision-making in modified trolley dilemma situations: a virtual reality and eye tracking study. <i>Frontiers in Behavioral Neuroscience</i> , 2014, 8, 426.	2.0	105
9	Extraction of Network Topology From Multi-Electrode Recordings: Is there a Small-World Effect?. <i>Frontiers in Computational Neuroscience</i> , 2011, 5, 4.	2.1	93
10	Kinesthetic and vestibular information modulate alpha activity during spatial navigation: a mobile EEG study. <i>Frontiers in Human Neuroscience</i> , 2014, 8, 71.	2.0	90
11	Human Decisions in Moral Dilemmas are Largely Described by Utilitarianism: Virtual Car Driving Study Provides Guidelines for Autonomous Driving Vehicles. <i>Science and Engineering Ethics</i> , 2019, 25, 399-418.	2.9	85
12	Using Virtual Reality to Assess Ethical Decisions in Road Traffic Scenarios: Applicability of Value-of-Life-Based Models and Influences of Time Pressure. <i>Frontiers in Behavioral Neuroscience</i> , 2017, 11, 122.	2.0	70
13	NeuroXidence: reliable and efficient analysis of an excess or deficiency of joint-spike events. <i>Journal of Computational Neuroscience</i> , 2008, 25, 64-88.	1.0	69
14	Autonomous Vehicles Require Socio-Political Acceptance—An Empirical and Philosophical Perspective on the Problem of Moral Decision Making. <i>Frontiers in Behavioral Neuroscience</i> , 2018, 12, 31.	2.0	54
15	Real-time dialogue between experimenters and dreamers during REM sleep. <i>Current Biology</i> , 2021, 31, 1417-1427.e6.	3.9	51
16	Effect of the Topology and Delayed Interactions in Neuronal Networks Synchronization. <i>PLoS ONE</i> , 2011, 6, e19900.	2.5	50
17	Discrete Time Rescaling Theorem: Determining Goodness of Fit for Discrete Time Statistical Models of Neural Spiking. <i>Neural Computation</i> , 2010, 22, 2477-2506.	2.2	48
18	Assessing Coupling Dynamics from an Ensemble of Time Series. <i>Entropy</i> , 2015, 17, 1958-1970.	2.2	48

#	ARTICLE	IF	CITATIONS
19	Non-parametric significance estimation of joint-spike events by shuffling and resampling. <i>Neurocomputing</i> , 2003, 52-54, 31-37.	5.9	45
20	Reliability and comparability of human brain structural covariance networks. <i>NeuroImage</i> , 2020, 220, 117104.	4.2	37
21	Impact of Spike Train Autostructure on Probability Distribution of Joint Spike Events. <i>Neural Computation</i> , 2013, 25, 1123-1163.	2.2	35
22	Moral Judgements on the Actions of Self-Driving Cars and Human Drivers in Dilemma Situations From Different Perspectives. <i>Frontiers in Psychology</i> , 2019, 10, 2415.	2.1	35
23	Validation of task-related excess of spike coincidences based on NeuroXidence. <i>Neurocomputing</i> , 2007, 70, 2064-2068.	5.9	32
24	Performance- and stimulus-dependent oscillations in monkey prefrontal cortex during short-term memory. <i>Frontiers in Integrative Neuroscience</i> , 2009, 3, 25.	2.1	28
25	Spatiotemporal Computations of an Excitable and Plastic Brain: Neuronal Plasticity Leads to Noise-Robust and Noise-Constructive Computations. <i>PLoS Computational Biology</i> , 2014, 10, e1003512.	3.2	28
26	Higher Order Spike Synchrony in Prefrontal Cortex during Visual Memory. <i>Frontiers in Computational Neuroscience</i> , 2011, 5, 23.	2.1	24
27	Predicting epileptic seizures using nonnegative matrix factorization. <i>PLoS ONE</i> , 2020, 15, e0228025.	2.5	24
28	A Bayesian Monte Carlo approach for predicting the spread of infectious diseases. <i>PLoS ONE</i> , 2019, 14, e0225838.	2.5	21
29	Neuronal oscillations form parietal/frontal networks during contour integration. <i>Frontiers in Integrative Neuroscience</i> , 2014, 8, 64.	2.1	20
30	Significance of joint-spike events based on trial-shuffling by efficient combinatorial methods. <i>Complexity</i> , 2003, 8, 79-86.	1.6	18
31	A Statistical Framework to Infer Delay and Direction of Information Flow from Measurements of Complex Systems. <i>Neural Computation</i> , 2015, 27, 1555-1608.	2.2	18
32	Behavioral performance modulates spike field coherence in monkey prefrontal cortex. <i>NeuroReport</i> , 2008, 19, 235-238.	1.2	17
33	Statistical modeling approach for detecting generalized synchronization. <i>Physical Review E</i> , 2012, 85, 056215.	2.1	17
34	Context Matters: The Illusive Simplicity of Macaque V1 Receptive Fields. <i>PLoS ONE</i> , 2012, 7, e39699.	2.5	17
35	Achieving synchronization of networks by an auxiliary hub. <i>Europhysics Letters</i> , 2007, 77, 50010.	2.0	14
36	EEG under anesthesia Feature extraction with TESPAR. <i>Computer Methods and Programs in Biomedicine</i> , 2009, 95, 191-202.	4.7	14

#	ARTICLE	IF	CITATIONS
37	Applying the Multivariate Time-Rescaling Theorem to Neural Population Models. <i>Neural Computation</i> , 2011, 23, 1452-1483.	2.2	13
38	Cortical Spike Synchrony as a Measure of Input Familiarity. <i>Neural Computation</i> , 2017, 29, 2491-2510.	2.2	13
39	Investigating consciousness in the sleep laboratory – an interdisciplinary perspective on lucid dreaming. <i>Interdisciplinary Science Reviews</i> , 2018, 43, 192-207.	1.4	13
40	How does the method change what we measure? Comparing virtual reality and text-based surveys for the assessment of moral decisions in traffic dilemmas. <i>PLoS ONE</i> , 2019, 14, e0223108.	2.5	12
41	Encoding Through Patterns: Regression Tree-Based Neuronal Population Models. <i>Neural Computation</i> , 2013, 25, 1953-1993.	2.2	11
42	RM-SORN: a reward-modulated self-organizing recurrent neural network. <i>Frontiers in Computational Neuroscience</i> , 2015, 9, 36.	2.1	11
43	2D:4D and spatial abilities: From rats to humans. <i>Neurobiology of Learning and Memory</i> , 2018, 151, 85-87.	1.9	11
44	A Unifying Framework of Synaptic and Intrinsic Plasticity in Neural Populations. <i>Neural Computation</i> , 2018, 30, 945-986.	2.2	10
45	Mapping of Visual Receptive Fields by Tomographic Reconstruction. <i>Neural Computation</i> , 2012, 24, 2543-2578.	2.2	9
46	A Color-Based Visualization Technique for Multielectrode Spike Trains. <i>Journal of Neurophysiology</i> , 2009, 102, 3766-3778.	1.8	8
47	Emerging Bayesian Priors in a Self-Organizing Recurrent Network. <i>Lecture Notes in Computer Science</i> , 2011, , 127-134.	1.3	7
48	An Introduction to Delay-Coupled Reservoir Computing. <i>Springer Series in Bio-/neuroinformatics</i> , 2015, , 63-90.	0.1	7
49	No effect of $\hat{\mu}$ -GPC on lucid dream induction or dream content. <i>Somnologie</i> , 2017, 21, 180-186.	1.5	6
50	Westdrive X LoopAR: An Open-Access Virtual Reality Project in Unity for Evaluating User Interaction Methods during Takeover Requests. <i>Sensors</i> , 2021, 21, 1879.	3.8	6
51	LOW HEMOGLOBIN LEVELS DURING NORMOVOLEMIA ARE ASSOCIATED WITH ELECTROCARDIOGRAPHIC CHANGES IN PIGS. <i>Shock</i> , 2011, 35, 375-381.	2.1	5
52	Application of Parallel Factor Analysis (PARAFAC) to electrophysiological data. <i>Frontiers in Neuroinformatics</i> , 2015, 8, 84.	2.5	5
53	Homeostatic Plasticity for Single Node Delay-Coupled Reservoir Computing. <i>Neural Computation</i> , 2015, 27, 1159-1185.	2.2	5
54	General Anesthesia Increases Temporal Precision and Decreases Power of the Brainstem Auditory-evoked Response-related Segments of the Electroencephalogram. <i>Anesthesiology</i> , 2009, 111, 340-355.	2.5	5

#	ARTICLE	IF	CITATIONS
55	A trajectory-based loss function to learn missing terms in bifurcating dynamical systems. Scientific Reports, 2021, 11, 20394.	3.3	5
56	Bivariate and Multivariate NeuroXidence: A Robust and Reliable Method to Detect Modulations of Spike?Spike Synchronization Across Experimental Conditions. Frontiers in Neuroinformatics, 2011, 5, 14.	2.5	4
57	Missing mass approximations for the partition function of stimulus driven Ising models. Frontiers in Computational Neuroscience, 2013, 7, 96.	2.1	4
58	Project Westdrive: Unity City With Self-Driving Cars and Pedestrians for Virtual Reality Studies. Frontiers in ICT, 2020, 7, .	3.6	4
59	Adaptive Blending Units: Trainable Activation Functions for Deep Neural Networks. Advances in Intelligent Systems and Computing, 2020, , 37-50.	0.6	4
60	Persistent Memory in Single Node Delay-Coupled Reservoir Computing. PLoS ONE, 2016, 11, e0165170.	2.5	4
61	Real-Time Dialogue between Experimenters and Dreamers During rem Sleep. SSRN Electronic Journal, 0, , .	0.4	4
62	Learning sparse and meaningful representations through embodiment. Neural Networks, 2021, 134, 23-41.	5.9	3
63	Classifying Bio-Inspired Model of Point-Light Human Motion Using Echo State Networks. Lecture Notes in Computer Science, 2017, , 84-91.	1.3	3
64	Feasible and Adaptive Multimodal Trajectory Prediction with Semantic Maneuver Fusion. , 2021, , .		3
65	Talking Cars, Doubtful Usersâ€”A Population Study in Virtual Reality. IEEE Transactions on Human-Machine Systems, 2022, 52, 602-612.	3.5	3
66	EEG processing with TESPAPAR for depth of anesthesia detection. BMC Neuroscience, 2009, 10, .	1.9	2
67	Predictive Coding in Cortical Microcircuits. Lecture Notes in Computer Science, 2008, , 386-395.	1.3	2
68	Optimized Temporal Multiplexing for Reservoir Computing with a Single Delay-Coupled Node. IEICE Proceeding Series, 2014, 1, 519-522.	0.0	2
69	Zero-Lag Long Range Synchronization of Neurons Is Enhanced by Dynamical Relaying. Lecture Notes in Computer Science, 2007, , 904-913.	1.3	2
70	Biologically Inspired Deep Learning Model for Efficient Foveal-Peripheral Vision. Frontiers in Computational Neuroscience, 2021, 15, 746204.	2.1	2
71	Auto-structure of spike trains matters for testing on synchronous activity. BMC Neuroscience, 2009, 10, .	1.9	1
72	A mechanism for achieving zero-lag long-range synchronization of neural activity. BMC Neuroscience, 2009, 10, .	1.9	1

#	ARTICLE	IF	CITATIONS
73	Serial Spike Time Correlations Affect Probability Distribution of Joint Spike Events. <i>Frontiers in Computational Neuroscience</i> , 2016, 10, 139.	2.1	1
74	Response: Commentary: Using Virtual Reality to Assess Ethical Decisions in Road Traffic Scenarios: Applicability of Value-of-Life-Based Models and Influences of Time Pressure. <i>Frontiers in Behavioral Neuroscience</i> , 2018, 12, 128.	2.0	1
75	Preoperative Interleukin-22 Values Add Valuable Information for Outcome Prediction Following Orthotopic Liver Transplantation: A Preliminary Study. <i>Annals of Transplantation</i> , 2014, 19, 503-512.	0.9	1
76	Auto-structure of Presynaptic Activity Defines Postsynaptic Firing Statistics and Can Modulate STDP-Based Structure Formation and Learning. <i>Lecture Notes in Computer Science</i> , 2008, , 413-422.	1.3	1
77	How specific is synchronous neuronal firing?. <i>BMC Neuroscience</i> , 2007, 8, .	1.9	0
78	Importance of electrophysiological signal features assessed by classification trees. <i>Neurocomputing</i> , 2007, 70, 2017-2021.	5.9	0
79	NeuroXidence: reliable and efficient analysis of an excess or deficiency of joint-spike events. <i>BMC Neuroscience</i> , 2009, 10, .	1.9	0
80	Detection of task-related synchronous firing patterns. <i>BMC Neuroscience</i> , 2009, 10, .	1.9	0
81	Goodness-of-fit tests for neural population models: the multivariate time-rescaling theorem. <i>BMC Neuroscience</i> , 2010, 11, .	1.9	0
82	Spike Train Auto-Structure Impacts Post-Synaptic Firing and Timing-Based Plasticity. <i>Frontiers in Computational Neuroscience</i> , 2011, 5, 60.	2.1	0
83	Far in Space and Yet in Synchrony: Neuronal Mechanisms for Zero-Lag Long-Range Synchronization. , 2009, , 143-167.		0
84	Teildisziplinen der Kognitionswissenschaft. , 2013, , 23-151.		0
85	Memory Trace in Spiking Neural Networks. <i>Lecture Notes in Computer Science</i> , 2013, , 264-271.	1.3	0
86	Combining Deep Learning and (Structural) Feature-Based Classification Methods for Copyright-Protected PDF Documents. <i>Lecture Notes in Computer Science</i> , 2019, , 69-75.	1.3	0
87	Bistable Perception in Conceptor Networks. <i>Lecture Notes in Computer Science</i> , 2019, , 24-34.	1.3	0
88	Bayesian Hierarchical Models can Infer Interpretable Predictions of Leaf Area Index From Heterogeneous Datasets. <i>Frontiers in Environmental Science</i> , 2022, 9, .	3.3	0