Gordon Pipa

List of Publications by Year
in descending order

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	Bayesian Hierarchical Models can Infer Interpretable Predictions of Leaf Area Index From Heterogeneous Datasets. Frontiers in Environmental Science, 2022, 9, .	3.3	0
2	Talking Cars, Doubtful Usersâ€"A Population Study in Virtual Reality. IEEE Transactions on Human-Machine Systems, 2022, 52, 602-612.	3.5	3
3	Learning sparse and meaningful representations through embodiment. Neural Networks, 2021, 134, 23-41.	5.9	3
4	Real-time dialogue between experimenters and dreamers during REM sleep. Current Biology, 2021, 31, 1417-1427.e6.	3.9	51
5	Westdrive X LoopAR: An Open-Access Virtual Reality Project in Unity for Evaluating User Interaction Methods during Takeover Requests. Sensors, 2021, 21, 1879.	3.8	6
6	Feasible and Adaptive Multimodal Trajectory Prediction with Semantic Maneuver Fusion. , 2021, , .		3
7	A trajectory-based loss function to learn missing terms in bifurcating dynamical systems. Scientific Reports, 2021, 11, 20394.	3.3	5
8	Biologically Inspired Deep Learning Model for Efficient Foveal-Peripheral Vision. Frontiers in Computational Neuroscience, 2021, 15, 746204.	2.1	2
9	Project Westdrive: Unity City With Self-Driving Cars and Pedestrians for Virtual Reality Studies. Frontiers in ICT, 2020, 7, .	3.6	4
10	Reliability and comparability of human brain structural covariance networks. NeuroImage, 2020, 220, 117104.	4.2	37
11	Predicting epileptic seizures using nonnegative matrix factorization. PLoS ONE, 2020, 15, e0228025.	2.5	24
12	Adaptive Blending Units: Trainable Activation Functions for Deep Neural Networks. Advances in Intelligent Systems and Computing, 2020, , 37-50.	0.6	4
13	How does the method change what we measure? Comparing virtual reality and text-based surveys for the assessment of moral decisions in traffic dilemmas. PLoS ONE, 2019, 14, e0223108.	2.5	12
14	Moral Judgements on the Actions of Self-Driving Cars and Human Drivers in Dilemma Situations From Different Perspectives. Frontiers in Psychology, 2019, 10, 2415.	2.1	35
15	A Bayesian Monte Carlo approach for predicting the spread of infectious diseases. PLoS ONE, 2019, 14, e0225838.	2.5	21
16	Human Decisions in Moral Dilemmas are Largely Described by Utilitarianism: Virtual Car Driving Study Provides Guidelines for Autonomous Driving Vehicles. Science and Engineering Ethics, 2019, 25, 399-418.	2.9	85
17	Combining Deep Learning and (Structural) Feature-Based Classification Methods for Copyright-Protected PDF Documents. Lecture Notes in Computer Science, 2019, , 69-75.	1.3	0
18	Bistable Perception in Conceptor Networks. Lecture Notes in Computer Science, 2019, , 24-34.	1.3	0

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19	2D:4D and spatial abilities: From rats to humans. Neurobiology of Learning and Memory, 2018, 151, 85-87.	1.9	11
20	A Unifying Framework of Synaptic and Intrinsic Plasticity in Neural Populations. Neural Computation, 2018, 30, 945-986.	2.2	10
21	Investigating consciousness in the sleep laboratory â€“ an interdisciplinary perspective on lucid dreaming. Interdisciplinary Science Reviews, 2018, 43, 192-207.	1.4	13
22	Autonomous Vehicles Require Socio-Political Acceptanceâ€”An Empirical and Philosophical Perspective on the Problem of Moral Decision Making. Frontiers in Behavioral Neuroscience, 2018, 12, 31.	2.0	54
23	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. Frontiers in Behavioral Neuroscience, 2018, 12, 128.	2.0	1
24	No effect of Î±â€˜GPC on lucid dream induction or dream content. Somnologie, 2017, 21, 180-186.	1.5	6
25	Cortical Spike Synchrony as a Measure of Input Familiarity. Neural Computation, 2017, 29, 2491-2510.	2.2	13
26	Using Virtual Reality to Assess Ethical Decisions in Road Traffic Scenarios: Applicability of Value-of-Life-Based Models and Influences of Time Pressure. Frontiers in Behavioral Neuroscience, 2017, 11, 122.	2.0	70
27	Classifying Bio-Inspired Model of Point-Light Human Motion Using Echo State Networks. Lecture Notes in Computer Science, 2017, , 84-91.	1.3	3
28	Serial Spike Time Correlations Affect Probability Distribution of Joint Spike Events. Frontiers in Computational Neuroscience, 2016, 10, 139.	2.1	1
29	Persistent Memory in Single Node Delay-Coupled Reservoir Computing. PLoS ONE, 2016, 11, e0165170.	2.5	4
30	RM-SORN: a reward-modulated self-organizing recurrent neural network. Frontiers in Computational Neuroscience, 2015, 9, 36.	2.1	11
31	Application of Parallel Factor Analysis (PARAFAC) to electrophysiological data. Frontiers in Neuroinformatics, 2015, 8, 84.	2.5	5
32	Assessing Coupling Dynamics from an Ensemble of Time Series. Entropy, 2015, 17, 1958-1970.	2.2	48
33	A Statistical Framework to Infer Delay and Direction of Information Flow from Measurements of Complex Systems. Neural Computation, 2015, 27, 1555-1608.	2.2	18
34	Homeostatic Plasticity for Single Node Delay-Coupled Reservoir Computing. Neural Computation, 2015, 27, 1159-1185.	2.2	5
35	Untangling cross-frequency coupling in neuroscience. Current Opinion in Neurobiology, 2015, 31, 51-61.	4.2	455
36	An Introduction to Delay-Coupled Reservoir Computing. Springer Series in Bio-/neuroinformatics, 2015, , 63-90.	0.1	7

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37	Kinesthetic and vestibular information modulate alpha activity during spatial navigation: a mobile EEG study. Frontiers in Human Neuroscience, 2014, 8, 71.	2.0	90
38	Neuronal oscillations form parietal/frontal networks during contour integration. Frontiers in Integrative Neuroscience, 2014, 8, 64.	2.1	20
39	Spatiotemporal Computations of an Excitable and Plastic Brain: Neuronal Plasticity Leads to Noise-Robust and Noise-Constructive Computations. PLoS Computational Biology, 2014, 10, e1003512.	3.2	28
40	Forced-choice decision-making in modified trolley dilemma situations: a virtual reality and eye tracking study. Frontiers in Behavioral Neuroscience, 2014, 8, 426.	2.0	105
41	Preoperative Interleukin-22 Values Add Valuable Information for Outcome Prediction Following Orthotopic Liver Transplantation: A Preliminary Study. Annals of Transplantation, 2014, 19, 503-512.	0.9	1
42	Optimized Temporal Multiplexing for Reservoir Computing with a Single Delay-Coupled Node. IEICE Proceeding Series, 2014, 1, 519-522.	0.0	2
43	Impact of Spike Train Autostructure on Probability Distribution of Joint Spike Events. Neural Computation, 2013, 25, 1123-1163.	2.2	35
44	Encoding Through Patterns: Regression Treeâ€“Based Neuronal Population Models. Neural Computation, 2013, 25, 1953-1993.	2.2	11
45	Missing mass approximations for the partition function of stimulus driven Ising models. Frontiers in Computational Neuroscience, 2013, 7, 96.	2.1	4
46	Teildisziplinen der Kognitionswissenschaft. , 2013, , 23-151.		0
47	Memory Trace in Spiking Neural Networks. Lecture Notes in Computer Science, 2013, , 264-271.	1.3	0
48	Mapping of Visual Receptive Fields by Tomographic Reconstruction. Neural Computation, 2012, 24, 2543-2578.	2.2	9
49	Statistical modeling approach for detecting generalized synchronization. Physical Review E, 2012, 85, 056215.	2.1	17
50	Context Matters: The Illusive Simplicity of Macaque V1 Receptive Fields. PLoS ONE, 2012, 7, e39699.	2.5	17
51	Extraction of Network Topology From Multi-Electrode Recordings: Is there a Small-World Effect?. Frontiers in Computational Neuroscience, 2011, 5, 4.	2.1	93
52	Higher Order Spike Synchrony in Prefrontal Cortex during Visual Memory. Frontiers in Computational Neuroscience, 2011, 5, 23.	2.1	24
53	Spike Train Auto-Structure Impacts Post-Synaptic Firing and Timing-Based Plasticity. Frontiers in Computational Neuroscience, 2011, 5, 60.	2.1	0
54	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

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55	LOW HEMOGLOBIN LEVELS DURING NORMOVOLEMIA ARE ASSOCIATED WITH ELECTROCARDIOGRAPHIC CHANGES IN PIGS. Shock, 2011, 35, 375-381.	2.1	5
56	A new look at gamma? High- (>60ÂHz) Î³-band activity in cortical networks: Function, mechanisms and impairment. Progress in Biophysics and Molecular Biology, 2011, 105, 14-28.	2.9	173
57	Transfer entropyâ€"a model-free measure of effective connectivity for the neurosciences. Journal of Computational Neuroscience, 2011, 30, 45-67.	1.0	753
58	Applying the Multivariate Time-Rescaling Theorem to Neural Population Models. Neural Computation, 2011, 23, 1452-1483.	2.2	13
59	Emerging Bayesian Priors in a Self-Organizing Recurrent Network. Lecture Notes in Computer Science, 2011, , 127-134.	1.3	7
60	Effect of the Topology and Delayed Interactions in Neuronal Networks Synchronization. PLoS ONE, 2011, 6, e19900.	2.5	50
61	Goodness-of-fit tests for neural population models: the multivariate time-rescaling theorem. BMC Neuroscience, 2010, 11, .	1.9	0
62	Discrete Time Rescaling Theorem: Determining Goodness of Fit for Discrete Time Statistical Models of Neural Spiking. Neural Computation, 2010, 22, 2477-2506.	2.2	48
63	A Color-Based Visualization Technique for Multielectrode Spike Trains. Journal of Neurophysiology, 2009, 102, 3766-3778.	1.8	8
64	Performance- and stimulus-dependent oscillations in monkey prefrontal cortex during short-term memory. Frontiers in Integrative Neuroscience, 2009, 3, 25.	2.1	28
65	SORN: a Self-organizing Recurrent Neural Network. Frontiers in Computational Neuroscience, 2009, 3, 23.	2.1	178
66	Neural synchrony in cortical networks: history, concept and current status. Frontiers in Integrative Neuroscience, 2009, 3, 17.	2.1	571
67	NeuroXidence: reliable and efficient analysis of an excess or deficiency of joint-spike events. BMC Neuroscience, 2009, 10, .	1.9	0
68	Auto-structure of spike trains matters for testing on synchronous activity. BMC Neuroscience, 2009, 10, .	1.9	1
69	A mechanism for achieving zero-lag long-range synchronization of neural activity. BMC Neuroscience, 2009, 10, .	1.9	1
70	Detection of task-related synchronous firing patterns. BMC Neuroscience, 2009, 10, .	1.9	0
71	EEG processing with TESPAR for depth of anesthesia detection. BMC Neuroscience, 2009, 10, .	1.9	2
72	EEG under anesthesiaâ€"Feature extraction with TESPAR. Computer Methods and Programs in Biomedicine, 2009, 95, 191-202.	4.7	14

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73	General Anesthesia Increases Temporal Precision and Decreases Power of the Brainstem Auditory-evoked Response-related Segments of the Electroencephalogram. Anesthesiology, 2009, 111, 340-355.	2.5	5
74	Far in Space and Yet in Synchrony: Neuronal Mechanisms for Zero-Lag Long-Range Synchronization. , 2009, , 143-167.		0
75	NeuroXidence: reliable and efficient analysis of an excess or deficiency of joint-spike events. Journal of Computational Neuroscience, 2008, 25, 64-88.	1.0	69
76	Dynamical relaying can yield zero time lag neuronal synchrony despite long conduction delays. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17157-17162.	7.1	310
77	Behavioral performance modulates spike field coherence in monkey prefrontal cortex. NeuroReport, 2008, 19, 235-238.	1.2	17
78	Predictive Coding in Cortical Microcircuits. Lecture Notes in Computer Science, 2008, , 386-395.	1.3	2
79	Auto-structure of Presynaptic Activity Defines Postsynaptic Firing Statistics and Can Modulate STDP-Based Structure Formation and Learning. Lecture Notes in Computer Science, 2008, , 413-422.	1.3	1
80	Achieving synchronization of networks by an auxiliary hub. Europhysics Letters, 2007, 77, 50010.	2.0	14
81	Fading memory and time series prediction in recurrent networks with different forms of plasticity. Neural Networks, 2007, 20, 312-322.	5.9	107
82	How specific is synchronous neuronal firing?. BMC Neuroscience, 2007, 8, .	1.9	0
83	Importance of electrophysiological signal features assessed by classification trees. Neurocomputing, 2007, 70, 2017-2021.	5.9	0
84	Validation of task-related excess of spike coincidences based on NeuroXidence. Neurocomputing, 2007, 70, 2064-2068.	5.9	32
85	Zero-Lag Long Range Synchronization of Neurons Is Enhanced by Dynamical Relaying. Lecture Notes in Computer Science, 2007, , 904-913.	1.3	2
86	Non-parametric significance estimation of joint-spike events by shuffling and resampling. Neurocomputing, 2003, 52-54, 31-37.	5.9	45
87	Significance of joint-spike events based on trial-shuffling by efficient combinatorial methods. Complexity, 2003, 8, 79-86.	1.6	18
88	Real-Time Dialogue between Experimenters and Dreamers During rem Sleep. SSRN Electronic Journal, 0, , .	0.4	4