Laurent U Perrinet

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6958163/publications.pdf

Version: 2024-02-01

90 papers	2,008 citations	331670 21 h-index	276875 41 g-index
107 all docs	107 docs citations	107 times ranked	1918 citing authors

#	Article	IF	Citations
1	Revisiting horizontal connectivity rules in V1: from like-to-like towards like-to-all. Brain Structure and Function, 2022, 227, 1279-1295.	2.3	12
2	A Behavioral Receptive Field for Ocular Following in Monkeys: Spatial Summation and Its Spatial Frequency Tuning. ENeuro, 2022, 9, ENEURO.0374-21.2022.	1.9	1
3	A homeostatic gain control mechanism to improve event-driven object recognition. , 2021, , .		4
4	Sparse deep predictive coding captures contour integration capabilities of the early visual system. PLoS Computational Biology, 2021, 17, e1008629.	3.2	16
5	A dual foveal-peripheral visual processing model implements efficient saccade selection. Journal of Vision, 2020, 20, 22.	0.3	8
6	Humans adapt their anticipatory eye movements to the volatility of visual motion properties. PLoS Computational Biology, 2020, 16, e1007438.	3.2	10
7	Visual Search as Active Inference. Communications in Computer and Information Science, 2020, , 165-178.	0.5	5
8	Effect of Top-Down Connections in Hierarchical Sparse Coding. Neural Computation, 2020, 32, 2279-2309.	2.2	10
9	Humans adapt their anticipatory eye movements to the volatility of visual motion properties. , 2020, 16, e1007438.		0
10	Humans adapt their anticipatory eye movements to the volatility of visual motion properties. , 2020, 16, e1007438.		0
11	Humans adapt their anticipatory eye movements to the volatility of visual motion properties. , 2020, 16, e1007438.		0
12	Humans adapt their anticipatory eye movements to the volatility of visual motion properties. , 2020, 16, e1007438.		0
13	Speed-Selectivity in Retinal Ganglion Cells is Sharpened by Broad Spatial Frequency, Naturalistic Stimuli. Scientific Reports, 2019, 9, 456.	3.3	11
14	Suppressive Traveling Waves Shape Representations of Illusory Motion in Primary Visual Cortex of Awake Primate. Journal of Neuroscience, 2019, 39, 4282-4298.	3.6	36
15	An Adaptive Homeostatic Algorithm for the Unsupervised Learning of Visual Features. Vision (Switzerland), 2019, 3, 47.	1.2	5
16	Reinforcement effects in anticipatory smooth eye movements. Journal of Vision, 2018, 18, 14.	0.3	15
17	Bayesian Modeling of Motion Perception Using Dynamical Stochastic Textures. Neural Computation, 2018, 30, 3355-3392.	2.2	5
18	M²APix: A Bio-Inspired Auto-Adaptive Visual Sensor for Robust Ground Height Estimation. , 2018, , .		3

#	ARTICLE	IF	CITATIONS
19	Speed uncertainty and motion perception with naturalistic random textures. Journal of Vision, 2018, 18, 345.	0.3	2
20	The Flash-Lag Effect as a Motion-Based Predictive Shift. PLoS Computational Biology, 2017, 13, e1005068.	3.2	40
21	Dynamic modulation of volatility by reward contingencies: effects on anticipatory smooth eye movement. Journal of Vision, 2017, 17, 273.	0.3	0
22	Testing the odds of inherent vs. observed overdispersion in neural spike counts. Journal of Neurophysiology, 2016, 115, 434-444.	1.8	9
23	Push-Pull Receptive Field Organization and Synaptic Depression: Mechanisms for Reliably Encoding Naturalistic Stimuli in V1. Frontiers in Neural Circuits, 2016, 10, 37.	2.8	35
24	Eye tracking a self-moved target with complex hand-target dynamics. Journal of Neurophysiology, 2016, 116, 1859-1870.	1.8	17
25	Biologically-inspired characterization of sparseness in natural images. , 2016, , .		0
26	Operant reinforcement versus reward expectancy: effects on anticipatory eye movements. Journal of Vision, 2016, 16, 1356.	0.3	0
27	Edge co-occurrences can account for rapid categorization of natural versus animal images. Scientific Reports, 2015, 5, 11400.	3.3	25
28	Sparse coding of natural images using a prior on edge co-occurences. , 2015, , .		0
29	Anticipatory smooth eye movements and reinforcement. Journal of Vision, 2015, 15, 1019.	0.3	0
30	A dynamic model for decoding direction and orientation in macaque primary visual cortex. Journal of Vision, 2015, 15, 484.	0.3	0
31	Signature of an anticipatory response in area VI as modeled by a probabilistic model and a spiking neural network. , 2014, , .		3
32	Active inference, eye movements and oculomotor delays. Biological Cybernetics, 2014, 108, 777-801.	1.3	44
33	Beyond simply faster and slower: exploring paradoxes in speed perception. Journal of Vision, 2014, 14, 491-491.	0.3	0
34	Edge co-occurrences are sufficient to categorize natural versus animal images. Journal of Vision, 2014, 14, 1310-1310.	0.3	0
35	Motion-based prediction model for flash lag effect. Journal of Vision, 2014, 14, 471-471.	0.3	0
36	The characteristics of microsaccadic eye movements varied with the change of strategy in a match-to-sample task.. Journal of Vision, 2014, 14, 110-110.	0.3	0

#	ARTICLE	IF	CITATIONS
37	Active inference, eye movements and oculomotor delays. BMC Neuroscience, 2013, 14, .	1.9	0
38	Motion based prediction and development of response to an "on the way" stimulus. BMC Neuroscience, 2013, 14, .	1.9	0
39	Motion-based prediction explains the role of tracking in motion extrapolation. Journal of Physiology (Paris), 2013, 107, 409-420.	2.1	23
40	Anisotropic connectivity implements motion-based prediction in a spiking neural network. Frontiers in Computational Neuroscience, 2013, 7, 112.	2.1	13
41	How and why do image frequency properties influence perceived speed?. Journal of Vision, 2013, 13, 354-354.	0.3	0
42	Different temporal integration for ocular following and speed perception. Journal of Vision, 2013, 13, 385-385.	0.3	0
43	Motion clouds: model-based stimulus synthesis of natural-like random textures for the study of motion perception. Journal of Neurophysiology, 2012, 107, 3217-3226.	1.8	32
44	Motion-Based Prediction Is Sufficient to Solve the Aperture Problem. Neural Computation, 2012, 24, 2726-2750.	2.2	19
45	More is not always better: adaptive gain control explains dissociation between perception and action. Nature Neuroscience, 2012, 15, 1596-1603.	14.8	60
46	Perceptions as Hypotheses: Saccades as Experiments. Frontiers in Psychology, 2012, 3, 151.	2.1	290
47	Smooth Pursuit and Visual Occlusion: Active Inference and Oculomotor Control in Schizophrenia. PLoS ONE, 2012, 7, e47502.	2.5	78
48	Complex dynamics in recurrent cortical networks based on spatially realistic connectivities. Frontiers in Computational Neuroscience, 2012, 6, 41.	2.1	37
49	The behavioral receptive field underlying motion integration for primate tracking eye movements. Neuroscience and Biobehavioral Reviews, 2012, 36, 1-25.	6.1	51
50	Effect of image statistics on fixational eye movements. Journal of Vision, 2012, 12, 1014-1014.	0.3	0
51	Saccadic Foveation of a Moving Visual Target in the Rhesus Monkey. Journal of Neurophysiology, 2011, 105, 883-895.	1.8	20
52	Pursuing motion illusions: A realistic oculomotor framework for Bayesian inference. Vision Research, 2011, 51, 867-880.	1.4	22
53	Motion-based predictive coding is sufficient to solve the aperture problem. BMC Neuroscience, 2011, 12, .	1.9	0
54	The relationship between cortical network structure and the corresponding state space dynamics. BMC Neuroscience, 2011, 12, .	1.9	0

#	ARTICLE	IF	CITATIONS
55	Pattern discrimination for moving random textures: Richer stimuli are more difficult to recognize. Journal of Vision, 2011, 11, 749-749.	0.3	0
56	Functional consequences of correlated excitatory and inhibitory conductances in cortical networks. Journal of Computational Neuroscience, 2010, 28, 579-594.	1.0	71
57	Computational neuroscience, from multiple levels to multi-level. Journal of Physiology (Paris), 2010, 104, 1-4.	2.1	2
58	Phase space analysis of networks based on biologically realistic parameters. Journal of Physiology (Paris), 2010, 104, 51-60.	2.1	11
59	Role of Homeostasis in Learning Sparse Representations. Neural Computation, 2010, 22, 1812-1836.	2.2	35
60	A novel bio-inspired static image compression scheme for noisy data transmission over low-bandwidth channels. , 2010, , .		6
61	Different pooling of motion information for perceptual speed discrimination and behavioral speed estimation. Journal of Vision, 2010, 10, 834-834.	0.3	1
62	A recurrent Bayesian model of dynamic motion integration for smooth pursuit. Journal of Vision, 2010, 10, 545-545.	0.3	0
63	Control of the temporal interplay between excitation and inhibition by the statistics of visual input. BMC Neuroscience, 2009, 10, .	1.9	2
64	Dynamics of non-linear cortico-cortical interactions during motion integration in early visual cortex: a spiking neural network model of an optical imaging study in the awake monkey. BMC Neuroscience, 2009, 10, .	1.9	0
65	Decoding the population dynamics underlying ocular following response using a probabilistic framework. BMC Neuroscience, 2009, 10, .	1.9	0
66	Dynamics of distributed 1D and 2D motion representations for short-latency ocular following. Vision Research, 2008, 48, 501-522.	1.4	30
67	PyNN: a common interface for neuronal network simulators. Frontiers in Neuroinformatics, 2008, 2, 11.	2.5	409
68	Sparse spike coding : applications of neuroscience to the processing of natural images. Proceedings of SPIE, 2008, , .	0.8	5
69	Synchrony in thalamic inputs enhances propagation of activity through cortical layers. BMC Neuroscience, 2007, 8, .	1.9	1
70	PyNN: towards a universal neural simulator API in Python. BMC Neuroscience, 2007, 8, .	1.9	7
71	On efficient sparse spike coding schemes for learning natural scenes in the primary visual cortex. BMC Neuroscience, 2007, 8, .	1.9	2
72	Modeling spatial integration in the ocular following response using a probabilistic framework. Journal of Physiology (Paris), 2007, 101, 46-55.	2.1	10

#	ARTICLE	IF	CITATIONS
73	Bayesian modeling of dynamic motion integration. Journal of Physiology (Paris), 2007, 101, 64-77.	2.1	42
74	Dynamical neural networks: Modeling low-level vision at short latencies. European Physical Journal: Special Topics, 2007, 142, 163-225.	2.6	4
75	Self-Invertible 2D Log-Gabor Wavelets. International Journal of Computer Vision, 2007, 75, 231-246.	15.6	136
76	Sparse Approximation of Images Inspired from the Functional Architecture of the Primary Visual Areas. Eurasip Journal on Advances in Signal Processing, 2006, 2007, 1.	1.7	12
77	Sparse Gabor wavelets by local operations. , 2005, , .		3
78	Sparse spike coding in an asynchronous feed-forward multi-layer neural network using matching pursuit. Neurocomputing, 2004, 57, 125-134.	5.9	32
79	Emergence of filters from natural scenes in a sparse spike coding scheme. Neurocomputing, 2004, 58-60, 821-826.	5.9	4
80	Feature detection using spikes: The greedy approach. Journal of Physiology (Paris), 2004, 98, 530-539.	2.1	11
81	Finding independent components using spikes: A natural result of hebbian learning in a sparse spike coding scheme. Natural Computing, 2004, 3, 159-175.	3.0	8
82	Coding Static Natural Images Using Spiking Event Times: Do Neurons Cooperate?. IEEE Transactions on Neural Networks, 2004, 15, 1164-1175.	4.2	49
83	Coherence detection in a spiking neuron via Hebbian learning. Neurocomputing, 2002, 44-46, 133-139.	5.9	3
84	Networks of integrate-and-fire neurons using Rank Order Coding B: Spike timing dependent plasticity and emergence of orientation selectivity. Neurocomputing, 2001, 38-40, 539-545.	5.9	86
85	Networks of integrate-and-fire neuron using rank order coding A: How to implement spike time dependent Hebbian plasticity. Neurocomputing, 2001, 38-40, 817-822.	5.9	22
86	NeuralEnsemble.Org: Unifying neural simulators in Python to ease the model complexity bottleneck. Frontiers in Neuroinformatics, 0, 3, .	2.5	3
87	Dynamical state spaces of cortical networks representing various horizontal connectivities. Frontiers in Systems Neuroscience, 0, 3, .	2.5	0
88	Decoding spatial information in population of neurons for the ocular following response. Frontiers in Neuroinformatics, 0, 3, .	2.5	0
89	Variations of horizontal cortical network structures and their corresponding state space dynamics. Frontiers in Computational Neuroscience, 0, 5, .	2.1	0
90	AB009. Learning dynamics in a neural network model of the primary visual cortex. Annals of Eye Science, 0, 4, AB009-AB009.	2.1	0