AndrÃ© Longtin

List of Publications by Year
in descending order

138	10,719	44069 48	32842 100
papers	citations	h-index	g-index

147	147	147	6370
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Non-additive activity modulation during a decision making task involving tactic selection. Cognitive Neurodynamics, 2022, 16, 117-133.	4.0	4
2	Mixed selectivity coding of sensory and motor social signals in the thalamus of a weakly electric fish. Current Biology, 2022, 32, 51-63.e3.	3.9	11
3	Mutual information resonances in delay-coupled limit cycle and quasi-cycle brain rhythms. Biological Cybernetics, 2022, 116, 129-146.	1.3	0
4	Brain rhythm bursts are enhanced by multiplicative noise. Chaos, 2021, 31, 013117.	2.5	5
5	Enhanced Signal Detection by Adaptive Decorrelation of Interspike Intervals. Neural Computation, 2021, 33, 341-375.	2.2	3
6	Vibrational resonance in a neuronâ€“astrocyte coupled model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200267.	3.4	9
7	Amplitude-phase description of stochastic neural oscillators across the Hopf bifurcation. Physical Review Research, 2021, 3, .	3.6	6
8	Mechanisms of Flexible Information Sharing through Noisy Oscillations. Biology, 2021, 10, 764.	2.8	4
9	Prestimulus dynamics blend with the stimulus in neural variability quenching. NeuroImage, 2021, 238, 118160.	4.2	17
10	Dynamical invariants and inverse period-doubling cascades in multi-delay systems. Chaos, 2021, 31, 103129.	2.5	2
11	Complexity Collapse, Fluctuating Synchrony, and Transient Chaos in Neural Networks With Delay Clusters. Frontiers in Systems Neuroscience, 2021, 15, 720744.	2.5	1
12	Inference of a Mesoscopic Population Model from Population Spike Trains. Neural Computation, 2020, 32, 1448-1498.	2.2	10
13	Phase dynamics of delay-coupled quasi-cycles with application to brain rhythms. Physical Review Research, 2020, 2, .	3.6	5
14	Multi-delay complexity collapse. Physical Review Research, 2020, 2, .	3.6	5
15	Linking demyelination to compound action potential dispersion with a spike-diffuse-spike approach. Journal of Mathematical Neuroscience, 2019, 9, 3.	2.4	8
16	Data-driven inference for stationary jump-diffusion processes with application to membrane voltage fluctuations in pyramidal neurons. Journal of Mathematical Neuroscience, 2019, 9, 6.	2.4	7
17	Electrosensory Contrast Signals for Interacting Weakly Electric Fish. Frontiers in Integrative Neuroscience, 2019, 13, 36.	2.1	12
18	Parsing Out the Variability of Transmission at Central Synapses Using Optical Quantal Analysis. Frontiers in Synaptic Neuroscience, 2019, 11, 22.	2.5	18

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19	Interspike interval correlations in networks of inhibitory integrate-and-fire neurons. Physical Review E, 2019, 99, 032402.	2.1	2
20	Determinants of Brain Rhythm Burst Statistics. Scientific Reports, 2019, 9, 18335.	3.3	25
21	The temporal signature of self: Temporal measures of restingâ€state EEG predict selfâ€consciousness. Human Brain Mapping, 2019, 40, 789-803.	3.6	76
22	Learning to generalize. ELife, 2019, 8, .	6.0	0
23	Centre of pressure during quiet stance and dual-task one month after mild traumatic brain injury: In adolescents. Journal of Concussion, 2018, 2, 205970021880491.	0.6	1
24	Non-monotonic accumulation of spike time variance during membrane potential oscillations. Biological Cybernetics, 2018, 112, 539-545.	1.3	1
25	A time-stamp mechanism may provide temporal information necessary for egocentric to allocentric spatial transformations. ELife, 2018, 7, .	6.0	32
26	Is There a Nonadditive Interaction Between Spontaneous and Evoked Activity? Phase-Dependence and Its Relation to the Temporal Structure of Scale-Free Brain Activity. Cerebral Cortex, 2017, 27, bhv288.	2.9	92
27	Optimal Design for Estimation in Diffusion Processes from First Hitting Times. SIAM-ASA Journal on Uncertainty Quantification, 2017, 5, 88-110.	2.0	8
28	Mean, covariance, and effective dimension of stochastic distributed delay dynamics. Chaos, 2017, 27, 114322.	2.5	8
29	Evolution of moments and correlations in nonrenewal escape-time processes. Physical Review E, 2017, 95, 052127.	2.1	7
30	A stochastic-field description of finite-size spiking neural networks. PLoS Computational Biology, 2017, 13, e1005691.	3.2	24
31	Nonstationary Stochastic Dynamics Underlie Spontaneous Transitions between Active and Inactive Behavioral States. ENeuro, 2017, 4, ENEURO.0355-16.2017.	1.9	13
32	Active sensing associated with spatial learning reveals memory-based attention in an electric fish. Journal of Neurophysiology, 2016, 115, 2577-2592.	1.8	58
33	Weak signal amplification and detection by higher-order sensory neurons. Journal of Neurophysiology, 2016, 115, 2158-2175.	1.8	17
34	Balanced ionotropic receptor dynamics support signal estimation via voltage-dependent membrane noise. Journal of Neurophysiology, 2016, 115, 530-545.	1.8	12
35	A stochastic model of input effectiveness during irregular gamma rhythms. Journal of Computational Neuroscience, 2016, 40, 85-101.	1.0	5
36	Oscillatorylike behavior in feedforward neuronal networks. Physical Review E, 2015, 92, 012703.	2.1	6

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37	The neural dynamics of sensory focus. Nature Communications, 2015, 6, 8764.	12.8	24
38	Ultrafast traveling wave dominates the electric organ discharge of Apteronotus leptorhynchus: an inverse modelling study. Scientific Reports, 2015, 5, 15780.	3.3	9
39	Counting on dis-inhibition: a circuit motif for interval counting and selectivity in the anuran auditory system. Journal of Neurophysiology, 2015, 114, 2804-2815.	1.8	19
40	Contrast coding in the electrosensory system: parallels with visual computation. Nature Reviews Neuroscience, 2015, 16, 733-744.	10.2	71
41	Attractor dynamics in local neuronal networks. Frontiers in Neural Circuits, 2014, 8, 22.	2.8	8
42	Subtractive, divisive and non-monotonic gain control in feedforward nets linearized by noise and delays. Frontiers in Computational Neuroscience, 2014, 8, 19.	2.1	15
43	Differential effects of excitatory and inhibitory heterogeneity on the gain and asynchronous state of sparse cortical networks. Frontiers in Computational Neuroscience, 2014, 8, 107.	2.1	47
44	Enhanced sensory sampling precedes self-initiated locomotion in an electric fish. Journal of Experimental Biology, 2014, 217, 3615-3628.	1.7	26
45	A Neural Code for Looming and Receding Motion Is Distributed over a Population of Electrosensory ON and OFF Contrast Cells. Journal of Neuroscience, 2014, 34, 5583-5594.	3.6	27
46	Linear noise approximation for oscillations in a stochastic inhibitory network with delay. Physical Review E, 2014, 90, 012702.	2.1	9
47	Long-term Behavioral Tracking of Freely Swimming Weakly Electric Fish. Journal of Visualized Experiments, 2014, , .	0.3	13
48	Temperature Fluctuations for a System in Contact with a Heat Bath. Journal of Statistical Physics, 2013, 153, 1132-1142.	1.2	6
49	Linear response theory for two neural populations applied to gamma oscillation generation. Physical Review E, 2013, 87, .	2.1	1
50	Learning Contrast-Invariant Cancellation of Redundant Signals in Neural Systems. PLoS Computational Biology, 2013, 9, e1003180.	3.2	20
51	Speed-invariant encoding of looming object distance requires power law spike rate adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13624-13629.	7.1	26
52	Coding Conspecific Identity and Motion in the Electric Sense. PLoS Computational Biology, 2012, 8, e1002564.	3.2	49
53	Signal cancellation in neural systems: encoding sensory input in the weakly electric fish. , 2012, , .		0
54	Reduced dynamics for delayed systems with harmonic or stochastic forcing. Chaos, 2012, 22, 043121.	2.5	10

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55	Cellular and circuit properties supporting different sensory coding strategies in electric fish and other systems. Current Opinion in Neurobiology, 2012, 22, 686-692.	4.2	62
56	Efficient computation via sparse coding in electrosensory neural networks. Current Opinion in Neurobiology, 2011, 21, 752-760.	4.2	84
57	Coherence depression in stochastic excitable systems with two-frequency forcing. Chaos, 2011, 21, 047507.	2.5	3
58	Frequency-Tuned Cerebellar Channels and Burst-Induced LTD Lead to the Cancellation of Redundant Sensory Inputs. Journal of Neuroscience, 2011, 31, 11028-11038.	3.6	54
59	Effects of the anesthetic agent propofol on neural populations. Cognitive Neurodynamics, 2010, 4, 37-59.	4.0	67
60	Kinetics of Fast Short-Term Depression Are Matched to Spike Train Statistics to Reduce Noise. Journal of Neurophysiology, 2010, 103, 3337-3348.	1.8	12
61	Linear Versus Nonlinear Signal Transmission in Neuron Models With Adaptation Currents or Dynamic Thresholds. Journal of Neurophysiology, 2010, 104, 2806-2820.	1.8	93
62	Biophysical information representation in temporally correlated spike trains. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 21973-21978.	7.1	27
63	Postsynaptic Receptive Field Size and Spike Threshold Determine Encoding of High-Frequency Information Via Sensitivity to Synchronous Presynaptic Activity. Journal of Neurophysiology, 2009, 101, 1160-1170.	1.8	37
64	Broadband Coding with Dynamic Synapses. Journal of Neuroscience, 2009, 29, 2076-2087.	3.6	62
65	Feedback-induced gain control in stochastic spiking networks. Biological Cybernetics, 2009, 100, 475-489.	1.3	31
66	Neuronal dynamics of sensory coding: the legacy of Jose Pedro Segundo. Biological Cybernetics, 2009, 100, 409-411.	1.3	1
67	Delayed visual feedback reveals distinct time scales in balance control. Neuroscience Letters, 2009, 452, 37-41.	2.1	35
68	Additive noise-induced Turing transitions in spatial systems with application to neural fields and the Swiftâ€“Hohenberg equation. Physica D: Nonlinear Phenomena, 2008, 237, 755-773.	2.8	103
69	Electric field interactions in pairs of electric fish: modeling and mimicking naturalistic inputs. Biological Cybernetics, 2008, 98, 479-490.	1.3	38
70	Neural dynamics of envelope coding. Mathematical Biosciences, 2008, 214, 87-99.	1.9	24
71	Driving neural oscillations with correlated spatial input and topographic feedback. Physical Review E, 2008, 78, 021911.	2.1	14
72	Spatial Acuity and Prey Detection in Weakly Electric Fish. PLoS Computational Biology, 2007, 3, e38.	3.2	69

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73	Additive Global Noise Delays Turing Bifurcations. Physical Review Letters, 2007, 98, 230601.	7.8	43
74	Threshold fatigue and information transfer. Journal of Computational Neuroscience, 2007, 23, 301-311.	1.0	58
75	A Synchronization-Desynchronization Code for Natural Communication Signals. Neuron, 2006, 52, 347-358.	8.1	98
76	Comment on â€œCharacterization of Subthreshold Voltage Fluctuations in Neuronal Membranes,â€•by M. Rudolph and A. Destexhe. Neural Computation, 2006, 18, 1896-1931.	2.2	30
77	Modeling the electric field of weakly electric fish. Journal of Experimental Biology, 2006, 209, 3636-3651.	1.7	66
78	The cellular basis for parallel neural transmission of a high-frequency stimulus and its low-frequency envelope. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14596-14601.	7.1	93
79	Effect of an exponentially decaying threshold on the firing statistics of a stochastic integrate-and-fire neuron. Journal of Theoretical Biology, 2005, 232, 505-521.	1.7	33
80	Delayed excitatory and inhibitory feedback shape neural information transmission. Physical Review E, 2005, 72, 051917.	2.1	49
81	Theory of oscillatory firing induced by spatially correlated noise and delayed inhibitory feedback. Physical Review E, 2005, 72, 061919.	2.1	137
82	Spike-Frequency Adaptation Separates Transient Communication Signals from Background Oscillations. Journal of Neuroscience, 2005, 25, 2312-2321.	3.6	173
83	Oscillatory Activity in Electrosensory Neurons Increases with the Spatial Correlation of the Stochastic Input Stimulus. Physical Review Letters, 2004, 93, 048101.	7.8	105
84	Noise Shaping by Interval Correlations Increases Information Transfer. Physical Review Letters, 2004, 92, 080601.	7.8	111
85	ISI CORRELATIONS AND INFORMATION TRANSFER. Fluctuation and Noise Letters, 2004, 04, L195-L205.	1.5	9
86	Comparison of Coding Capabilities of Type I and Type II Neurons. Journal of Computational Neuroscience, 2004, 16, 299-313.	1.0	42
87	To Burst or Not to Burst?. Journal of Computational Neuroscience, 2004, 17, 127-136.	1.0	44
88	Coding of information in models of tuberous electroreceptors. Mathematical Biosciences, 2004, 188, 157-174.	1.9	2
89	Type I burst excitability. Journal of Computational Neuroscience, 2003, 14, 329-342.	1.0	33
90	Inhibitory feedback required for network oscillatory responses to communication but not prey stimuli. Nature, 2003, 421, 539-543.	27.8	152

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91	Non-classical receptive field mediates switch in a sensory neuron's frequency tuning. Nature, 2003, 423, 77-81.	27.8	168
92	Dynamics of Deterministic and Stochastic Paired Excitatoryâ€"Inhibitory Delayed Feedback. Neural Computation, 2003, 15, 2779-2822.	2.2	21
93	Interspike Interval Correlations, Memory, Adaptation, and Refractoriness in a Leaky Integrate-and-Fire Model with Threshold Fatigue. Neural Computation, 2003, 15, 253-278.	2.2	86
94	Analytic Expressions for Rate and CV of a Type I Neuron Driven by White Gaussian Noise. Neural Computation, 2003, 15, 1761-1788.	2.2	95
95	The effects of spontaneous activity, background noise, and the stimulus ensemble on information transfer in neurons. Network: Computation in Neural Systems, 2003, 14, 803-824.	3.6	33
96	A Dynamic Dendritic Refractory Period Regulates Burst Discharge in the Electrosensory Lobe of Weakly Electric Fish. Journal of Neuroscience, 2003, 23, 1524-1534.	3.6	46
97	The effects of spontaneous activity, background noise, and the stimulus ensemble on information transfer in neurons. Network: Computation in Neural Systems, 2003, 14, 803-824.	3.6	19
98	The effects of spontaneous activity, background noise, and the stimulus ensemble on information transfer in neurons. Network: Computation in Neural Systems, 2003, 14, 803-24.	3.6	16
99	PHASE LOCKING AND RESONANCES FOR STOCHASTIC EXCITABLE SYSTEMS. Fluctuation and Noise Letters, 2002, 02, L183-L203.	1.5	5
100	A dynamical model of saccade generation in reading based on spatially distributed lexical processing. Vision Research, 2002, 42, 621-636.	1.4	310
101	Maximizing spike train coherence or incoherence in the leaky integrate-and-fire model. Physical Review E, 2002, 66, 031916.	2.1	135
102	A Two-Variable Model of Somaticâ€"Dendritic Interactions in a Bursting Neuron. Bulletin of Mathematical Biology, 2002, 64, 829-860.	1.9	24
103	Bifurcation analysis of a class of first-order nonlinear delay-differential equations with reflectional symmetry. Physica D: Nonlinear Phenomena, 2002, 166, 131-146.	2.8	52
104	Noise-induced divisive gain control in neuron models. BioSystems, 2002, 67, 147-156.	2.0	28
105	Ghostbursting: a novel neuronal burst mechanism. Journal of Computational Neuroscience, 2002, 12, 5-25.	1.0	113
106	Negative Interspike Interval Correlations Increase the Neuronal Capacity for Encoding Time-Dependent Stimuli. Journal of Neuroscience, 2001, 21, 5328-5343.	3.6	191
107	Model of Gamma Frequency Burst Discharge Generated by Conditional Backpropagation. Journal of Neurophysiology, 2001, 86, 1523-1545.	1.8	60
108	Variability of the electric organ discharge interval duration in resting Gymnotus carapo. Biological Cybernetics, 2001, 84, 309-321.	1.3	11

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109	Noise-induced stabilization of bumps in systems with long-range spatial coupling. Physica D: Nonlinear Phenomena, 2001, 160, 149-172.	2.8	38
110	Two-category Model of Task Allocation with Application to Ant Societies. Bulletin of Mathematical Biology, 2001, 63, 1125-1161.	1.9	1
111	Subtractive and Divisive Inhibition: Effect of Voltage-Dependent Inhibitory Conductances and Noise. Neural Computation, 2001, 13, 227-248.	2.2	97
112	Transition rates for stochastic delay differential equations. AIP Conference Proceedings, 2000, , .	0.4	0
113	Effect of noise on the tuning properties of excitable systems. Chaos, Solitons and Fractals, 2000, 11, 1835-1848.	5.1	43
114	Stochastic aspects of neural phase locking to periodic signals. AIP Conference Proceedings, 2000, , .	0.4	1
115	Rate processes in a delayed, stochastically driven, and overdamped system. Physical Review E, 2000, 61, 4906-4914.	2.1	114
116	Suprathreshold Stochastic Firing Dynamics with Memory inP-Type Electroreceptors. Physical Review Letters, 2000, 85, 1576-1579.	7.8	110
117	ENCODING CARRIER AMPLITUDE MODULATIONS VIA STOCHASTIC PHASE SYNCHRONIZATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 2447-2463.	1.7	7
118	Adiabatic and Non-adiabatic Resonances in Excitable Systems. , 2000, , 172-181.		1
119	Small delay approximation of stochastic delay differential equations. Physical Review E, 1999, 59, 3970-3982.	2.1	302
120	Synchronization of delay-differential equations with application to private communication. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 244, 59-70.	2.1	84
121	Power spectra and dynamical invariants for delay-differential and difference equations. Physica D: Nonlinear Phenomena, 1998, 113, 1-25.	2.8	38
122	Chaos control in multistable delay-differential equations and their singular limit maps. Physical Review E, 1998, 58, 410-422.	2.1	24
123	Stochastic and Deterministic Resonances for Excitable Systems. Physical Review Letters, 1998, 81, 4012-4015.	7.8	119
124	Autonomous stochastic resonance in bursting neurons. Physical Review E, 1997, 55, 868-876.	2.1	280
125	Stochastic resonance in models of neuronal ensembles. Physical Review E, 1997, 55, 1798-1808.	2.1	150
126	Interspike interval attractors from chaotically driven neuron models. Physica D: Nonlinear Phenomena, 1997, 104, 184-204.	2.8	66

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127	Encoding with Bursting, Subthreshold Oscillations, and Noise in Mammalian Cold Receptors. Neural Computation, 1996, 8, 215-255.	2.2	90
128	Multistability and Delayed Recurrent Loops. Physical Review Letters, 1996, 76, 708-711.	7.8	304
129	Controlling chaos to store information in delay-differential equations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 205, 18-24.	2.1	37
130	Bistability and the dynamics of periodically forced sensory neurons. Biological Cybernetics, 1994, 70, 569-578.	1.3	94
131	Solution multistability in firstâ€order nonlinear differential delay equations. Chaos, 1993, 3, 167-176.	2.5	92
132	Testing for nonlinearity in time series: the method of surrogate data. Physica D: Nonlinear Phenomena, 1992, 58, 77-94.	2.8	3,281
133	Noise-induced transitions at a Hopf bifurcation in a first-order delay-differential equation. Physical Review A, 1991, 44, 4801-4813.	2.5	40
134	Time-interval sequences in bistable systems and the noise-induced transmission of information by sensory neurons. Physical Review Letters, 1991, 67, 656-659.	7.8	450
135	Noise and critical behavior of the pupil light reflex at oscillation onset. Physical Review A, 1990, 41, 6992-7005.	2.5	133
136	Evaluation of pupil constriction and dilation from cycling measurements. Vision Research, 1990, 30, 515-525.	1.4	54
137	Complex dynamics and bifurcations in neurology. Journal of Theoretical Biology, 1989, 138, 129-147.	1.7	76
138	Complex oscillations in the human pupil light reflex with â€œmixedâ€•and delayed feedback. Mathematical Biosciences, 1988, 90, 183-199.	1.9	185