

Terrence J Sejnowski

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

182
papers

27,498
citations

59
h-index

165
g-index

211
ext. papers

32,926
ext. citations

9.2
avg, IF

7.34
L-index

#	Paper	IF	Citations
182	Geometry unites synchrony, chimeras, and waves in nonlinear oscillator networks.. <i>Chaos</i> , 2022 , 32, 031104	5.9	0
181	Biological underpinnings for lifelong learning machines. <i>Nature Machine Intelligence</i> , 2022 , 4, 196-210	22.5	1
180	Multiscale modeling of presynaptic dynamics from molecular to mesoscale.. <i>PLoS Computational Biology</i> , 2022 , 18, e1010068	5	
179	Pharmacological reversal of synaptic and network pathology in human MECP2-KO neurons and cortical organoids. <i>EMBO Molecular Medicine</i> , 2021 , 13, e12523	12	14
178	Spontaneous traveling waves naturally emerge from horizontal fiber time delays and travel through locally asynchronous-irregular states. <i>Nature Communications</i> , 2021 , 12, 6057	17.4	3
177	Dynamical ergodicity DDA reveals causal structure in time series. <i>Chaos</i> , 2021 , 31, 103108	3.3	0
176	Learning the Synaptic and Intrinsic Membrane Dynamics Underlying Working Memory in Spiking Neural Network Models. <i>Neural Computation</i> , 2021 , 33, 3264-3287	2.9	1
175	NMDAR-dependent long-term depression is associated with increased short term plasticity through autophagy mediated loss of PSD-95. <i>Nature Communications</i> , 2021 , 12, 2849	17.4	17
174	Diversity-enabled sweet spots in layered architectures and speed-accuracy trade-offs in sensorimotor control. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	4
173	Strong inhibitory signaling underlies stable temporal dynamics and working memory in spiking neural networks. <i>Nature Neuroscience</i> , 2021 , 24, 129-139	25.5	25
172	Predicting the fMRI Signal Fluctuation with Recurrent Neural Networks Trained on Vascular Network Dynamics. <i>Cerebral Cortex</i> , 2021 , 31, 826-844	5.1	4
171	Replay in Deep Learning: Current Approaches and Missing Biological Elements. <i>Neural Computation</i> , 2021 , 33, 2908-2950	2.9	6
170	A modeling framework for adaptive lifelong learning with transfer and savings through gating in the prefrontal cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 29872-29882	11.5	5
169	The ventral striatum dissociates information expectation, reward anticipation, and reward receipt. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 15200-15208	11.5	9
168	Nanoscale co-organization and coactivation of AMPAR, NMDAR, and mGluR at excitatory synapses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14503-14511	11.5	38
167	Heterogeneity of Preictal Dynamics in Human Epileptic Seizures. <i>IEEE Access</i> , 2020 , 8, 52738-52748	3.5	2
166	The unreasonable effectiveness of deep learning in artificial intelligence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 30033-30038	11.5	102

165	A Discrete Presynaptic Vesicle Cycle for Neuromodulator Receptors. <i>Neuron</i> , 2020 , 105, 663-677.e8	13.9	19
164	Spontaneous travelling cortical waves gate perception in behaving primates. <i>Nature</i> , 2020 , 587, 432-436	50.4	33
163	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator. <i>PLoS Computational Biology</i> , 2020 , 16, e1008015	5	4
162	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
161	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
160	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
159	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
158	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
157	Interactions between calmodulin and neurogranin govern the dynamics of CaMKII as a leaky integrator 2020 , 16, e1008015		
156	Characterizing Brain Connectivity From Human Electrocorticography Recordings With Unobserved Inputs During Epileptic Seizures. <i>Neural Computation</i> , 2019 , 31, 1271-1326	2.9	5
155	MCell-R: A Particle-Resolution Network-Free Spatial Modeling Framework. <i>Methods in Molecular Biology</i> , 2019 , 1945, 203-229	1.4	7
154	Nonlinear dynamics underlying sensory processing dysfunction in schizophrenia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 3847-3852	11.5	14
153	Geometric principles of second messenger dynamics in dendritic spines. <i>Scientific Reports</i> , 2019 , 9, 11676	4.9	22
152	Dendritic spine geometry and spine apparatus organization govern the spatiotemporal dynamics of calcium. <i>Journal of General Physiology</i> , 2019 , 151, 1017-1034	3.4	30
151	Feedforward Thalamocortical Connectivity Preserves Stimulus Timing Information in Sensory Pathways. <i>Journal of Neuroscience</i> , 2019 , 39, 7674-7688	6.6	1
150	Impairments in remote memory caused by the lack of Type 2 IP receptors. <i>Glia</i> , 2019 , 67, 1976-1989	9	23
149	Utilizing Deep Learning Towards Multi-modal Bio-sensing and Vision-based Affective Computing. <i>IEEE Transactions on Affective Computing</i> , 2019 , 1-1	5.7	53
148	Causality detection in cortical seizure dynamics using cross-dynamical delay differential analysis. <i>Chaos</i> , 2019 , 29, 101103	3.3	4

147	Simple framework for constructing functional spiking recurrent neural networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 22811-22820	11.5	22
146	A multi-state model of the CaMKII dodecamer suggests a role for calmodulin in maintenance of autophosphorylation. <i>PLoS Computational Biology</i> , 2019 , 15, e1006941	5	4
145	The nucleus does not significantly affect the migratory trajectories of amoeba in two-dimensional environments. <i>Scientific Reports</i> , 2019 , 9, 16369	4.9	4
144	Cortical chimera states predict epileptic seizures. <i>Chaos</i> , 2019 , 29, 121106	3.3	11
143	Impact of Affective Multimedia Content on the Electroencephalogram and Facial Expressions. <i>Scientific Reports</i> , 2019 , 9, 16295	4.9	7
142	Mitochondrial morphology provides a mechanism for energy buffering at synapses. <i>Scientific Reports</i> , 2019 , 9, 18306	4.9	23
141	A Wearable Multi-Modal Bio-Sensing System Towards Real-World Applications. <i>IEEE Transactions on Biomedical Engineering</i> , 2019 , 66, 1137-1147	5	17
140	Brain-state dependent astrocytic Ca signals are coupled to both positive and negative BOLD-fMRI signals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E1647-E1658	11.5	55
139	Structured networks support sparse traveling waves in rodent somatosensory cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 5277-5282	11.5	5
138	Cortical travelling waves: mechanisms and computational principles. <i>Nature Reviews Neuroscience</i> , 2018 , 19, 255-268	13.5	194
137	Thalamocortical and intracortical laminar connectivity determines sleep spindle properties. <i>PLoS Computational Biology</i> , 2018 , 14, e1006171	5	9
136	Ketamine independently modulated power and phase-coupling of theta oscillations in Sp4 hypomorphic mice. <i>PLoS ONE</i> , 2018 , 13, e0193446	3.7	3
135	Heterogeneities in Axonal Structure and Transporter Distribution Lower Dopamine Reuptake Efficiency. <i>ENeuro</i> , 2018 , 5,	3.9	8
134	The Deep Learning Revolution 2018 ,		88
133	Pre-post synaptic alignment through neuroligin-1 tunes synaptic transmission efficiency. <i>ELife</i> , 2018 , 7,	8.9	78
132	Centrifugal Inputs to the Main Olfactory Bulb Revealed Through Whole Brain Circuit-Mapping. <i>Frontiers in Neuroanatomy</i> , 2018 , 12, 115	3.6	27
131	Multi-modal Approach for Affective Computing. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 291-294	0.9	4
130	Interpretation of the Precision Matrix and Its Application in Estimating Sparse Brain Connectivity during Sleep Spindles from Human Electroencephalography Recordings. <i>Neural Computation</i> , 2017 , 29, 603-642	2.9	14

129	Cortical gamma band synchronization through somatostatin interneurons. <i>Nature Neuroscience</i> , 2017 , 20, 951-959	25.5	173
128	Interstitial solute transport in 3D reconstructed neuropil occurs by diffusion rather than bulk flow. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 9894-9899	11.5	133
127	Differential Covariance: A New Class of Methods to Estimate Sparse Connectivity from Neural Recordings. <i>Neural Computation</i> , 2017 , 29, 2581-2632	2.9	7
126	Delay Differential Analysis of Seizures in Multichannel Electrocorticography Data. <i>Neural Computation</i> , 2017 , 29, 3181-3218	2.9	8
125	Single-cell methylomes identify neuronal subtypes and regulatory elements in mammalian cortex. <i>Science</i> , 2017 , 357, 600-604	33.3	279
124	Decision-making neural circuits mediating social behaviors : An attractor network model. <i>Journal of Computational Neuroscience</i> , 2017 , 43, 127-142	1.4	1
123	The Population Tracking Model: A Simple, Scalable Statistical Model for Neural Population Data. <i>Neural Computation</i> , 2017 , 29, 50-93	2.9	12
122	Beyond excitation/inhibition imbalance in multidimensional models of neural circuit changes in brain disorders. <i>ELife</i> , 2017 , 6,	8.9	38
121	Abnormal Gamma Oscillations in N-Methyl-D-Aspartate Receptor Hypofunction Models of Schizophrenia. <i>Biological Psychiatry</i> , 2016 , 79, 716-726	7.9	84
120	Efficient Multiscale Models of Polymer Assembly. <i>Biophysical Journal</i> , 2016 , 111, 185-96	2.9	5
119	Conservation law for self-paced movements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8831-6	11.5	10
118	Objective, computerized video-based rating of blepharospasm severity. <i>Neurology</i> , 2016 , 87, 2146-2153	6.5	11
117	Street View of the Cognitive Map. <i>Cell</i> , 2016 , 164, 13-15	56.2	1
116	Time-coded neurotransmitter release at excitatory and inhibitory synapses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E1108-15	11.5	7
115	Rotating waves during human sleep spindles organize global patterns of activity that repeat precisely through the night. <i>ELife</i> , 2016 , 5,	8.9	83
114	Dendritic trafficking faces physiologically critical speed-precision tradeoffs. <i>ELife</i> , 2016 , 5,	8.9	27
113	Blending computational and experimental neuroscience. <i>Nature Reviews Neuroscience</i> , 2016 , 17, 667-668	3.5	17
112	Learning to soar in turbulent environments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E4877-84	11.5	72

111	Diverse Representations of Olfactory Information in Centrifugal Feedback Projections. <i>Journal of Neuroscience</i> , 2016 , 36, 7535-45	6.6	28
110	Consciousness. <i>Daedalus</i> , 2015 , 144, 123-132	2	2
109	Epigenomic Signatures of Neuronal Diversity in the Mammalian Brain. <i>Neuron</i> , 2015 , 86, 1369-84	13.9	430
108	Spectrum of power laws for curved hand movements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E3950-8	11.5	36
107	Periodic Forcing of Inhibition-Stabilized Networks: Nonlinear Resonances and Phase-Amplitude Coupling. <i>Neural Computation</i> , 2015 , 27, 2477-509	2.9	12
106	The BRAIN Initiative: developing technology to catalyse neuroscience discovery. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2015 , 370,	5.8	119
105	Model reduction for stochastic CaMKII reaction kinetics in synapses by graph-constrained correlation dynamics. <i>Physical Biology</i> , 2015 , 12, 045005	3	11
104	Motor adaptation and generalization of reaching movements using motor primitives based on spatial coordinates. <i>Journal of Neurophysiology</i> , 2015 , 113, 1217-33	3.2	4
103	Delay differential analysis of electroencephalographic data. <i>Neural Computation</i> , 2015 , 27, 615-27	2.9	7
102	Computational reconstitution of spine calcium transients from individual proteins. <i>Frontiers in Synaptic Neuroscience</i> , 2015 , 7, 17	3.5	33
101	Nanoconnectomic upper bound on the variability of synaptic plasticity. <i>ELife</i> , 2015 , 4, e10778	8.9	144
100	Human body epigenome maps reveal noncanonical DNA methylation variation. <i>Nature</i> , 2015 , 523, 212-650.4	50.4	442
99	Vernon Mountcastle: Father of neuroscience. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 6523-4	11.5	2
98	Feedback stabilizes propagation of synchronous spiking in cortical neural networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 2545-50	11.5	31
97	Author response: Nanoconnectomic upper bound on the variability of synaptic plasticity 2015 ,		2
96	Selective memory generalization by spatial patterning of protein synthesis. <i>Neuron</i> , 2014 , 82, 398-412	13.9	33
95	Regulating Cortical Oscillations in an Inhibition-Stabilized Network. <i>Proceedings of the IEEE</i> , 2014 , 102,	14.3	29
94	Prospective Optimization. <i>Proceedings of the IEEE</i> , 2014 , 102,	14.3	10

93	VolRoverN: enhancing surface and volumetric reconstruction for realistic dynamical simulation of cellular and subcellular function. <i>Neuroinformatics</i> , 2014 , 12, 277-89	3.2	11
92	Identifying transport behavior of single-molecule trajectories. <i>Biophysical Journal</i> , 2014 , 107, 2345-51	2.9	5
91	Putting big data to good use in neuroscience. <i>Nature Neuroscience</i> , 2014 , 17, 1440-1	25.5	166
90	Astrocytes contribute to gamma oscillations and recognition memory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E3343-52	11.5	158
89	Summary: Cognition in 2014. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , 2014 , 79, 237-41	3.9	
88	Multi-state modeling of biomolecules. <i>PLoS Computational Biology</i> , 2014 , 10, e1003844	5	28
87	Synchronization of isolated downstates (K-complexes) may be caused by cortically-induced disruption of thalamic spindling. <i>PLoS Computational Biology</i> , 2014 , 10, e1003855	5	17
86	Place cell rate remapping by CA3 recurrent collaterals. <i>PLoS Computational Biology</i> , 2014 , 10, e1003648	5	15
85	Top-down inputs enhance orientation selectivity in neurons of the primary visual cortex during perceptual learning. <i>PLoS Computational Biology</i> , 2014 , 10, e1003770	5	14
84	Toward a semi-self-paced EEG brain computer interface: decoding initiation state from non-initiation state in dedicated time slots. <i>PLoS ONE</i> , 2014 , 9, e88915	3.7	6
83	Extracellular sheets and tunnels modulate glutamate diffusion in hippocampal neuropil. <i>Journal of Comparative Neurology</i> , 2013 , 521, 448-64	3.4	83
82	Short-term synaptic plasticity in the deterministic Tsodyks-Markram model leads to unpredictable network dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 16610-5	11.5	22
81	Electrocardiogram classification using delay differential equations. <i>Chaos</i> , 2013 , 23, 023132	3.3	22
80	Multivariate spectral analysis of electroencephalography data 2013 ,		1
79	Non-linear dynamical classification of short time series of the rössler system in high noise regimes. <i>Frontiers in Neurology</i> , 2013 , 4, 182	4.1	13
78	Non-linear dynamical analysis of EEG time series distinguishes patients with Parkinson's disease from healthy individuals. <i>Frontiers in Neurology</i> , 2013 , 4, 200	4.1	25
77	Short-term plasticity constrains spatial organization of a hippocampal presynaptic terminal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 14657-62	11.5	37
76	Modelling vesicular release at hippocampal synapses. <i>PLoS Computational Biology</i> , 2010 , 6, e1000983	5	49

75	Metabolic cost as a unifying principle governing neuronal biophysics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 12329-34	11.5	155
74	Experience matters: information acquisition optimizes probability gain. <i>Psychological Science</i> , 2010 , 21, 960-9	7.9	67
73	Synchrony of thalamocortical inputs maximizes cortical reliability. <i>Science</i> , 2010 , 328, 106-9	33.3	116
72	Consequences of non-uniform active currents in dendrites. <i>Frontiers in Neuroscience</i> , 2009 , 3, 332-3	5.1	3
71	Regulation of spike timing in visual cortical circuits. <i>Nature Reviews Neuroscience</i> , 2008 , 9, 97-107	13.5	266
70	FAST MONTE CARLO SIMULATION METHODS FOR BIOLOGICAL REACTION-DIFFUSION SYSTEMS IN SOLUTION AND ON SURFACES. <i>SIAM Journal of Scientific Computing</i> , 2008 , 30, 3126	2.6	221
69	Calmodulin activation by calcium transients in the postsynaptic density of dendritic spines. <i>PLoS ONE</i> , 2008 , 3, e2045	3.7	72
68	NEUROSCIENCE: The Hippocampus Review. <i>Science</i> , 2007 , 317, 44-45	33.3	3
67	Network oscillations: emerging computational principles. <i>Journal of Neuroscience</i> , 2006 , 26, 1673-6	6.6	212
66	What is consolidated during sleep-dependent motor skill learning?. <i>Behavioral and Brain Sciences</i> , 2005 , 28, 70-71	0.9	1
65	Evidence for ectopic neurotransmission at a neuronal synapse. <i>Science</i> , 2005 , 309, 446-51	33.3	148
64	Variational Bayesian Learning of ICA with Missing Data. <i>Neural Computation</i> , 2003 , 15, 1991-2011	2.9	38
63	Self-organizing neural systems based on predictive learning. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003 , 361, 1149-75	3	23
62	Independent sources of quantal variability at single glutamatergic synapses. <i>Journal of Neuroscience</i> , 2003 , 23, 3186-95	6.6	168
61	The computational self. <i>Annals of the New York Academy of Sciences</i> , 2003 , 1001, 262-71	6.5	4
60	Communication in neuronal networks. <i>Science</i> , 2003 , 301, 1870-4	33.3	655
59	Perceptions of science. Tap into science 24-7. <i>Science</i> , 2003 , 301, 601	33.3	
58	Complexity of calcium signaling in synaptic spines. <i>BioEssays</i> , 2002 , 24, 1130-44	4.1	89

57	A Monte Carlo model reveals independent signaling at central glutamatergic synapses. <i>Biophysical Journal</i> , 2002 , 83, 2333-48	2.9	131
56	Predictive learning of temporal sequences in recurrent neocortical circuits. <i>Novartis Foundation Symposium</i> , 2001 , 239, 208-29; discussion 229-40		13
55	Computational model of carbachol-induced delta, theta, and gamma oscillations in the hippocampus. <i>Hippocampus</i> , 2001 , 11, 251-74	3.5	118
54	Parallel Fiber Coding in the Cerebellum for Life-Long Learning. <i>Autonomous Robots</i> , 2001 , 11, 291-297	3	24
53	Correlated neuronal activity and the flow of neural information. <i>Nature Reviews Neuroscience</i> , 2001 , 2, 539-50	13.5	957
52	Optimal smoothing in visual motion perception. <i>Neural Computation</i> , 2001 , 13, 1243-53	2.9	43
51	Spike-timing-dependent Hebbian plasticity as temporal difference learning. <i>Neural Computation</i> , 2001 , 13, 2221-37	2.9	138
50	Cholinergic induction of oscillations in the hippocampal slice in the slow (0.5-2 Hz), theta (5-12 Hz), and gamma (35-70 Hz) bands. <i>Hippocampus</i> , 2000 , 10, 187-97	3.5	190
49	Synaptic plasticity in morphologically identified CA1 stratum radiatum interneurons and giant projection cells. <i>Hippocampus</i> , 2000 , 10, 673-83	3.5	32
48	Neurocomputational models of working memory. <i>Nature Neuroscience</i> , 2000 , 3 Suppl, 1184-91	25.5	553
47	Why do we sleep?. <i>Brain Research</i> , 2000 , 886, 208-223	3.7	380
46	Gap junction effects on precision and frequency of a model pacemaker network. <i>Journal of Neurophysiology</i> , 2000 , 83, 984-97	3.2	51
45	Constraining constructivism: Cortical and sub-cortical constraints on learning in development. <i>Behavioral and Brain Sciences</i> , 2000 , 23, 785-791	0.9	6
44	Removing electroencephalographic artifacts by blind source separation. <i>Psychophysiology</i> , 2000 , 37, 163-178	4.1	2074
43	Learning overcomplete representations. <i>Neural Computation</i> , 2000 , 12, 337-65	2.9	723
42	Removing electroencephalographic artifacts by blind source separation 2000 , 37, 163		489
41	Measuring facial expressions by computer image analysis. <i>Psychophysiology</i> , 1999 , 36, 253-63	4.1	208
40	Spatially fixed patterns account for the spike and wave features in absence seizures. <i>Brain Topography</i> , 1999 , 12, 107-16	4.3	26

39	Neuronal tuning: To sharpen or broaden?. <i>Neural Computation</i> , 1999 , 11, 75-84	2.9	214
38	Independent component analysis using an extended infomax algorithm for mixed subgaussian and supergaussian sources. <i>Neural Computation</i> , 1999 , 11, 417-41	2.9	1236
37	The book of Hebb. <i>Neuron</i> , 1999 , 24, 773-6	13.9	77
36	Analysis of fMRI data by blind separation into independent spatial components. <i>Human Brain Mapping</i> , 1998 , 6, 160-88	5.9	1334
35	Independent component analysis of fMRI data: examining the assumptions. <i>Human Brain Mapping</i> , 1998 , 6, 368-72	5.9	355
34	A computational model of how the basal ganglia produce sequences. <i>Journal of Cognitive Neuroscience</i> , 1998 , 10, 108-21	3.1	167
33	Irregular synchronous activity in stochastically-coupled networks of integrate-and-fire neurons. <i>Network: Computation in Neural Systems</i> , 1998 , 9, 333-344	0.7	9
32	Learning viewpoint-invariant face representations from visual experience in an attractor network. <i>Network: Computation in Neural Systems</i> , 1998 , 9, 399-417	0.7	19
31	Cellular and network models for intrathalamic augmenting responses during 10-Hz stimulation. <i>Journal of Neurophysiology</i> , 1998 , 79, 2730-48	3.2	76
30	Interpreting neuronal population activity by reconstruction: unified framework with application to hippocampal place cells. <i>Journal of Neurophysiology</i> , 1998 , 79, 1017-44	3.2	462
29	Analysis of fMRI data by blind separation into independent spatial components 1998 , 6, 160		2
28	Analysis of fMRI data by blind separation into independent spatial components 1998 , 6, 160		10
27	Independent component analysis of fMRI data: Examining the assumptions 1998 , 6, 368		3
26	Spatial transformations in the parietal cortex using basis functions. <i>Journal of Cognitive Neuroscience</i> , 1997 , 9, 222-37	3.1	338
25	A Unifying Objective Function for Topographic Mappings. <i>Neural Computation</i> , 1997 , 9, 1291-1303	2.9	59
24	The neural basis of cognitive development: a constructivist manifesto. <i>Behavioral and Brain Sciences</i> , 1997 , 20, 537-56; discussion 556-96	0.9	845
23	Spatiotemporal patterns of spindle oscillations in cortex and thalamus. <i>Journal of Neuroscience</i> , 1997 , 17, 1179-96	6.6	239
22	Population dynamics and theta rhythm phase precession of hippocampal place cell firing: a spiking neuron model. <i>Hippocampus</i> , 1996 , 6, 271-80	3.5	182

21	Exploration Bonuses and Dual Control. <i>Machine Learning</i> , 1996 , 25, 5-22	4	
20	Exploration bonuses and dual control. <i>Machine Learning</i> , 1996 , 25, 5-22	4	60
19	Influence of dendritic structure on firing pattern in model neocortical neurons. <i>Nature</i> , 1996 , 382, 363-650.4	50.4	1014
18	Population dynamics and theta rhythm phase precession of hippocampal place cell firing: A spiking neuron model 1996 , 6, 271		105
17	Bee foraging in uncertain environments using predictive hebbian learning. <i>Nature</i> , 1995 , 377, 725-8	50.4	240
16	An information-maximization approach to blind separation and blind deconvolution. <i>Neural Computation</i> , 1995 , 7, 1129-59	2.9	5872
15	Neural networks. Sleep and memory. <i>Current Biology</i> , 1995 , 5, 832-4	6.3	13
14	Beyond modularity: Neural evidence for constructivist principles in development. <i>Behavioral and Brain Sciences</i> , 1994 , 17, 725-726	0.9	33
13	Simulations of a Reconstructed Cerebellar Purkinje Cell Based on Simplified Channel Kinetics. <i>Neural Computation</i> , 1991 , 3, 321-332	2.9	18
12	A Learning Algorithm for Boltzmann Machines*. <i>Cognitive Science</i> , 1985 , 9, 147-169	2.2	1807
11	A Learning Algorithm for Boltzmann Machines* 1985 , 9, 147		162
10	Irregular synchronous activity in stochastically-coupled networks of integrate-and-fire neurons		14
9	Learning viewpoint-invariant face representations from visual experience in an attractor network		29
8	Strong inhibitory signaling underlies stable temporal dynamics and working memory in spiking neural networks		3
7	Presynaptic Endoplasmic Reticulum Contributes Crucially to Short-term Plasticity in Small Hippocampal Synapses		2
6	Simple Framework for Constructing Functional Spiking Recurrent Neural Networks		2
5	Spontaneous Traveling Cortical Waves Gate Perception in Awake Behaving Primates		4
4	The population tracking model: A simple, scalable statistical model for neural population data		1

3	Neuromodulators enable overlapping synaptic memory regimes and nonlinear transition dynamics in recurrent neural networks	1
2	Dynamical differential covariance recovers directional network structure in multiscale neural systems	2
1	Population dynamics and theta rhythm phase precession of hippocampal place cell firing: A spiking neuron model	3