

# Contrast-Invariant Orientation Tuning in Cat Visual Cortex and Correlation-Based Intracortical Connectivity

Journal of Neuroscience

18, 5908-5927

DOI: [10.1523/jneurosci.18-15-05908.1998](https://doi.org/10.1523/jneurosci.18-15-05908.1998)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Strength and Orientation Tuning of the Thalamic Input to Simple Cells Revealed by Electrically Evoked Cortical Suppression. <i>Neuron</i> , 1998, 20, 1177-1189.	3.8	236
2	Synaptic Integration in Striate Cortical Simple Cells. <i>Journal of Neuroscience</i> , 1998, 18, 9517-9528.	1.7	296
3	Functional Independence of Layer IV Barrels in Rodent Somatosensory Cortex. <i>Journal of Neurophysiology</i> , 1999, 82, 1311-1316.	0.9	76
4	Is the development of orientation selectivity instructed by activity?. , 1999, 41, 44-57.		57
5	Differential Depression at Excitatory and Inhibitory Synapses in Visual Cortex. <i>Journal of Neuroscience</i> , 1999, 19, 4293-4304.	1.7	174
6	A model for the intracortical origin of orientation preference and tuning in macaque striate cortex. <i>Visual Neuroscience</i> , 1999, 16, 303-318.	0.5	64
7	Linear and nonlinear contributions to orientation tuning of simple cells in the cat's striate cortex. <i>Visual Neuroscience</i> , 1999, 16, 1115-1121.	0.5	106
8	A simple cell model with dominating opponent inhibition for robust contrast detection. <i>Kognitionswissenschaft</i> , 2000, 9, 93-100.	0.4	12
9	Orientation Tuning of Input Conductance, Excitation, and Inhibition in Cat Primary Visual Cortex. <i>Journal of Neurophysiology</i> , 2000, 84, 909-926.	0.9	446
10	Modeling LGN Responses during Free-Viewing: A Possible Role of Microscopic Eye Movements in the Refinement of Cortical Orientation Selectivity. <i>Journal of Neuroscience</i> , 2000, 20, 4708-4720.	1.7	29
11	A neuronal network model of macaque primary visual cortex (V1): Orientation selectivity and dynamics in the input layer 4Calpha. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 8087-8092.	3.3	228
12	Feature extraction from colour and stereo images using ICA. , 2000, , .		3
13	Independent component analysis applied to feature extraction from colour and stereo images. <i>Network: Computation in Neural Systems</i> , 2000, 11, 191-210.	2.2	146
14	The implementation of visual routines. <i>Vision Research</i> , 2000, 40, 1385-1411.	0.7	205
15	The Contribution of Noise to Contrast Invariance of Orientation Tuning in Cat Visual Cortex. <i>Science</i> , 2000, 290, 1968-1972.	6.0	381
16	Neural Mechanisms of Orientation Selectivity in the Visual Cortex. <i>Annual Review of Neuroscience</i> , 2000, 23, 441-471.	5.0	573
17	Prediction of Orientation Selectivity from Receptive Field Architecture in Simple Cells of Cat Visual Cortex. <i>Neuron</i> , 2001, 30, 263-274.	3.8	72
18	The relatively small decline in orientation acuity as stimulus size decreases. <i>Vision Research</i> , 2001, 41, 1723-1733.	0.7	15

#	ARTICLE	IF	CITATIONS
19	Contrast-Dependent Nonlinearities Arise Locally in a Model of Contrast-Invariant Orientation Tuning. <i>Journal of Neurophysiology</i> , 2001, 85, 2130-2149.	0.9	56
20	Local Correlation-Based Circuitry Can Account for Responses to Multi-Grating Stimuli in a Model of Cat V1. <i>Journal of Neurophysiology</i> , 2001, 86, 1803-1815.	0.9	30
21	Chapter 22 Emergence of feature selectivity from lateral interactions in the visual cortex. <i>Handbook of Biological Physics</i> , 2001, , 969-1000.	0.8	0
22	How Simple Cells Are Made in a Nonlinear Network Model of the Visual Cortex. <i>Journal of Neuroscience</i> , 2001, 21, 5203-5211.	1.7	101
23	Effects of neuromodulation in a cortical network model of object working memory dominated by recurrent inhibition. , 2001, 11, 63-85.		586
24	Efficient and accurate time-stepping schemes for integrate-and-fire neuronal networks. <i>Journal of Computational Neuroscience</i> , 2001, 11, 111-119.	0.6	84
25	Thalamocortical NMDA conductances and intracortical inhibition can explain cortical temporal tuning. <i>Nature Neuroscience</i> , 2001, 4, 424-430.	7.1	56
26	A model of cross-orientation inhibition in cat primary visual cortex. <i>Neurocomputing</i> , 2001, 38-40, 757-762.	3.5	1
27	A model of visual cortical temporal frequency tuning. <i>Neurocomputing</i> , 2001, 38-40, 1379-1383.	3.5	4
28	Processing in layer 4 of the neocortical circuit: new insights from visual and somatosensory cortex. <i>Current Opinion in Neurobiology</i> , 2001, 11, 488-497.	2.0	147
29	Chapter 21 Mechanisms of synchrony of neural activity in large networks. <i>Handbook of Biological Physics</i> , 2001, 4, 887-968.	0.8	39
30	Orientation Tuning Properties of Simple Cells in Area V1 Derived from an Approximate Analysis of Nonlinear Neural Field Models. <i>Neural Computation</i> , 2001, 13, 1721-1747.	1.3	24
31	Spatial frequency and orientation tuning dynamics in area V1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 1645-1650.	3.3	241
32	Dynamic Approximation of Spatiotemporal Receptive Fields in Nonlinear Neural Field Models. <i>Neural Computation</i> , 2002, 14, 1801-1825.	1.3	17
33	An abstract model of a cortical hypercolumn. , 0, , .		3
34	Dynamics and Constancy in Cortical Spatiotemporal Patterns of Orientation Processing. <i>Science</i> , 2002, 295, 512-515.	6.0	83
36	Thalamocortical control of feedâ€‘forward inhibition in awake somatosensory â€‘barrelâ€™ cortex. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2002, 357, 1717-1727.	1.8	101
37	Opponent Inhibition. <i>Neuron</i> , 2002, 33, 131-142.	3.8	49

#	ARTICLE	IF	CITATIONS
38	Suppression without Inhibition in Visual Cortex. <i>Neuron</i> , 2002, 35, 759-771.	3.8	194
39	Dynamic Modification of Cortical Orientation Tuning Mediated by Recurrent Connections. <i>Neuron</i> , 2002, 36, 945-954.	3.8	118
40	Integration of Thalamic Inputs to Cat Primary Visual Cortex. , 2002, , 319-342.		4
41	Orientation Selectivity and Its Modulation by Local and Long-Range Connections in Visual Cortex. , 2002, , 471-ix.		6
42	How Noise Contributes to Contrast Invariance of Orientation Tuning in Cat Visual Cortex. <i>Journal of Neuroscience</i> , 2002, 22, 5118-5128.	1.7	134
43	A Synaptic Explanation of Suppression in Visual Cortex. <i>Journal of Neuroscience</i> , 2002, 22, 10053-10065.	1.7	192
44	Spatial Organization of Receptive Fields of V1 Neurons of Alert Monkeys: Comparison With Responses to Gratings. <i>Journal of Neurophysiology</i> , 2002, 88, 2557-2574.	0.9	75
45	Visual Cortex Neurons of Monkeys and Cats: Temporal Dynamics of the Contrast Response Function. <i>Journal of Neurophysiology</i> , 2002, 88, 888-913.	0.9	167
46	Adaptation and Inhibition Underlie Responses to Time-Varying Interaural Phase Cues in a Model of Inferior Colliculus Neurons. <i>Journal of Neurophysiology</i> , 2002, 88, 2134-2146.	0.9	32
47	Constraints on the Source of Short-Term Motion Adaptation in Macaque Area MT. II. Tuning of Neural Circuit Mechanisms. <i>Journal of Neurophysiology</i> , 2002, 88, 370-382.	0.9	66
48	Orientation Selectivity in Macaque V1: Diversity and Laminar Dependence. <i>Journal of Neuroscience</i> , 2002, 22, 5639-5651.	1.7	563
49	LGN Input to Simple Cells and Contrast-Invariant Orientation Tuning: An Analysis. <i>Journal of Neurophysiology</i> , 2002, 87, 2741-2752.	0.9	45
50	Neural Noise Can Explain Expansive, Power-Law Nonlinearities in Neural Response Functions. <i>Journal of Neurophysiology</i> , 2002, 87, 653-659.	0.9	179
51	Suppression of Neural Responses to Nonoptimal Stimuli Correlates With Tuning Selectivity in Macaque V1. <i>Journal of Neurophysiology</i> , 2002, 87, 1018-1027.	0.9	84
52	Dynamics of Spatial Frequency Tuning in Macaque V1. <i>Journal of Neuroscience</i> , 2002, 22, 1976-1984.	1.7	165
53	The Timing of Response Onset and Offset in Macaque Visual Neurons. <i>Journal of Neuroscience</i> , 2002, 22, 3189-3205.	1.7	164
54	Local correlation-based (‘‘push-pull’’) circuitry can account for non-linear summation of stimuli in a model of cat V1. <i>Neurocomputing</i> , 2002, 44-46, 509-513.	3.5	0
55	Laminar processing of stimulus orientation in cat visual cortex. <i>Journal of Physiology</i> , 2002, 540, 321-333.	1.3	96

#	ARTICLE	IF	CITATIONS
56	A role for inhibition in shaping the temporal flow of information in prefrontal cortex. <i>Nature Neuroscience</i> , 2002, 5, 175-180.	7.1	370
57	Receptive-field construction in cortical inhibitory interneurons. <i>Nature Neuroscience</i> , 2002, 5, 403-404.	7.1	136
58	Dynamics of neuronal sensitivity in visual cortex and local feature discrimination. <i>Nature Neuroscience</i> , 2002, 5, 883-891.	7.1	185
59	Coarse-grained reduction and analysis of a network model of cortical response: I. Drifting grating stimuli. <i>Journal of Computational Neuroscience</i> , 2002, 12, 97-122.	0.6	34
60	The mystery of structure and function of sensory processing areas of the neocortex: a resolution. <i>Journal of Computational Neuroscience</i> , 2002, 13, 187-205.	0.6	12
61	One axon-multiple functions: specificity of lateral inhibitory connections by large basket cells. <i>Journal of Neurocytology</i> , 2002, 31, 255-264.	1.6	36
62	Early Cortical Orientation Selectivity: How Fast Inhibition Decodes the Order of Spike Latencies. <i>Journal of Computational Neuroscience</i> , 2003, 15, 357-365.	0.6	23
63	Large-scale modeling of the primary visual cortex: influence of cortical architecture upon neuronal response. <i>Journal of Physiology (Paris)</i> , 2003, 97, 237-252.	2.1	24
64	Shunting inhibition, a silent step in visual cortical computation. <i>Journal of Physiology (Paris)</i> , 2003, 97, 441-451.	2.1	30
65	$\hat{\beta}$ -Frequency fluctuations of the membrane potential and response selectivity in visual cortical neurons. <i>European Journal of Neuroscience</i> , 2003, 17, 1768-1776.	1.2	40
66	Functionally distinct inhibitory neurons at the first stage of visual cortical processing. <i>Nature Neuroscience</i> , 2003, 6, 1300-1308.	7.1	161
67	Complex Receptive Fields in Primary Visual Cortex. <i>Neuroscientist</i> , 2003, 9, 317-331.	2.6	68
68	Orientation and Direction Selectivity of Synaptic Inputs in Visual Cortical Neurons. <i>Neuron</i> , 2003, 37, 663-680.	3.8	330
69	Dynamics of Orientation Selectivity in the Primary Visual Cortex and the Importance of Cortical Inhibition. <i>Neuron</i> , 2003, 38, 689-699.	3.8	222
70	Understanding Layer 4 of the Cortical Circuit: A Model Based on Cat V1. <i>Cerebral Cortex</i> , 2003, 13, 73-82.	1.6	57
71	Columnar Transformations in Auditory Cortex? A Comparison to Visual and Somatosensory Cortices. <i>Cerebral Cortex</i> , 2003, 13, 83-89.	1.6	130
72	Fast-spike Interneurons and Feedforward Inhibition in Awake Sensory Neocortex. <i>Cerebral Cortex</i> , 2003, 13, 25-32.	1.6	314
73	Oblique Effect: A Neural Basis in the Visual Cortex. <i>Journal of Neurophysiology</i> , 2003, 90, 204-217.	0.9	269

#	ARTICLE	IF	CITATIONS
74	Synaptic Physiology and Receptive Field Structure in the Early Visual Pathway of the Cat. <i>Cerebral Cortex</i> , 2003, 13, 63-69.	1.6	57
75	Receptive Fields and Orientation Selectivity of Simple Cells in Visual Cortex. <i>IETE Journal of Research</i> , 2003, 49, 87-96.	1.8	0
76	A model of direction selectivity in cortical simple cells based on lagged thalamic input and intracortical feedback. , 0, , .		1
77	Learning and Adaptation in a Recurrent Model of V1 Orientation Selectivity. <i>Journal of Neurophysiology</i> , 2003, 89, 2086-2100.	0.9	140
78	Multiplicative Gain Changes Are Induced by Excitation or Inhibition Alone. <i>Journal of Neuroscience</i> , 2003, 23, 10040-10051.	1.7	124
79	Different Roles for Simple-Cell and Complex-Cell Inhibition in V1. <i>Journal of Neuroscience</i> , 2003, 23, 10201-10213.	1.7	80
80	Dynamics of Orientation Tuning in Macaque V1: The Role of Global and Tuned Suppression. <i>Journal of Neurophysiology</i> , 2003, 90, 342-352.	0.9	130
81	Selective Elimination of Corticogeniculate Feedback Abolishes the Electroencephalogram Dependence of Primary Visual Cortical Receptive Fields and Reduces Their Spatial Specificity. <i>Journal of Neuroscience</i> , 2003, 23, 7021-7033.	1.7	31
82	Influence of Contrast on Orientation and Temporal Frequency Tuning in Ferret Primary Visual Cortex. <i>Journal of Neurophysiology</i> , 2004, 91, 2797-2808.	0.9	113
83	Orientation tuning and synchronization in the hypercolumn model. <i>Physical Review E</i> , 2004, 69, 011914.	0.8	2
84	Visual Cortex Neurons of Monkeys and Cats: Temporal Dynamics of the Spatial Frequency Response Function. <i>Journal of Neurophysiology</i> , 2004, 91, 2607-2627.	0.9	75
85	Chromatic adaptation, perceived location, and color tuning properties. <i>Visual Neuroscience</i> , 2004, 21, 275-282.	0.5	7
86	On the Fight Between Excitation and Inhibition: Location Is Everything. <i>Science Signaling</i> , 2004, 2004, pe44-pe44.	1.6	34
87	Tuning curve sharpening for orientation selectivity: coding efficiency and the impact of correlations. <i>Nature Neuroscience</i> , 2004, 7, 1129-1135.	7.1	209
88	Correlation of local and global orientation and spatial frequency tuning in macaque V1. <i>Journal of Physiology</i> , 2004, 557, 923-933.	1.3	39
89	The contributions of inhibition and noise to responses in V1. <i>Neurocomputing</i> , 2004, 58-60, 901-907.	3.5	0
90	Fitting of spatio-temporal receptive fields by sums of Gaussian components. <i>Neurocomputing</i> , 2004, 58-60, 929-934.	3.5	3
91	Response selectivity and $\hat{f}^3$ -frequency fluctuations of the membrane potential in visual cortical neurons. <i>Neurocomputing</i> , 2004, 58-60, 957-963.	3.5	3

#	ARTICLE	IF	CITATIONS
92	Local networks in visual cortex and their influence on neuronal responses and dynamics. Journal of Physiology (Paris), 2004, 98, 429-441.	2.1	21
93	Separation of Spatio-Temporal Receptive Fields into Sums of Gaussian Components. Journal of Computational Neuroscience, 2004, 16, 27-38.	0.6	1
94	A model of contextual interactions and contour detection in primary visual cortex. Neural Networks, 2004, 17, 719-735.	3.3	113
95	A simple cell model with dominating opponent inhibition for robust image processing. Neural Networks, 2004, 17, 647-662.	3.3	19
96	Feedforward, feedback and inhibitory connections in primate visual cortex. Neural Networks, 2004, 17, 625-632.	3.3	137
97	A new view of the primary visual cortex. Neural Networks, 2004, 17, 615-623.	3.3	27
98	Natural Stimulus Statistics Alter the Receptive Field Structure of V1 Neurons. Journal of Neuroscience, 2004, 24, 6991-7006.	1.7	317
99	Adaptive Temporal Integration of Motion in Direction-Selective Neurons in Macaque Visual Cortex. Journal of Neuroscience, 2004, 24, 7305-7323.	1.7	115
100	ATTENTIONAL MODULATION OF VISUAL PROCESSING. Annual Review of Neuroscience, 2004, 27, 611-647.	5.0	969
101	Comparison of different models of orientation selectivity based on distinct intracortical inhibition rules. Vision Research, 2004, 44, 1641-1658.	0.7	11
102	The organization of orientation and spatial frequency in primary visual cortex. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16941-16946.	3.3	44
104	Course 11 Pattern formation in visual cortex. Les Houches Summer School Proceedings, 2005, 80, 477-574.	0.2	3
105	Course 5 Some useful numerical techniques for simulating integrate-and-fire networks. Les Houches Summer School Proceedings, 2005, 80, 179-196.	0.2	0
106	Invariant computations in local cortical networks with balanced excitation and inhibition. Nature Neuroscience, 2005, 8, 194-201.	7.1	282
107	Receptive field structure varies with layer in the primary visual cortex. Nature Neuroscience, 2005, 8, 372-379.	7.1	173
108	Visual receptive field organization. Current Opinion in Neurobiology, 2005, 15, 459-464.	2.0	47
109	Study of spatial frequency selectivity and its spatial organization in the visual cortex through a feedforward model. Neurocomputing, 2005, 65-66, 85-91.	3.5	7
110	Dependence of Visual Cell Properties on Intracortical Synapses Among Hypercolumns: Analysis by a Computer Model. Journal of Computational Neuroscience, 2005, 19, 291-310.	0.6	1

#	ARTICLE	IF	CITATIONS
111	Effect of Stimulus Size on the Dynamics of Orientation Selectivity in Macaque V1. <i>Journal of Neurophysiology</i> , 2005, 94, 799-812.	0.9	77
112	Course 9 Irregular activity in large networks of neurons. <i>Les Houches Summer School Proceedings</i> , 2005, 80, 341-406.	0.2	20
113	Chromatic Gain Controls in Visual Cortical Neurons. <i>Journal of Neuroscience</i> , 2005, 25, 4779-4792.	1.7	98
114	Short-Term Synaptic Depression Causes a Non-Monotonic Response to Correlated Stimuli. <i>Journal of Neuroscience</i> , 2005, 25, 8416-8431.	1.7	65
115	Neuromorphic implementation of orientation hypercolumns. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2005, 52, 1049-1060.	0.1	104
116	Coding of color and form in the geniculostriate visual pathway (invited review). <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005, 22, 2013.	0.8	132
117	Quantitative analysis of functional clustering of neurons in the macaque inferior temporal cortex. <i>Neuroscience Research</i> , 2005, 52, 311-322.	1.0	22
118	Direction Selectivity of Excitation and Inhibition in Simple Cells of the Cat Primary Visual Cortex. <i>Neuron</i> , 2005, 45, 133-145.	3.8	231
119	Bottom-up and top-down dynamics in visual cortex. <i>Progress in Brain Research</i> , 2005, 149, 65-81.	0.9	23
120	Early and Late Mechanisms of Surround Suppression in Striate Cortex of Macaque. <i>Journal of Neuroscience</i> , 2005, 25, 11666-11675.	1.7	245
121	The generation of receptive-field structure in cat primary visual cortex. <i>Progress in Brain Research</i> , 2006, 154, 73-92.	0.9	4
122	Circuits that build visual cortical receptive fields. <i>Trends in Neurosciences</i> , 2006, 29, 30-39.	4.2	78
123	Direction Selectivity of Neurons in the Striate Cortex Increases as Stimulus Contrast Is Decreased. <i>Journal of Neurophysiology</i> , 2006, 95, 2705-2712.	0.9	15
124	Origins of Cross-Orientation Suppression in the Visual Cortex. <i>Journal of Neurophysiology</i> , 2006, 96, 1755-1764.	0.9	70
125	Comparison Among Some Models of Orientation Selectivity. <i>Journal of Neurophysiology</i> , 2006, 96, 404-419.	0.9	37
126	Mechanisms underlying cross-orientation suppression in cat visual cortex. <i>Nature Neuroscience</i> , 2006, 9, 552-561.	7.1	158
127	Attentional modulation of firing rate and synchrony in a model cortical network. <i>Journal of Computational Neuroscience</i> , 2006, 20, 247-264.	0.6	103
128	A Cortical Based Model of Perceptual Completion in the Roto-Translation Space. <i>Journal of Mathematical Imaging and Vision</i> , 2006, 24, 307-326.	0.8	238



#	ARTICLE	IF	CITATIONS
129	Loose-patchâ€“juxtacellular recording in vivoâ€“A method for functional characterization and labeling of neurons in macaque V1. <i>Journal of Neuroscience Methods</i> , 2006, 156, 37-49.	1.3	49
130	Travelling waves and EEG patterns during epileptic seizure: Analysis with an integrate-and-fire neural network. <i>Journal of Theoretical Biology</i> , 2006, 242, 171-187.	0.8	50
131	Laminar processing in the visual cortical column. <i>Current Opinion in Neurobiology</i> , 2006, 16, 377-384.	2.0	91
132	Estimation of synaptic conductances. <i>Journal of Physiology (Paris)</i> , 2006, 100, 31-42.	2.1	20
133	A neural model of surface perception: Lightness, anchoring, and filling-in. <i>Spatial Vision</i> , 2006, 19, 263-321.	1.4	81
134	Receptive Field Properties of Neurons in the Early Visual Cortex Revealed by Local Spectral Reverse Correlation. <i>Journal of Neuroscience</i> , 2006, 26, 3269-3280.	1.7	49
135	Angularly Nonspecific Response Suppression in Rat Barrel Cortex. <i>Cerebral Cortex</i> , 2006, 17, 599-609.	1.6	23
136	Orientation selectivity in visual cortex by fluctuation-controlled criticality. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12911-12916.	3.3	35
137	Dynamic Spatial Processing Originates in Early Visual Pathways. <i>Journal of Neuroscience</i> , 2006, 26, 11763-11774.	1.7	51
138	A Multichip Pulse-Based Neuromorphic Infrastructure and Its Application to a Model of Orientation Selectivity. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2007, 54, 981-993.	0.1	108
139	Effects of Inhibitory Gain and Conductance Fluctuations in a Simple Model for Contrast-Invariant Orientation Tuning in Cat V1. <i>Journal of Neurophysiology</i> , 2007, 98, 63-78.	0.9	16
140	Similarity and Diversity in Visual Cortex: Is There a Unifying Theory of Cortical Computation?. <i>Neuroscientist</i> , 2007, 13, 639-656.	2.6	86
141	A Biologically Realistic Model of Contrast Invariant Orientation Tuning by Thalamocortical Synaptic Depression. <i>Journal of Neuroscience</i> , 2007, 27, 10230-10239.	1.7	44
142	Stimulus Feature Selectivity in Excitatory and Inhibitory Neurons in Primary Visual Cortex. <i>Journal of Neuroscience</i> , 2007, 27, 10333-10344.	1.7	165
143	The Emergence of Contrast-Invariant Orientation Tuning in Simple Cells of Cat Visual Cortex. <i>Neuron</i> , 2007, 54, 137-152.	3.8	217
144	Melting the Iceberg: Contrast Invariance in Visual Cortex. <i>Neuron</i> , 2007, 54, 11-13.	3.8	24
145	The dynamics of visual responses in the primary visual cortex. <i>Progress in Brain Research</i> , 2007, 165, 21-32.	0.9	35
146	Internal Spatial Organization of Receptive Fields of Complex Cells in the Early Visual Cortex. <i>Journal of Neurophysiology</i> , 2007, 98, 1194-1212.	0.9	24

#	ARTICLE	IF	CITATIONS
147	Direction selectivity of simple cells in the primary visual cortex: Comparison of two alternative mathematical models. I: Response to drifting gratings. <i>Computers in Biology and Medicine</i> , 2007, 37, 398-414.	3.9	4
148	Direction selectivity of simple cells in the primary visual cortex: Comparison of two alternative mathematical models. II: Velocity tuning and response to moving bars. <i>Computers in Biology and Medicine</i> , 2007, 37, 598-610.	3.9	4
149	Fast numerical methods for simulating large-scale integrate-and-fire neuronal networks. <i>Journal of Computational Neuroscience</i> , 2007, 22, 81-100.	0.6	34
150	Retinal and cortical nonlinearities combine to produce masking in V1 responses to plaids. <i>Journal of Computational Neuroscience</i> , 2008, 25, 390-400.	0.6	7
151	Possible mechanisms underlying tilt aftereffect in the primary visual cortex: A critical analysis with the aid of simple computational models. <i>Vision Research</i> , 2008, 48, 1456-1470.	0.7	5
152	Possible Role of Dendritic Compartmentalization in the Spatial Working Memory Circuit. <i>Journal of Neuroscience</i> , 2008, 28, 7699-7724.	1.7	25
153	GABA-mediated inhibition correlates with orientation selectivity in primary visual cortex of cat. <i>Neuroscience</i> , 2008, 155, 914-922.	1.1	36
154	Comparative study on the offset responses of simple cells and complex cells in the primary visual cortex of the cat. <i>Neuroscience</i> , 2008, 156, 365-373.	1.1	25
155	Global evaluation of contributions of GABA A , AMPA and NMDA receptors to orientation maps in cat's visual cortex. <i>NeuroImage</i> , 2008, 40, 776-787.	2.1	25
156	Efficient coding in heterogeneous neuronal populations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 16344-16349.	3.3	132
157	Asymmetric Synaptic Depression in Cortical Networks. <i>Cerebral Cortex</i> , 2008, 18, 771-788.	1.6	31
158	Stimulus Dependency and Mechanisms of Surround Modulation in Cortical Area MT. <i>Journal of Neuroscience</i> , 2008, 28, 13889-13906.	1.7	45
159	The Orientation Selectivity of Color-Responsive Neurons in Macaque V1. <i>Journal of Neuroscience</i> , 2008, 28, 8096-8106.	1.7	160
160	Lack of Orientation and Direction Selectivity in a Subgroup of Fast-Spiking Inhibitory Interneurons: Cellular and Synaptic Mechanisms and Comparison with Other Electrophysiological Cell Types. <i>Cerebral Cortex</i> , 2008, 18, 1058-1078.	1.6	88
161	Kinetic theory for neuronal networks with fast and slow excitatory conductances driven by the same spike train. <i>Physical Review E</i> , 2008, 77, 041915.	0.8	35
162	Dynamics of Tuning in the Fourier Domain. <i>Journal of Neurophysiology</i> , 2008, 100, 239-248.	0.9	24
163	Visualizing neuronal neconnectivity with connectivity pattern tables twork c. <i>Frontiers in Neuroinformatics</i> , 2009, 3, 39.	1.3	17
164	The linearity and selectivity of neuronal responses in awake visual cortex. <i>Journal of Vision</i> , 2009, 9, 12-12.	0.1	32

#	ARTICLE	IF	CITATIONS
165	Network-induced chaos in integrate-and-fire neuronal ensembles. <i>Physical Review E</i> , 2009, 80, 031918.	0.8	15
166	Fokker-Planck description of conductance-based integrate-and-fire neuronal networks. <i>Physical Review E</i> , 2009, 80, 021904.	0.8	15
167	A Second Function of Gamma Frequency Oscillations: An E%-Max Winner-Take-All Mechanism Selects Which Cells Fire. <i>Journal of Neuroscience</i> , 2009, 29, 7497-7503.	1.7	135
168	The Embedded Neuron, the Enactive Field?. , 2009, , .		9
169	œœ Look in Your Eyes, Honeyœœ Internal Face Features Induce Spatial Frequency Preference for Human Face Processing. <i>PLoS Computational Biology</i> , 2009, 5, e1000329.	1.5	45
170	Towards Reproducible Descriptions of Neuronal Network Models. <i>PLoS Computational Biology</i> , 2009, 5, e1000456.	1.5	149
171	The Operating Regime of Local Computations in Primary Visual Cortex. <i>Cerebral Cortex</i> , 2009, 19, 2166-2180.	1.6	36
172	Integrating contrast invariance into a model for cortical orientation map formation. <i>Neurocomputing</i> , 2009, 72, 1887-1899.	3.5	2
173	Functional geometry of the horizontal connectivity in the primary visual cortex. <i>Journal of Physiology (Paris)</i> , 2009, 103, 37-45.	2.1	20
174	Control of the temporal interplay between excitation and inhibition by the statistics of visual input. <i>BMC Neuroscience</i> , 2009, 10, .	0.8	2
175	Linear and nonlinear systems analysis of the visual system: Why does it seem so linear?. <i>Vision Research</i> , 2009, 49, 907-921.	0.7	43
176	Dissociation of Neural Mechanisms Underlying Orientation Processing in Humans. <i>Current Biology</i> , 2009, 19, 1458-1462.	1.8	19
177	Analysis of the interaction between the retinal ON and OFF channels using CNNœœUM models. <i>International Journal of Circuit Theory and Applications</i> , 2009, 37, 87-108.	1.3	8
178	A neuronal network model of primary visual cortex explains spatial frequency selectivity. <i>Journal of Computational Neuroscience</i> , 2009, 26, 271-287.	0.6	23
179	Library-based numerical reduction of the HodgkinœœHuxley neuron for network simulation. <i>Journal of Computational Neuroscience</i> , 2009, 27, 369-390.	0.6	17
180	Spatial attention in area V4 is mediated by circuits in primary visual cortex. <i>Neural Networks</i> , 2009, 22, 1039-1054.	3.3	10
181	Inhibitory Stabilization of the Cortical Network Underlies Visual Surround Suppression. <i>Neuron</i> , 2009, 62, 578-592.	3.8	398
182	Cooling in cat visual cortex: stability of orientation selectivity despite changes in responsiveness and spike width. <i>Neuroscience</i> , 2009, 164, 777-787.	1.1	8

#	ARTICLE	IF	CITATIONS
183	Coherent Behavior in Neuronal Networks. , 2009, , .		5
184	Visual Receptive Field Structure of Cortical Inhibitory Neurons Revealed by Two-Photon Imaging Guided Recording. <i>Journal of Neuroscience</i> , 2009, 29, 10520-10532.	1.7	143
185	LFP spectral peaks in V1 cortex: network resonance and cortico-cortical feedback. <i>Journal of Computational Neuroscience</i> , 2010, 29, 495-507.	0.6	69
186	Spectrum of Lyapunov exponents of non-smooth dynamical systems of integrate-and-fire type. <i>Journal of Computational Neuroscience</i> , 2010, 28, 229-245.	0.6	24
187	Pseudo-Lyapunov exponents and predictability of Hodgkin-Huxley neuronal network dynamics. <i>Journal of Computational Neuroscience</i> , 2010, 28, 247-266.	0.6	16
188	Functional consequences of correlated excitatory and inhibitory conductances in cortical networks. <i>Journal of Computational Neuroscience</i> , 2010, 28, 579-594.	0.6	71
189	The effects of acute alcohol exposure on the response properties of neurons in visual cortex area 17 of cats. <i>Toxicology and Applied Pharmacology</i> , 2010, 243, 348-358.	1.3	16
190	NineML â€” a description language for spiking neuron network modeling: the user layer. <i>BMC Neuroscience</i> , 2010, 11, .	0.8	5
191	Distribution of vestibulospinal contacts on the dendrites of ipsilateral splenius motoneurons: An anatomical substrate for push-pull interactions during vestibulocollic reflexes. <i>Brain Research</i> , 2010, 1333, 9-27.	1.1	14
192	Correlation between spatial frequency and orientation selectivity in V1 cortex: Implications of a network model. <i>Vision Research</i> , 2010, 50, 2261-2273.	0.7	20
193	Intervening inhibition underlies simple-cell receptive field structure in visual cortex. <i>Nature Neuroscience</i> , 2010, 13, 89-96.	7.1	113
194	Visual Representations by Cortical Somatostatin Inhibitory Neuronsâ€”Selective But with Weak and Delayed Responses. <i>Journal of Neuroscience</i> , 2010, 30, 14371-14379.	1.7	211
195	V1 orientation plasticity is explained by broadly tuned feedforward inputs and intracortical sharpening. <i>Visual Neuroscience</i> , 2010, 27, 57-73.	0.5	16
196	A Dynamic Neural Field Model of Mesoscopic Cortical Activity Captured with Voltage-Sensitive Dye Imaging. <i>PLoS Computational Biology</i> , 2010, 6, e1000919.	1.5	53
197	Hebbian Plasticity and Homeostasis in a Model of Hypercolumn of the Visual Cortex. <i>Neural Computation</i> , 2010, 22, 1837-1859.	1.3	6
198	Predictive Coding as a Model of Response Properties in Cortical Area V1. <i>Journal of Neuroscience</i> , 2010, 30, 3531-3543.	1.7	226
199	Broad Inhibition Sharpens Orientation Selectivity by Expanding Input Dynamic Range in Mouse Simple Cells. <i>Neuron</i> , 2011, 71, 542-554.	3.8	148
200	Statistical Comparison of Spike Responses to Natural Stimuli in Monkey Area V1 With Simulated Responses of a Detailed Laminar Network Model for a Patch of V1. <i>Journal of Neurophysiology</i> , 2011, 105, 757-778.	0.9	25

#	ARTICLE	IF	CITATIONS
201	The horizontal tuning of face perception relies on the processing of intermediate and high spatial frequencies. <i>Journal of Vision</i> , 2011, 11, 1-1.	0.1	40
202	A Computational Study of How Orientation Bias in the Lateral Geniculate Nucleus Can Give Rise to Orientation Selectivity in Primary Visual Cortex. <i>Frontiers in Systems Neuroscience</i> , 2011, 5, 81.	1.2	19
203	The Wagon Wheel Illusions and models of orientation selection. <i>Journal of Computational Neuroscience</i> , 2011, 31, 273-284.	0.6	1
204	Effects of electrical coupling among layer 4 inhibitory interneurons on contrast-invariant orientation tuning. <i>Experimental Brain Research</i> , 2011, 208, 127-138.	0.7	3
205	A numerical solver for a nonlinear Fokker-Planck equation representation of neuronal network dynamics. <i>Journal of Computational Physics</i> , 2011, 230, 1084-1099.	1.9	34
206	Adaptation of the simple or complex nature of V1 receptive fields to visual statistics. <i>Nature Neuroscience</i> , 2011, 14, 1053-1060.	7.1	53
207	Suppressive Mechanisms in Monkey V1 Help to Solve the Stereo Correspondence Problem. <i>Journal of Neuroscience</i> , 2011, 31, 8295-8305.	1.7	34
208	Untuned Suppression Makes a Major Contribution to the Enhancement of Orientation Selectivity in Macaque V1. <i>Journal of Neuroscience</i> , 2011, 31, 15972-15982.	1.7	38
209	Functional Elimination of Excitatory Feedforward Inputs Underlies Developmental Refinement of Visual Receptive Fields in Zebrafish. <i>Journal of Neuroscience</i> , 2011, 31, 5460-5469.	1.7	29
210	Neocortical layer 4 as a pluripotent function linearizer. <i>Journal of Neurophysiology</i> , 2011, 105, 1342-1360.	0.9	28
211	Power-Law Input-Output Transfer Functions Explain the Contrast-Response and Tuning Properties of Neurons in Visual Cortex. <i>PLoS Computational Biology</i> , 2011, 7, e1001078.	1.5	30
212	A Multi-Compartment Model for Interneurons in the Dorsal Lateral Geniculate Nucleus. <i>PLoS Computational Biology</i> , 2011, 7, e1002160.	1.5	36
213	Model Cortical Association Fields Account for the Time Course and Dependence on Target Complexity of Human Contour Perception. <i>PLoS Computational Biology</i> , 2011, 7, e1002162.	1.5	10
214	Topological effects on dynamics in complex pulse-coupled networks of integrate-and-fire type. <i>Physical Review E</i> , 2012, 85, 036104.	0.8	3
215	Inter-Neuronal Correlation Distinguishes Mechanisms of Direction Selectivity in Cortical Circuit Models. <i>Journal of Neuroscience</i> , 2012, 32, 8800-8816.	1.7	12
216	Integrate-and-fire vs Poisson models of LGN input to V1 cortex: noisier inputs reduce orientation selectivity. <i>Journal of Computational Neuroscience</i> , 2012, 33, 559-572.	0.6	10
217	A group-decision making model of orientation detection. , 2012, , .		9
218	Feedforward Origins of Response Variability Underlying Contrast Invariant Orientation Tuning in Cat Visual Cortex. <i>Neuron</i> , 2012, 74, 911-923.	3.8	57

#	ARTICLE	IF	CITATIONS
219	Broadening of Inhibitory Tuning Underlies Contrast-Dependent Sharpening of Orientation Selectivity in Mouse Visual Cortex. <i>Journal of Neuroscience</i> , 2012, 32, 16466-16477.	1.7	63
220	The Mechanism of Orientation Selectivity in Primary Visual Cortex without a Functional Map. <i>Journal of Neuroscience</i> , 2012, 32, 4049-4064.	1.7	118
221	Mechanisms of Neuronal Computation in Mammalian Visual Cortex. <i>Neuron</i> , 2012, 75, 194-208.	3.8	160
222	Extended difference-of-Gaussians model incorporating cortical feedback for relay cells in the lateral geniculate nucleus of cat. <i>Cognitive Neurodynamics</i> , 2012, 6, 307-324.	2.3	21
223	Broadening of Cortical Inhibition Mediates Developmental Sharpening of Orientation Selectivity. <i>Journal of Neuroscience</i> , 2012, 32, 3981-3991.	1.7	56
224	Fast Recruitment of Recurrent Inhibition in the Cat Visual Cortex. <i>PLoS ONE</i> , 2012, 7, e40601.	1.1	19
225	Transformation-invariant visual representations in self-organizing spiking neural networks. <i>Frontiers in Computational Neuroscience</i> , 2012, 6, 46.	1.2	17
226	A Retinal Source of Spatial Contrast Gain Control. <i>Journal of Neuroscience</i> , 2012, 32, 9824-9830.	1.7	18
227	Activation of specific interneurons improves V1 feature selectivity and visual perception. <i>Nature</i> , 2012, 488, 379-383.	13.7	530
228	A minimal mechanistic model for temporal signal processing in the lateral geniculate nucleus. <i>Cognitive Neurodynamics</i> , 2012, 6, 259-281.	2.3	12
229	Coarse-grained event tree analysis for quantifying Hodgkin-Huxley neuronal network dynamics. <i>Journal of Computational Neuroscience</i> , 2012, 32, 55-72.	0.6	0
230	Computational Identification of Receptive Fields. <i>Annual Review of Neuroscience</i> , 2013, 36, 103-120.	5.0	79
231	Layer 4 in Primary Visual Cortex of the Awake Rabbit: Contrasting Properties of Simple Cells and Putative Feedforward Inhibitory Interneurons. <i>Journal of Neuroscience</i> , 2013, 33, 11372-11389.	1.7	33
232	Cortical Balance of Excitation and Inhibition Is Regulated by the Rate of Synaptic Activity. <i>Journal of Neuroscience</i> , 2013, 33, 14359-14368.	1.7	55
233	A collaborative decision-making model for orientation detection. <i>Applied Soft Computing Journal</i> , 2013, 13, 302-314.	4.1	5
234	Local circuit inhibition in the cerebral cortex as the source of gain control and untuned suppression. <i>Neural Networks</i> , 2013, 37, 172-181.	3.3	12
235	Effects of stimulus spatial frequency, size, and luminance contrast on orientation tuning of neurons in the dorsal lateral geniculate nucleus of cat. <i>Neuroscience Research</i> , 2013, 77, 143-154.	1.0	11
236	Corticocortical Feedback Contributes to Surround Suppression in V1 of the Alert Primate. <i>Journal of Neuroscience</i> , 2013, 33, 8504-8517.	1.7	161

#	ARTICLE	IF	CITATIONS
237	Sublinear binocular integration preserves orientation selectivity in mouse visual cortex. <i>Nature Communications</i> , 2013, 4, 2088.	5.8	41
238	Fluoxetine and serotonin facilitate attractive-adaptation-induced orientation plasticity in adult cat visual cortex. <i>European Journal of Neuroscience</i> , 2013, 38, 2065-2077.	1.2	35
239	Learning Contrast-Invariant Cancellation of Redundant Signals in Neural Systems. <i>PLoS Computational Biology</i> , 2013, 9, e1003180.	1.5	20
240	Causal and Structural Connectivity of Pulse-Coupled Nonlinear Networks. <i>Physical Review Letters</i> , 2013, 111, 054102.	2.9	35
241	Digit recognition in a simplified visual cortex model. , 2013, , .		1
242	Mechanisms of Seizure Propagation in 2-Dimensional Centre-Surround Recurrent Networks. <i>PLoS ONE</i> , 2013, 8, e71369.	1.1	27
243	The Effects of Short-Term Synaptic Depression at Thalamocortical Synapses on Orientation Tuning in Cat V1. <i>PLoS ONE</i> , 2014, 9, e106046.	1.1	4
244	Analysis of sampling artifacts on the Granger causality analysis for topology extraction of neuronal dynamics. <i>Frontiers in Computational Neuroscience</i> , 2014, 8, 75.	1.2	12
245	Corticocortical feedback increases the spatial extent of normalization. <i>Frontiers in Systems Neuroscience</i> , 2014, 8, 105.	1.2	42
246	Genetic disruption of the On visual pathway affects cortical orientation selectivity and contrast sensitivity in mice. <i>Journal of Neurophysiology</i> , 2014, 111, 2276-2286.	0.9	18
248	Conductance-based refractory density model of primary visual cortex. <i>Journal of Computational Neuroscience</i> , 2014, 36, 297-319.	0.6	28
249	Dynamics of the exponential integrate-and-fire model with slow currents and adaptation. <i>Journal of Computational Neuroscience</i> , 2014, 37, 161-180.	0.6	23
250	Large-Scale Axonal Reorganization of Inhibitory Neurons following Retinal Lesions. <i>Journal of Neuroscience</i> , 2014, 34, 1625-1632.	1.7	42
251	A cortical integrate-and-fire neural network model for blind decoding of visual prosthetic stimulation. , 2014, 2014, 1715-8.		0
252	A Feedforward Inhibitory Circuit Mediates Lateral Refinement of Sensory Representation in Upper Layer 2/3 of Mouse Primary Auditory Cortex. <i>Journal of Neuroscience</i> , 2014, 34, 13670-13683.	1.7	98
253	Cell directional spread determines accuracy, precision, and length of the neuronal population vector. <i>Experimental Brain Research</i> , 2014, 232, 2391-2405.	0.7	9
254	Dependence of V2 illusory contour response on V1 cell properties and topographic organization. <i>Biological Cybernetics</i> , 2014, 108, 337-354.	0.6	12
255	Development of spatial coarse-to-fine processing in the visual pathway. <i>Journal of Computational Neuroscience</i> , 2014, 36, 401-414.	0.6	9

#	ARTICLE	IF	CITATIONS
256	Emerging feed-forward inhibition allows the robust formation of direction selectivity in the developing ferret visual cortex. <i>Journal of Neurophysiology</i> , 2014, 111, 2355-2373.	0.9	19
257	Orientation selectivity based structure for texture classification. , 2014, , .		0
258	A cortical locus for anisotropic overlay suppression of stimuli presented at fixation. <i>Visual Neuroscience</i> , 2015, 32, E023.	0.5	8
259	Contrast invariance of orientation tuning in cat primary visual cortex neurons depends on stimulus size. <i>Journal of Physiology</i> , 2015, 593, 4485-4498.	1.3	9
260	Effect of Contrast on Visual Spatial Summation in Different Cell Categories in Cat Primary Visual Cortex. <i>PLoS ONE</i> , 2015, 10, e0144403.	1.1	2
261	Visual pattern degradation based image quality assessment. , 2015, , .		0
262	Reduced-reference image quality assessment with orientation selectivity based visual pattern. , 2015, , .		3
263	Transition to Chaos in Random Neuronal Networks. <i>Physical Review X</i> , 2015, 5, .	2.8	88
264	STDP in lateral connections creates category-based perceptual cycles for invariance learning with multiple stimuli. <i>Biological Cybernetics</i> , 2015, 109, 215-239.	0.6	1
265	How Inhibitory Circuits in the Thalamus Serve Vision. <i>Annual Review of Neuroscience</i> , 2015, 38, 309-329.	5.0	77
266	Neurons in cat V1 show significant clustering by degree of tuning. <i>Journal of Neurophysiology</i> , 2015, 113, 2555-2581.	0.9	4
267	Harmonic and Geometric Analysis. <i>Advanced Courses in Mathematics, CRM Barcelona</i> , 2015, , .	0.3	3
269	Visual Orientation Selectivity Based Structure Description. <i>IEEE Transactions on Image Processing</i> , 2015, 24, 4602-4613.	6.0	60
270	Contrast invariance of orientation tuning in the lateral geniculate nucleus of the feline visual system. <i>European Journal of Neuroscience</i> , 2015, 42, 2250-2257.	1.2	5
271	Cortical Correlates of Low-Level Perception: From Neural Circuits to Percepts. <i>Neuron</i> , 2015, 88, 110-126.	3.8	53
272	Transcranial Magnetic Stimulation Changes Response Selectivity of Neurons in the Visual Cortex. <i>Brain Stimulation</i> , 2015, 8, 613-623.	0.7	13
273	Push-Pull Receptive Field Organization and Synaptic Depression: Mechanisms for Reliably Encoding Naturalistic Stimuli in V1. <i>Frontiers in Neural Circuits</i> , 2016, 10, 37.	1.4	35
274	Direction selectivity of neurons in the visual cortex is non-linear and lamina-dependent. <i>European Journal of Neuroscience</i> , 2016, 43, 1389-1399.	1.2	3



#	ARTICLE	IF	CITATIONS
275	Categorically distinct types of receptive fields in early visual cortex. <i>Journal of Neurophysiology</i> , 2016, 115, 2556-2576.	0.9	21
276	Mechanisms of Orientation Selectivity in the Primary Visual Cortex. <i>Annual Review of Vision Science</i> , 2016, 2, 85-107.	2.3	73
277	Orientation selectivity based visual pattern for reduced-reference image quality assessment. <i>Information Sciences</i> , 2016, 351, 18-29.	4.0	81
278	Canonical computations of cerebral cortex. <i>Current Opinion in Neurobiology</i> , 2016, 37, 75-84.	2.0	90
279	Comparison of mechanisms for contrast-invariance of orientation selectivity in simple cells. <i>Neuroscience</i> , 2017, 348, 41-62.	1.1	0
280	Towards building a more complex view of the lateral geniculate nucleus: Recent advances in understanding its role. <i>Progress in Neurobiology</i> , 2017, 156, 214-255.	2.8	50
281	Enhanced Just Noticeable Difference Model for Images With Pattern Complexity. <i>IEEE Transactions on Image Processing</i> , 2017, 26, 2682-2693.	6.0	118
282	Cortical cells reveal APP as a new player in the regulation of GABAergic neurotransmission. <i>Scientific Reports</i> , 2017, 7, 370.	1.6	31
283	The divisive normalization model of V1 neurons: a comprehensive comparison of physiological data and model predictions. <i>Journal of Neurophysiology</i> , 2017, 118, 3051-3091.	0.9	16
284	Receptive Fields and Profiles, and Wavelet Analysis. <i>Lecture Notes in Morphogenesis</i> , 2017, , 45-111.	0.2	0
285	Hierarchical Feature Degradation Based Blind Image Quality Assessment. , 2017, , .		14
286	Spike-Triggered Regression for Synaptic Connectivity Reconstruction in Neuronal Networks. <i>Frontiers in Computational Neuroscience</i> , 2017, 11, 101.	1.2	3
287	Relationship between the Dynamics of Orientation Tuning and Spatiotemporal Receptive Field Structures of Cat LGN Neurons. <i>Neuroscience</i> , 2018, 377, 26-39.	1.1	4
288	Inhibition in Simple Cell Receptive Fields Is Broad and OFF-Subregion Biased. <i>Journal of Neuroscience</i> , 2018, 38, 595-612.	1.7	20
289	Method of experimental synaptic conductance estimation: Limitations of the basic approach and extension to voltage-dependent conductances. <i>Neurocomputing</i> , 2018, 275, 2414-2425.	3.5	8
290	Analysis and numerical solver for excitatory-inhibitory networks with delay and refractory periods. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2018, 52, 1733-1761.	0.8	11
291	Visual physiology of the layer 4 cortical circuit in silico. <i>PLoS Computational Biology</i> , 2018, 14, e1006535.	1.5	75
292	Investigation of Feedback Connections Effect of a Spike Timing Neural Network Model of Early Visual System. , 2018, , .		6

#	ARTICLE	IF	CITATIONS
293	A new approach to solving the feature-binding problem in primate vision. <i>Interface Focus</i> , 2018, 8, 20180021.	1.5	15
294	Does experience provide a permissive or instructive influence on the development of direction selectivity in visual cortex?. <i>Neural Development</i> , 2018, 13, 16.	1.1	9
295	Shaping the collision selectivity in a looming sensitive neuron model with parallel ON and OFF pathways and spike frequency adaptation. <i>Neural Networks</i> , 2018, 106, 127-143.	3.3	39
296	Transplanted Cells Are Essential for the Induction But Not the Expression of Cortical Plasticity. <i>Journal of Neuroscience</i> , 2019, 39, 7529-7538.	1.7	11
297	Blind Image Quality Assessment With Joint Entropy Degradation. <i>IEEE Access</i> , 2019, 7, 30925-30936.	2.6	18
298	Stochastic neural field model of stimulus-dependent variability in cortical neurons. <i>PLoS Computational Biology</i> , 2019, 15, e1006755.	1.5	15
299	Spike Timing Neural Model of Motion Perception and Decision Making. <i>Frontiers in Computational Neuroscience</i> , 2019, 13, 20.	1.2	12
300	Spatial and Temporal Feature-Based Reduced Reference Quality Assessment for Rate-Varying Videos in Wireless Networks. <i>International Journal of Pattern Recognition and Artificial Intelligence</i> , 2019, 33, 1950021.	0.7	1
301	Blind image quality assessment with hierarchy: Degradation from local structure to deep semantics. <i>Journal of Visual Communication and Image Representation</i> , 2019, 58, 353-362.	1.7	22
302	Age-related Spike Timing Dependent Plasticity of Brain-inspired Model of Visual Information Processing with Reinforcement Learning. , 2020, , .		0
303	The ins and outs of inhibitory synaptic plasticity: Neuron types, molecular mechanisms and functional roles. <i>European Journal of Neuroscience</i> , 2021, 54, 6882-6901.	1.2	16
304	A heuristic framework for perceptual saliency prediction. <i>Journal of Visual Communication and Image Representation</i> , 2020, 73, 102913.	1.7	0
305	STDP Training of Hierarchical Spike Timing Model of Visual Information Processing. , 2020, , .		0
306	Parallel Implementation of the Model of Retina Ganglion Cells Layer. , 2020, , .		2
307	Voltage-Gated Intrinsic Conductances Shape the Input-Output Relationship of Cortical Neurons in Behaving Primate V1. <i>Neuron</i> , 2020, 107, 185-196.e4.	3.8	15
308	Local organization of spatial frequency tuning dynamics in the cat visual areas 17 and 18. <i>Journal of Neurophysiology</i> , 2020, 124, 178-191.	0.9	1
309	Systematic Integration of Structural and Functional Data into Multi-scale Models of Mouse Primary Visual Cortex. <i>Neuron</i> , 2020, 106, 388-403.e18.	3.8	163
310	A Robust Collision Perception Visual Neural Network With Specific Selectivity to Darker Objects. <i>IEEE Transactions on Cybernetics</i> , 2020, 50, 5074-5088.	6.2	32

#	ARTICLE	IF	CITATIONS
311	Contrast response in a comprehensive network model of macaque V1. <i>Journal of Vision</i> , 2020, 20, 16.	0.1	13
312	Network mechanism for insect olfaction. <i>Cognitive Neurodynamics</i> , 2021, 15, 103-129.	2.3	5
316	Cellular connectomes as arbiters of local circuit models in the cerebral cortex. <i>Nature Communications</i> , 2021, 12, 2785.	5.8	11
317	Assessment of optogenetically-driven strategies for prosthetic restoration of cortical vision in large-scale neural simulation of V1. <i>Scientific Reports</i> , 2021, 11, 10783.	1.6	6
318	Temporal filtering of luminance and chromaticity in macaque visual cortex. <i>IScience</i> , 2021, 24, 102536.	1.9	2
319	An Anatomically Constrained Model of V1 Simple Cells Predicts the Coexistence of Push and Pull and Broad Inhibition. <i>Journal of Neuroscience</i> , 2021, 41, 7797-7812.	1.7	2
320	A strategy for mapping biophysical to abstract neuronal network models applied to primary visual cortex. <i>PLoS Computational Biology</i> , 2021, 17, e1009007.	1.5	2
323	Coding of Objects in Low-Level Visual Cortical Areas. <i>Lecture Notes in Computer Science</i> , 2005, , 57-63.	1.0	7
324	Large-Scale Computational Modeling of the Primary Visual Cortex. , 2009, , 263-296.		10
325	Orientation Selectivity Tuning of a Spike Timing Neural Network Model of the First Layer of the Human Visual Cortex. <i>Studies in Computational Intelligence</i> , 2019, , 291-303.	0.7	11
326	Modulation of Synchrony by Interneurons. , 2008, , 317-332.		2
327	The emergence of polychronization and feature binding in a spiking neural network model of the primate ventral visual system.. <i>Psychological Review</i> , 2018, 125, 545-571.	2.7	11
333	1/4 Contour-, Surface-, and Object-Related Coding in the Visual Cortex. , 2011, , 171-188.		1
334	Biophysical network modeling of the dLGN circuit: Effects of cortical feedback on spatial response properties of relay cells. <i>PLoS Computational Biology</i> , 2018, 14, e1005930.	1.5	6
335	Refractory density model of cortical direction selectivity: Lagged-nonlagged, transient-sustained, and On-Off thalamic neuron-based mechanisms and intracortical amplification. <i>PLoS Computational Biology</i> , 2020, 16, e1008333.	1.5	8
336	Contrast Adaptation Contributes to Contrast-Invariance of Orientation Tuning of Primate V1 Cells. <i>PLoS ONE</i> , 2009, 4, e4781.	1.1	24
337	How Lateral Connections and Spiking Dynamics May Separate Multiple Objects Moving Together. <i>PLoS ONE</i> , 2013, 8, e69952.	1.1	7
338	Granger Causality Network Reconstruction of Conductance-Based Integrate-and-Fire Neuronal Systems. <i>PLoS ONE</i> , 2014, 9, e87636.	1.1	26

#	ARTICLE	IF	CITATIONS
339	Kinetic theory for neuronal network dynamics. Communications in Mathematical Sciences, 2006, 4, 97-127.	0.5	63
340	The role of fluctuations in coarse-grained descriptions of neuronal networks. Communications in Mathematical Sciences, 2012, 10, 307-354.	0.5	7
341	Narrow and Broad $\beta$ Bands Process Complementary Visual Information in Mouse Primary Visual Cortex. ENeuro, 2021, 8, ENEURO.0106-21.2021.	0.9	9
344	Ratio of Average Inhibitory to Excitatory Conductance Modulates the Response of Simple Cell. Lecture Notes in Computer Science, 2006, , 82-89.	1.0	0
345	Visual Cortical Models of Orientation Tuning. , 2009, , 269-275.		0
347	$\frac{1}{4}$ 3D and Spatiotemporal Interpolation in Object and Surface Formation. , 2011, , 209-234.		0
348	Modeling the Emergence of Orientation Selectivity in the Cerebral Cortex. , 2014, , 1-15.		0
355	Enhanced Saliency Prediction via Orientation Selectivity. , 2020, , .		0
357	STDP Plasticity in TRN Within Hierarchical Spike Timing Model of Visual Information Processing. IFIP Advances in Information and Communication Technology, 2020, , 279-290.	0.5	3
358	Brain-Inspired Spike Timing Model of Dynamic Visual Information Perception and Decision Making with STDP and Reinforcement Learning. Lecture Notes in Computer Science, 2020, , 421-435.	1.0	2
359	HPC parallel implementation combining NEST Simulator and Python modules. Cluster Computing, 0, , 1.	3.5	0
362	Sensory coding and contrast invariance emerge from the control of plastic inhibition over emergent selectivity. PLoS Computational Biology, 2021, 17, e1009566.	1.5	5
363	Analytic Model for Feature Maps in the Primary Visual Cortex. Frontiers in Computational Neuroscience, 2022, 16, 659316.	1.2	2
366	Emergence of Orientation Selectivity in the Cerebral Cortex, Modeling. , 2022, , 1294-1307.		0
369	Mechanisms for Spontaneous Symmetry Breaking in Developing Visual Cortex. Physical Review X, 2022, 12, .	2.8	1
371	Classification of natural images inspired by the human visual system. Neurocomputing, 2023, 518, 60-69.	3.5	5
373	Simulations of cortical networks using spatially extended conductance-based neuronal models. Journal of Physiology, 2023, 601, 3123-3139.	1.3	6