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List of Publications by Year
in descending order

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Version: 2024-02-01

76 papers	7,259 citations	81900 39 h-index	98798 67 g-index

79 all docs	79 docs citations	79 times ranked	4428 citing authors

#	Article	IF	Citations
1	Efficient allocation of attentional sensitivity gain in visual cortex reduces foveal sensitivity in visual search. Current Biology, 2022, 32, 26-36.e6.	3.9	3
2	Stereo slant discrimination of planar 3D surfaces: Frontoparallel versus planar matching. Journal of Vision, 2022, 22, 6.	0.3	3
3	Similar masking effects of natural backgrounds on detection performances in humans, macaques, and macaque-V1 population responses. Journal of Neurophysiology, 2021, 125, 2125-2134.	1.8	1
4	The Energy-Normalized MAX Observer Approximates the Ideal Observer Under High-levels of Simultaneous Orientation and Scale Uncertainty in White Noise. Journal of Vision, 2021, 21, 2718.	0.3	0
5	A method to integrate and classify normal distributions. Journal of Vision, 2021, 21, 1.	0.3	17
6	Detection of occluding targets in natural backgrounds. Journal of Vision, 2020, 20, 14.	0.3	3
7	Local reliability weighting explains identification of partially masked objects in natural images. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29363-29370.	7.1	13
8	Theory of Covert Search in Noise Backgrounds Correctly Predicts Asymmetrical Spatial Distributions of Misses and False Alarms. Journal of Vision, 2019, 19, 318a.	0.3	0
9	Effects of Target Amplitude Uncertainty, Background Contrast Uncertainty, and Prior Probability Are Predicted by the Normalized Template-Matching Observer. Journal of Vision, 2019, 19, 79c.	0.3	1
10	Decision-variable correlation. Journal of Vision, 2018, 18, 3.	0.3	15
11	Psychometric functions of uncertain template matching observers. Journal of Vision, 2018, 18, 1.	0.3	6
12	Nonlinear Lateral Interactions in V1 Population Responses Explained by a Contrast Gain Control Model. Journal of Neuroscience, 2018, 38, 10069-10079.	3.6	4
13	Scale-Invariant Visual Capabilities Explained by Topographic Representations of Luminance and Texture in Primate V1. Neuron, 2018, 100, 1504-1512.e4.	8.1	8
14	Natural image and receptive field statistics predict saccade sizes. Nature Neuroscience, 2018, 21, 1591-1599.	14.8	45
15	Contributions of monocular and binocular cues to distance discrimination in natural scenes. Journal of Vision, 2018, 18, 12.	0.3	11
16	Linking V1 Activity to Behavior. Annual Review of Vision Science, 2018, 4, 287-310.	4.4	17
17	Constrained sampling experiments reveal principles of detection in natural scenes. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5731-E5740.	7.1	41
18	Estimating 3D tilt from local image cues in natural scenes. Journal of Vision, 2016, 16, 2.	0.3	23

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19	Calcium imaging with genetically encoded indicators in behaving primates. ELife, 2016, 5, .	6.0	49
20	Optimal speed estimation in natural image movies predicts human performance. Nature Communications, 2015, 6, 7900.	12.8	59
21	Visual search under scotopic lighting conditions. Vision Research, 2015, 113, 155-168.	1.4	23
22	Optimal disparity estimation in natural stereo images. Journal of Vision, 2014, 14, 1-1.	0.3	75
23	Human vision is attuned to the diffuseness of natural light. Journal of Vision, 2014, 14, 15.	0.3	40
24	Retina-V1 model of detectability across the visual field. Journal of Vision, 2014, 14, 22-22.	0.3	42
25	Humans make efficient use of natural image statistics when performing spatial interpolation. Journal of Vision, 2013, 13, 11-11.	0.3	12
26	Decoding natural signals from the peripheral retina. Journal of Vision, 2011, 11, 19-19.	0.3	4
27	Intrinsic position uncertainty explains detection and localization performance in peripheral vision. Journal of Vision, 2011, 11, 18-18.	0.3	55
28	Contributions of ideal observer theory to vision research. Vision Research, 2011, 51, 771-781.	1.4	211
29	Statistics for optimal point prediction in natural images. Journal of Vision, 2011, 11, 14-14.	0.3	41
30	Human Wavelength Discrimination of Monochromatic Light Explained by Optimal Wavelength Decoding of Light of Unknown Intensity. PLoS ONE, 2011, 6, e19248.	2.5	33
31	High-Order Statistics for Point Prediction in Natural Images. , 2011, , .		0
32	Contour statistics in natural images: Grouping across occlusions. Visual Neuroscience, 2009, 26, 109-121.	1.0	98
33	Optimal stimulus encoders for natural tasks. Journal of Vision, 2009, 9, 17-17.	0.3	43
34	Natural Systems Analysis. Visual Neuroscience, 2009, 26, 1-3.	1.0	54
35	Simple summation rule for optimal fixation selection in visual search. Vision Research, 2009, 49, 1286-1294.	1.4	77
36	Complex Dynamics of V1 Population Responses Explained by a Simple Gain-Control Model. Neuron, 2009, 64, 943-956.	8.1	69

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37	61.1: Invited Paper: Gaze Contingent Displays: Analysis of Saccadic Plasticity in Visual Search. Digest of Technical Papers SID International Symposium, 2009, 40, 911-914.	0.3	5
38	Visual Perception and the Statistical Properties of Natural Scenes. Annual Review of Psychology, 2008, 59, 167-192.	17.7	572
39	Optimal Temporal Decoding of Neural Population Responses in a Reaction-Time Visual Detection Task. Journal of Neurophysiology, 2008, 99, 1366-1379.	1.8	58
40	Natural systems analysis. Proceedings of SPIE, 2008, , .	0.8	7
41	Eye movement statistics in humans are consistent with an optimal search strategy. Journal of Vision, 2008, 8, 4.	0.3	154
42	Responses of Neurons in Primary Visual Cortex to Transient Changes in Local Contrast and Luminance. Journal of Neuroscience, 2007, 27, 5063-5067.	3.6	60
43	Optimal decoding of correlated neural population responses in the primate visual cortex. Nature Neuroscience, 2006, 9, 1412-1420.	14.8	184
44	Local luminance and contrast in natural images. Vision Research, 2006, 46, 1585-1598.	1.4	260
45	Visual search: The role of peripheral information measured using gaze-contingent displays. Journal of Vision, 2006, 6, 1.	0.3	86
46	Independence of luminance and contrast in natural scenes and in the early visual system. Nature Neuroscience, 2005, 8, 1690-1697.	14.8	331
47	Optimal eye movement strategies in visual search. Nature, 2005, 434, 387-391.	27.8	666
48	Contrast statistics for foveated visual systems: fixation selection by minimizing contrast entropy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 2039.	1.5	51
49	Visual Cortex Neurons of Monkeys and Cats: Temporal Dynamics of the Spatial Frequency Response Function. Journal of Neurophysiology, 2004, 91, 2607-2627.	1.8	75
50	A Bayesian approach to the evolution of perceptual and cognitive systems. Cognitive Science, 2003, 27, 379-402.	1.7	70
51	A Bayesian approach to the evolution of perceptual and cognitive systems. Cognitive Science, 2003, 27, 379-402.	1.7	31
52	Bayesian natural selection and the evolution of perceptual systems. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 419-448.	4.0	77
53	Visual Cortex Neurons of Monkeys and Cats: Temporal Dynamics of the Contrast Response Function. Journal of Neurophysiology, 2002, 88, 888-913.	1.8	167
54	Illusions, perception and Bayes. Nature Neuroscience, 2002, 5, 508-510.	14.8	208

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55	Motion direction signals in the primary visual cortex of cat and monkey. Visual Neuroscience, 2001, 18, 501-516.	1.0	109
56	Spikes versus BOLD: what does neuroimaging tell us about neuronal activity?. Nature Neuroscience, 2000, 3, 631-633.	14.8	336
57	Spatial Vision. , 2000, , 79-128.		2
58	Motion streaks provide a spatial code for motion direction. Nature, 1999, 400, 65-69.	27.8	289
59	<title>Retinally reconstructed images (RRIs): digital images having a resolution match with the human eye</title>. , 1998, , .		6
60	Visual cortex neurons in monkeys and cats: Detection, discrimination, and identification. Visual Neuroscience, 1997, 14, 897-919.	1.0	261
61	<title>Visual detection following retinal damage: predictions of an inhomogeneous retino-cortical model</title>. , 1996, 2674, 119.		22
62	Separation of low-level and high-level factors in complex tasks: Visual search.. Psychological Review, 1995, 102, 356-378.	3.8	192
63	DISCRIMINATION INFORMATION IN NATURAL RADIANCE SPECTRA. , 1995, , 117-131.		3
64	Adaptation mechanisms in spatial visionâ€”ii. Flash thresholds and background adaptation. Vision Research, 1995, 35, 1595-1609.	1.4	27
65	<title>Visual cortex neurons in monkey and cat: contrast response nonlinearities and stimulus selectivity</title>. , 1994, 2054, 12.		8
66	Cortical neurons: Isolation of contrast gain control. Vision Research, 1992, 32, 1409-1410.	1.4	195
67	Stereopsis at isoluminance in the absence of chromatic aberrations. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1992, 9, 868.	1.5	41
68	The relative contributions of pre-neural and neural factors to areal summation in the fovea. Vision Research, 1991, 31, 1369-1380.	1.4	58
69	Motion selectivity and the contrast-response function of simple cells in the visual cortex. Visual Neuroscience, 1991, 7, 531-546.	1.0	411
70	Color as a source of information in the stereo correspondence process. Vision Research, 1990, 30, 1955-1970.	1.4	72
71	Visual cortical receptive fields in monkey and cat: Spatial and temporal phase transfer function. Vision Research, 1989, 29, 1285-1308.	1.4	113
72	Sequential ideal-observer analysis of visual discriminations.. Psychological Review, 1989, 96, 267-314.	3.8	390

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73	The physical limits of grating visibility. Vision Research, 1987, 27, 1915-1924.	1.4	188
74	Physical limits of acuity and hyperacuity. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1984, 1, 775.	1.5	141
75	Mechanisms of visual sensitivity: Backgrounds and early dark adaptation. Vision Research, 1983, 23, 1423-1432.	1.4	62
76	Effects of bleaching and backgrounds on the flash response of the cone system. Journal of Physiology, 1981, 312, 413-434.	2.9	70