Michael W Spratling

List of Publications by Year
in descending order

52 papers	2,795 citations	331642 21 h-index	206102 48 g-index
52 all docs	52 docs citations	52 times ranked	2272 citing authors

#	Article	IF	Citations
1	Disordered visual processing and oscillatory brain activity in autism and Williams Syndrome. NeuroReport, 2001, 12, 2697-2700.	1.2	380
2	Gamma Oscillations and Object Processing in the Infant Brain. , 2000, 290, 1582-1585.		275
3	A review of predictive coding algorithms. Brain and Cognition, 2017, 112, 92-97.	1.8	265
4	Predictive Coding as a Model of Response Properties in Cortical Area V1. Journal of Neuroscience, 2010, 30, 3531-3543.	3.6	226
5	Predictive coding as a model of biased competition in visual attention. Vision Research, 2008, 48, 1391-1408.	1.4	210
6	Neuroconstructivism. Developmental Science, 2007, 10, 75-83.	2.4	177
7	A Feedback Model of Visual Attention. Journal of Cognitive Neuroscience, 2004, 16, 219-237.	2.3	121
8	Précis of <i>Neuroconstructivism: How the Brain Constructs Cognition</i>. Behavioral and Brain Sciences, 2008, 31, 321-331.	0.7	114
9	Reconciling Predictive Coding and Biased Competition Models of Cortical Function. Frontiers in Computational Neuroscience, 2008, 2, 4.	2.1	101
10	Image Segmentation Using a Sparse Coding Model of Cortical Area V1. IEEE Transactions on Image Processing, 2013, 22, 1631-1643.	9.8	97
11	Unsupervised Learning of Generative and Discriminative Weights Encoding Elementary Image Components in a Predictive Coding Model of Cortical Function. Neural Computation, 2012, 24, 60-103.	2.2	84
12	Predictive coding as a model of cognition. Cognitive Processing, 2016, 17, 279-305.	1.4	65
13	Cortical Region Interactions and the Functional Role of Apical Dendrites. Behavioral and Cognitive Neuroscience Reviews, 2002, 1, 219-228.	3.9	61
14	A single functional model accounts for the distinct properties of suppression in cortical area V1. Vision Research, 2011, 51, 563-576.	1.4	61
15	Predictive coding accounts for V1 response properties recorded using reverse correlation. Biological Cybernetics, 2012, 106, 37-49.	1.3	51
16	Preintegration Lateral Inhibition Enhances Unsupervised Learning. Neural Computation, 2002, 14, 2157-2179.	2.2	47
17	Predictive coding as a model of the V1 saliency map hypothesis. Neural Networks, 2012, 26, 7-28.	5.9	42
18	A Hierarchical Predictive Coding Model of Object Recognition in Natural Images. Cognitive Computation, 2017, 9, 151-167.	5.2	41

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19	Unsupervised Learning of Overlapping Image Components Using Divisive Input Modulation. Computational Intelligence and Neuroscience, 2009, 2009, 1-19.	1.7	38
20	A feedback model of perceptual learning and categorization. Visual Cognition, 2006, 13, 129-165.	1.6	31
21	Dendritic Inhibition Enhances Neural Coding Properties. Cerebral Cortex, 2001, 11, 1144-1149.	2.9	24
22	Learning viewpoint invariant perceptual representations from cluttered images. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2005, 27, 753-761.	13.9	22
23	Multiplicative Gain Modulation Arises Through Unsupervised Learning in a Predictive Coding Model of Cortical Function. Neural Computation, 2011, 23, 1536-1567.	2.2	18
24	A neural implementation of Bayesian inference based on predictive coding. Connection Science, 2016, 28, 346-383.	3.0	18
25	A single functional model of drivers and modulators in cortex. Journal of Computational Neuroscience, 2014, 36, 97-118.	1.0	17
26	Learning Synaptic Clusters for Nonlinear Dendritic Processing. Neural Processing Letters, 2000, 11, 17-27.	3.2	16
27	Classification using sparse representations: a biologically plausible approach. Biological Cybernetics, 2014, 108, 61-73.	1.3	16
28	Exploring the functional significance of dendritic inhibition in cortical pyramidal cells. Neurocomputing, 2003, 52-54, 389-395.	5.9	15
29	Explaining away results in accurate and tolerant template matching. Pattern Recognition, 2020, 104, 107337.	8.1	15
30	A Model of Partial Reference Frame Transforms Through Pooling of Gain-Modulated Responses. Cerebral Cortex, 2013, 23, 1230-1239.	2.9	13
31	Distinguishing theory from implementation in predictive coding accounts of brain function. Behavioral and Brain Sciences, 2013, 36, 231-232.	0.7	12
32	A neural model of binocular saccade planning and vergence control. Adaptive Behavior, 2015, 23, 265-282.	1.9	12
33	Fitting predictive coding to the neurophysiological data. Brain Research, 2019, 1720, 146313.	2.2	12
34	A model of non-linear interactions between cortical top-down and horizontal connections explains the attentional gating of collinear facilitation. Vision Research, 2009, 49, 553-568.	1.4	11
35	A neural implementation of the Hough transform and the advantages of explaining away. Image and Vision Computing, 2016, 52, 15-24.	4.5	11
36	Neural coding strategies and mechanisms of competition. Cognitive Systems Research, 2004, 5, 93-117.	2.7	10

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37	Pre-synaptic lateral inhibition provides a better architecture for self-organizing neural networks. Network: Computation in Neural Systems, 1999, 10, 285-301.	3.6	9
38	Learning Posture Invariant Spatial Representations Through Temporal Correlations. IEEE Transactions on Autonomous Mental Development, 2009, 1, 253-263.	1.6	9
39	Robust Template Matching via Hierarchical Convolutional Features from a Shape Biased CNN. Lecture Notes in Electrical Engineering, 2022, , 333-344.	0.4	9
40	A Neural Model of Coordinated Head and Eye Movement Control. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 107-126.	3.4	6
41	Contour Detection in Colour Images Using a Neurophysiologically Inspired Model. Cognitive Computation, 2016, 8, 1027-1035.	5.2	5
42	A predictive coding model of gaze shifts and the underlying neurophysiology. Visual Cognition, 2017, 25, 770-801.	1.6	5
43	Pre-synaptic lateral inhibition provides a better architecture for self-organizing neural networks. Network: Computation in Neural Systems, 1999, 10, 285-301.	3.6	5
44	Studying development in the 21st Century. Behavioral and Brain Sciences, 2008, 31, 345-356.	0.7	3
45	A simplified texture gradient method for improved image segmentation. Signal, Image and Video Processing, 2016, 10, 679-686.	2.7	3
46	Two collaborative filtering recommender systems based on sparse dictionary coding. Knowledge and Information Systems, 2018, 57, 709-720.	3.2	3
47	Pre-synaptic lateral inhibition provides a better architecture for self-organizing neural networks. Network: Computation in Neural Systems, 1999, 10, 285-301.	3.6	3
48	More robust object tracking via shape and motion cue integration. Signal Processing, 2022, 199, 108628.	3.7	3
49	Local versus distributed: A poor taxonomy of neural coding strategies. Behavioral and Brain Sciences, 2004, 27, 700-702.	0.7	1
50	A neural model for eye–head–arm coordination. Advanced Robotics, 2017, 31, 650-663.	1.8	1
51	Explaining away results in more robust visual tracking. Visual Computer, 0, , 1.	3.5	1
52	Contour detection refined by a sparse reconstruction-based discrimination method. Signal, Image and Video Processing, 2018, 12, 207-214.	2.7	0