Michael R Ibbotson

List of Publications by Year
in descending order

123 papers	3,001 citations	201385 27 h-index	214527 47 g-index
126 all docs	126 docs citations	126 times ranked	2497 citing authors

#	Article	IF	Citations
1	Fundamental mechanisms of visual motion detection: models, cells and functions. Progress in Neurobiology, 2002, 68, 409-437.	2.8	164
2	Visual perception and saccadic eye movements. Current Opinion in Neurobiology, 2011, 21, 553-558.	2.0	138
3	A universal strategy for visually guided landing. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18686-18691.	3.3	122
4	Soft, Flexible Freestanding Neural Stimulation and Recording Electrodes Fabricated from Reduced Graphene Oxide. Advanced Functional Materials, 2015, 25, 3551-3559.	7.8	117
5	Electrical stimulation of retinal ganglion cells with diamond and the development of an all diamond retinal prosthesis. Biomaterials, 2012, 33, 5812-5820.	5.7	109
6	Optic Flow Cues Guide Flight in Birds. Current Biology, 2011, 21, 1794-1799.	1.8	99
7	Saccadic Modulation of Neural Responses: Possible Roles in Saccadic Suppression, Enhancement, and Time Compression. Journal of Neuroscience, 2008, 28, 10952-10960.	1.7	88
8	Comparing Acceleration and Speed Tuning in Macaque MT: Physiology and Modeling. Journal of Neurophysiology, 2005, 94, 3451-3464.	0.9	82
9	Spatiotemporal response properties of direction-selective neurons in the nucleus of the optic tract and dorsal terminal nucleus of the wallaby, Macropus eugenii. Journal of Neurophysiology, 1994, 72, 2927-2943.	0.9	67
10	Relationship Between Contrast Adaptation and Orientation Tuning in V1 and V2 of Cat Visual Cortex. Journal of Neurophysiology, 2006, 95, 271-283.	0.9	67
11	Enhanced Motion Sensitivity Follows Saccadic Suppression in the Superior Temporal Sulcus of the Macaque Cortex. Cerebral Cortex, 2006, 17, 1129-1138.	1.6	66
12	Intrinsic physiological properties of rat retinal ganglion cells with a comparative analysis. Journal of Neurophysiology, 2012, 108, 2008-2023.	0.9	64
13	Evidence for velocityâ€"tuned motion-sensitive descending neurons in the honeybee. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 2195-2201.	1.2	61
14	Rapid Processing of Retinal Slip During Saccades in Macaque Area MT. Journal of Neurophysiology, 2005, 94, 235-246.	0.9	60
15	An adaptive Reichardt detector model of motion adaptation in insects and mammals. Visual Neuroscience, 1997, 14, 741-749.	0.5	58
16	Wide-field motion-sensitive neurons tuned to horizontal movement in the honeybee, Apis mellifera. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1991, 168, 91-102.	0.7	54
17	Complex Cells Increase Their Phase Sensitivity at Low Contrasts and Following Adaptation. Journal of Neurophysiology, 2007, 98, 1155-1166.	0.9	41
18	Hybrid diamond/ carbon fiber microelectrodes enable multimodal electrical/chemical neural interfacing. Biomaterials, 2020, 230, 119648.	5.7	41

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19	Adaptation to Visual Motion in Directional Neurons of the Nucleus of the Optic Tract. Journal of Neurophysiology, 1998, 79, 1481-1493.	0.9	40
20	Optimizing the Electrical Stimulation of Retinal Ganglion Cells. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 169-178.	2.7	40
21	Relative Sensitivities to Large-Field Optic-Flow Patterns Varying in Direction and Speed. Perception, 2007, 36, 113-124.	0.5	39
22	Stimulation Strategies for Improving the Resolution of Retinal Prostheses. Frontiers in Neuroscience, 2020, 14, 262.	1.4	38
23	Visual Perception: Saccadic OmissionÂâ€" Suppression or TemporalÂMasking?. Current Biology, 2009, 19, R493-R496.	1.8	37
24	Diamond Devices for High Acuity Prosthetic Vision. Advanced Biology, 2017, 1, e1600003.	3.0	35
25	Response Characteristics of Four Wide-Field Motion-Sensitive Descending Interneurones IN Apis Melufera. Journal of Experimental Biology, 1990, 148, 255-279.	0.8	34
26	Ocellar structure and neural innervation in the honeybee. Frontiers in Neuroanatomy, 2014, 8, 6.	0.9	33
27	Characterizing contrast adaptation in a population of cat primary visual cortical neurons using Fisher information. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 1529.	0.8	30
28	Prosthetic vision: devices, patient outcomes and retinal research. Australasian journal of optometry, The, 2015, 98, 395-410.	0.6	30
29	A Simple and Accurate Model to Predict Responses to Multi-electrode Stimulation in the Retina. PLoS Computational Biology, 2016, 12, e1004849.	1.5	30
30	Spatiotemporal Tuning of Directional Neurons in Mammalian and Avian Pretectum: A Comparison of Physiological Properties. Journal of Neurophysiology, 2001, 86, 2621-2624.	0.9	28
31	On the Division of Cortical Cells Into Simple and Complex Types: A Comparative Viewpoint. Journal of Neurophysiology, 2005, 93, 3699-3702.	0.9	27
32	Sensory experience modifies feature map relationships in visual cortex. ELife, 2016, 5, .	2.8	27
33	Effects of saccades on visual processing in primate MSTd. Vision Research, 2010, 50, 2683-2691.	0.7	26
34	The role of visual deprivation and experience on the performance of sensory substitution devices. Brain Research, 2015, 1624, 140-152.	1.1	26
35	Advances in Carbon-Based Microfiber Electrodes for Neural Interfacing. Frontiers in Neuroscience, 2021, 15, 658703.	1.4	26
36	Optical stimulation of neural tissue. Healthcare Technology Letters, 2020, 7, 58-65.	1.9	25

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37	Analysis of extracellular spike waveforms and associated receptive fields of neurons in cat primary visual cortex. Journal of Physiology, 2021, 599, 2211-2238.	1.3	25
38	A system of insect neurons sensitive to horizontal and vertical image motion connects the medulla and midbrain. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1991, 169, 355.	0.7	23
39	Neurons in V1, V2, and PMLS of Cat Cortex Are Speed Tuned But Not Acceleration Tuned: The Influence of Motion Adaptation. Journal of Neurophysiology, 2006, 95, 660-673.	0.9	23
40	Edge Detection in Landing Budgerigars (Melopsittacus undulatus). PLoS ONE, 2009, 4, e7301.	1.1	23
41	Improved visual acuity using a retinal implant and an optimized stimulation strategy. Journal of Neural Engineering, 2020, 17, 016018.	1.8	23
42	Characterising temporal delay filters in biological motion detectors. Vision Research, 2001, 41, 2311-2323.	0.7	22
43	Influence of adapting speed on speed and contrast coding in the primary visual cortex of the cat. Journal of Physiology, 2007, 584, 451-462.	1.3	22
44	Impulse responses distinguish two classes of directional motion-sensitive neurons in the nucleus of the optic tract. Journal of Neurophysiology, 1996, 75, 996-1007.	0.9	21
45	Contrast and Temporal Frequency-Related Adaptation in the Pretectal Nucleus of the Optic Tract. Journal of Neurophysiology, 2005, 94, 136-146.	0.9	21
46	Complex cell receptive fields: evidence for a hierarchical mechanism. Journal of Physiology, 2010, 588, 3457-3470.	1.3	21
47	Phase sensitivity of complex cells in primary visual cortex. Neuroscience, 2013, 237, 19-28.	1.1	21
48	Neural and behavioral effects of early eye rotation on the optokinetic system in the wallaby, Macropus eugenii. Journal of Neurophysiology, 1995, 73, 727-735.	0.9	20
49	Differential changes in human perception of speed due to motion adaptation. Journal of Vision, 2008, 8, 6-6.	0.1	20
50	The influence of restricted orientation rearing on map structure in primary visual cortex. NeuroImage, 2010, 52, 875-883.	2.1	20
51	Neural basis of forward flight control and landing in honeybees. Scientific Reports, 2017, 7, 14591.	1.6	20
52	Pretectal Neurons Optimized for the Detection of Saccade-Like Movements of the Visual Image. Journal of Neurophysiology, 2001, 85, 1512-1521.	0.9	19
53	Upper stimulation threshold for retinal ganglion cell activation. Journal of Neural Engineering, 2018, 15, 046012.	1.8	19
54	Wide-field nondirectional visual units in the pretectum: do they suppress ocular following of saccade-induced visual stimulation. Journal of Neurophysiology, 1994, 72, 1448-1450.	0.9	18

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55	Neural basis of time changes during saccades. Current Biology, 2006, 16, R834-R836.	1.8	18
56	Bond graph modelling of chemoelectrical energy transduction. IET Systems Biology, 2017, 11, 127-138.	0.8	18
57	Orientation and spatiotemporal tuning of cells in the primary visual cortex of an Australian marsupial, the wallaby Macropus eugenii. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2003, 189, 115-123.	0.7	17
58	Behavioral Lateralization and Optimal Route Choice in Flying Budgerigars. PLoS Computational Biology, 2014, 10, e1003473.	1.5	17
59	Tuning properties of radial phantom motion aftereffects. Vision Research, 2004, 44, 1971-1979.	0.7	16
60	A Three-Dimensional Atlas of the Honeybee Neck. PLoS ONE, 2010, 5, e10771.	1.1	16
61	3D Diamond Electrode Array for High-Acuity Stimulation in Neural Tissue. ACS Applied Bio Materials, 2020, 3, 1544-1552.	2.3	16
62	Physiological Mechanisms of Adaptation in the Visual System. , 2005, , 17-46.		16
63	Sensitivity to the acceleration of looming stimuli. Clinical and Experimental Ophthalmology, 2003, 31, 258-261.	1.3	15
64	Dynamic contrast change produces rapid gain control in visual cortex. Journal of Physiology, 2008, 586, 4107-4119.	1.3	15
65	Direction and Contrast Tuning of Macaque MSTd Neurons During Saccades. Journal of Neurophysiology, 2009, 101, 3100-3107.	0.9	15
66	Electrical receptive fields of retinal ganglion cells: Influence of presynaptic neurons. PLoS Computational Biology, 2018, 14, e1005997.	1.5	15
67	Mechanisms of Feature Selectivity and Invariance in Primary Visual Cortex. Cerebral Cortex, 2020, 30, 5067-5087.	1.6	13
68	Frequency Responses of Rat Retinal Ganglion Cells. PLoS ONE, 2016, 11, e0157676.	1.1	13
69	Distribution of retinogeniculate cells in the Tammar wallaby in relation to decussation at the optic chiasm. , 1999, 405, 128-140.		12
70	Vestibular Stimulation Affects Optic-Flow Sensitivity. Perception, 2010, 39, 1303-1310.	0.5	12
71	Spatial phase sensitivity of complex cells in primary visual cortex depends on stimulus contrast. Journal of Neurophysiology, 2015, 114, 3326-3338.	0.9	12
72	Contrast-dependent phase sensitivity in V1 but not V2 of macaque visual cortex. Journal of Neurophysiology, 2015, 113, 434-444.	0.9	12

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73	Laminin coated diamond electrodes for neural stimulation. Materials Science and Engineering C, 2021, 118, 111454.	3.8	12
74	A quadratic nonlinearity underlies direction selectivity in the nucleus of the optic tract. Visual Neuroscience, 1999, 16, 991-1000.	0.5	11
75	Torsional eye movements during psychophysical testing with rotating patterns. Experimental Brain Research, 2005, 160, 264-267.	0.7	11
76	Direction-selective neurons with tonic and phasic response profiles contribute to the optokinetic system ofApis mellifera. Die Naturwissenschaften, 1992, 79, 467-470.	0.6	10
77	â€˜Vector white noiseâ€™: a technique for mapping the motion receptive fields of direction-selective visual neurons. Biological Cybernetics, 1993, 68, 199-207.	0.6	10
78	Response variability and information transfer in directional neurons of the mammalian horizontal optokinetic system. Visual Neuroscience, 2000, 17, 207-215.	0.5	10
79	Contrast Gain Control Is Drift-Rate Dependent: An Informational Analysis. Journal of Neurophysiology, 2007, 97, 1078-1087.	0.9	10
80	Spectral inputs and ocellar contributions to a pitch-sensitive descending neuron in the honeybee. Journal of Neurophysiology, 2013, 109, 1202-1213.	0.9	10
81	Single-compartment models of retinal ganglion cells with different electrophysiologies. Network: Computation in Neural Systems, 2017, 28, 74-93.	2.2	10
82	High Fidelity Bidirectional Neural Interfacing with Carbon Fiber Microelectrodes Coated with Boronâ€Doped Carbon Nanowalls: An Acute Study. Advanced Functional Materials, 2020, 30, 2006101.	7.8	10
83	Origins of Functional Organization in the Visual Cortex. Frontiers in Systems Neuroscience, 2020, 14, 10.	1.2	10
84	The morphology, physiology and function of suboesophageal neck motor neurons in the honeybee. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2007, 193, 289-304.	0.7	9
85	Sparse Coding on the Spot: Spontaneous Retinal Waves Suffice for Orientation Selectivity. Neural Computation, 2012, 24, 2422-2433.	1.3	9
86	Visual Neuroscience: Unique Neural System for Flight Stabilization in Hummingbirds. Current Biology, 2017, 27, R58-R61.	1.8	9
87	Investigations into the source of binocular input to the nucleus of the optic tract in an Australian marsupial, the wallaby Macropus eugenii. Experimental Brain Research, 2002, 147, 80-88.	0.7	8
88	Transient photoresponse of nitrogen-doped ultrananocrystalline diamond electrodes in saline solution. Applied Physics Letters, 2016, 108, .	1.5	8
89	Feasibility of Nitrogen Doped Ultrananocrystalline Diamond Microelectrodes for Electrophysiological Recording From Neural Tissue. Frontiers in Bioengineering and Biotechnology, 2018, 6, 85.	2.0	8
90	Human ocular following responses are plastic: evidence for control by temporal frequency-dependent cortical adaptation. Experimental Brain Research, 1992, 91, 525-38.	0.7	7

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91	Employing following eye movements to discriminate normal from glaucoma subjects. Clinical and Experimental Ophthalmology, 2000, 28, 172-174.	1.3	7
92	Applicability of White-Noise Techniques to Analyzing Motion Responses. Journal of Neurophysiology, 2010, 103, 2642-2651.	0.9	7
93	A Possible Role for End-Stopped V1 Neurons in the Perception of Motion: A Computational Model. PLoS ONE, 2016, 11, e0164813.	1.1	7
94	The effects of adaptation to visual stimuli on the velocity of subsequent ocular following responses. Experimental Brain Research, 1994, 99, 148-54.	0.7	6
95	Direction-Selective Neurons in the Optokinetic System With Long-Lasting After-Responses. Journal of Neurophysiology, 2002, 88, 2224-2231.	0.9	6
96	Visual response properties of neck motor neurons in the honeybee. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2011, 197, 1173-1187.	0.7	6
97	Long-term sensorimotor adaptation in the ocular following system of primates. PLoS ONE, 2017, 12, e0189030.	1.1	6
98	A biologically-based computational model of visual cortex that overcomes the X-junction illusion. Neural Networks, 2018, 102, 10-20.	3.3	6
99	In vitro assessment of the differences in retinal ganglion cell responses to intra- and extracellular electrical stimulation. Journal of Neural Engineering, 2018, 15, 046022.	1.8	6
100	Pattern Motion Processing by MT Neurons. Frontiers in Neural Circuits, 2019, 13, 43.	1.4	6
101	Minimizing axon bundle activation of retinal ganglion cells with oriented rectangular electrodes. Journal of Neural Engineering, 2020, 17, 036016.	1.8	6
102	Synaptic Basis for Contrast-Dependent Shifts in Functional Identity in Mouse V1. ENeuro, 2019, 6, ENEURO.0480-18.2019.	0.9	6
103	Reshaping the binding problem of form and motion vision. Journal of Physiology, 2007, 585, 319-319.	1.3	5
104	Epiretinal electrical stimulation and the inner limiting membrane in rat retina. , 2012, 2012, 2989-92.		5
105	The effects of temperature changes on retinal ganglion cell responses to electrical stimulation. , 2015, 2015, 7506-9.		4
106	Visual Functions of the Retinorecipient Nuclei in the Midbrain, Pretectum, and Ventral Thalamus of Primates. , 2006, , 213-265.		3
107	Saccade-induced image motion cannot account for post-saccadic enhancement of visual processing in primate MST. Frontiers in Systems Neuroscience, 2015, 9, 122.	1.2	3
108	Efficacy of electrical stimulation of retinal ganglion cells with temporal patterns resembling light-evoked spike trains. , 2014, 2014, 1707-10.		2

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109	Stripe-rearing changes multiple aspects of the structure of primary visual cortex. NeuroImage, 2014, 95, 305-319.	2.1	2
110	Identification of Mechanisms Underlying Motion Detection in Mammals. , 2001, , 57-65.		2
111	Pretectal neurons responding to slow wide-field retinal motion: could they compensate for slow drift during fixation?. Clinical and Experimental Ophthalmology, 2001, 29, 201-205.	1.3	1
112	Differential changes in perceived contrast following contrast adaptation in humans. Vision Research, 2010, 50, 12-19.	0.7	1
113	Focal activation of primary visual cortex following supra-choroidal electrical stimulation of the retina: Intrinsic signal imaging and linear model analysis. , 2010, 2010, 6765-8.		1
114	Bionic eyes: where are we and what does the future hold?. Australasian journal of optometry, The, 2012, 95, 471-472.	0.6	1
115	Visual fatigue induced by optical misalignment in binocular devices: application to night vision binocular devices. , 2015, , .		1
116	Comparison of contrast-dependent phase sensitivity in primary visual cortex of mouse, cat and macaque. NeuroReport, 2019, 30, 960-965.	0.6	1
117	Adaptive Surround Modulation of MT Neurons: A Computational Model. Frontiers in Neural Circuits, 2020, 14, 529345.	1.4	1
118	Eye health profile of affordable eye care service users. Australasian journal of optometry, The, 2022, 105, 649-657.	0.6	1
119	Intrasaccadic Motion: Neural Evidence for Saccadic Suppression and Postsaccadic Enhancement. , 2009, , 239-257.		1
120	Retinal ganglion cells electrophysiology: The effect of cell morphology on impulse waveform. , 2013, 2013, 2583-6.		0
121	Contrast and response gain control depend on cortical map architecture. European Journal of Neuroscience, 2015, 42, 2963-2973.	1.2	0
122	Contrast-dependent phase sensitivity in area MT of macaque visual cortex. NeuroReport, 2019, 30, 195-201.	0.6	0
123	Visual Information Processing. , 2020, , 36-53.		0