

Michael R Ibbotson

List of Publications by Year in descending order

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123
papers

3,001
citations

201674

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126
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126
docs citations

126
times ranked

2497
citing authors

#	ARTICLE	IF	CITATIONS
1	Fundamental mechanisms of visual motion detection: models, cells and functions. <i>Progress in Neurobiology</i> , 2002, 68, 409-437.	5.7	164
2	Visual perception and saccadic eye movements. <i>Current Opinion in Neurobiology</i> , 2011, 21, 553-558.	4.2	138
3	A universal strategy for visually guided landing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 18686-18691.	7.1	122
4	Soft, Flexible Freestanding Neural Stimulation and Recording Electrodes Fabricated from Reduced Graphene Oxide. <i>Advanced Functional Materials</i> , 2015, 25, 3551-3559.	14.9	117
5	Electrical stimulation of retinal ganglion cells with diamond and the development of an all diamond retinal prosthesis. <i>Biomaterials</i> , 2012, 33, 5812-5820.	11.4	109
6	Optic Flow Cues Guide Flight in Birds. <i>Current Biology</i> , 2011, 21, 1794-1799.	3.9	99
7	Saccadic Modulation of Neural Responses: Possible Roles in Saccadic Suppression, Enhancement, and Time Compression. <i>Journal of Neuroscience</i> , 2008, 28, 10952-10960.	3.6	88
8	Comparing Acceleration and Speed Tuning in Macaque MT: Physiology and Modeling. <i>Journal of Neurophysiology</i> , 2005, 94, 3451-3464.	1.8	82
9	Spatiotemporal response properties of direction-selective neurons in the nucleus of the optic tract and dorsal terminal nucleus of the wallaby, <i>Macropus eugenii</i> . <i>Journal of Neurophysiology</i> , 1994, 72, 2927-2943.	1.8	67
10	Relationship Between Contrast Adaptation and Orientation Tuning in V1 and V2 of Cat Visual Cortex. <i>Journal of Neurophysiology</i> , 2006, 95, 271-283.	1.8	67
11	Enhanced Motion Sensitivity Follows Saccadic Suppression in the Superior Temporal Sulcus of the Macaque Cortex. <i>Cerebral Cortex</i> , 2006, 17, 1129-1138.	2.9	66
12	Intrinsic physiological properties of rat retinal ganglion cells with a comparative analysis. <i>Journal of Neurophysiology</i> , 2012, 108, 2008-2023.	1.8	64
13	Evidence for velocity-tuned motion-sensitive descending neurons in the honeybee. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2001, 268, 2195-2201.	2.6	61
14	Rapid Processing of Retinal Slip During Saccades in Macaque Area MT. <i>Journal of Neurophysiology</i> , 2005, 94, 235-246.	1.8	60
15	An adaptive Reichardt detector model of motion adaptation in insects and mammals. <i>Visual Neuroscience</i> , 1997, 14, 741-749.	1.0	58
16	Wide-field motion-sensitive neurons tuned to horizontal movement in the honeybee, <i>Apis mellifera</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1991, 168, 91-102.	1.6	54
17	Complex Cells Increase Their Phase Sensitivity at Low Contrasts and Following Adaptation. <i>Journal of Neurophysiology</i> , 2007, 98, 1155-1166.	1.8	41
18	Hybrid diamond/ carbon fiber microelectrodes enable multimodal electrical/chemical neural interfacing. <i>Biomaterials</i> , 2020, 230, 119648.	11.4	41

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19	Adaptation to Visual Motion in Directional Neurons of the Nucleus of the Optic Tract. <i>Journal of Neurophysiology</i> , 1998, 79, 1481-1493.	1.8	40
20	Optimizing the Electrical Stimulation of Retinal Ganglion Cells. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2015, 23, 169-178.	4.9	40
21	Relative Sensitivities to Large-Field Optic-Flow Patterns Varying in Direction and Speed. <i>Perception</i> , 2007, 36, 113-124.	1.2	39
22	Stimulation Strategies for Improving the Resolution of Retinal Prostheses. <i>Frontiers in Neuroscience</i> , 2020, 14, 262.	2.8	38
23	Visual Perception: Saccadic Omission "Suppression or Temporal Masking?. <i>Current Biology</i> , 2009, 19, R493-R496.	3.9	37
24	Diamond Devices for High Acuity Prosthetic Vision. <i>Advanced Biology</i> , 2017, 1, e1600003.	3.0	35
25	Response Characteristics of Four Wide-Field Motion-Sensitive Descending Interneurones IN <i>Apis Melufera</i> . <i>Journal of Experimental Biology</i> , 1990, 148, 255-279.	1.7	34
26	Ocellar structure and neural innervation in the honeybee. <i>Frontiers in Neuroanatomy</i> , 2014, 8, 6.	1.7	33
27	Characterizing contrast adaptation in a population of cat primary visual cortical neurons using Fisher information. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 1529.	1.5	30
28	Prosthetic vision: devices, patient outcomes and retinal research. <i>Australasian journal of optometry</i> , The, 2015, 98, 395-410.	1.3	30
29	A Simple and Accurate Model to Predict Responses to Multi-electrode Stimulation in the Retina. <i>PLoS Computational Biology</i> , 2016, 12, e1004849.	3.2	30
30	Spatiotemporal Tuning of Directional Neurons in Mammalian and Avian Pretectum: A Comparison of Physiological Properties. <i>Journal of Neurophysiology</i> , 2001, 86, 2621-2624.	1.8	28
31	On the Division of Cortical Cells Into Simple and Complex Types: A Comparative Viewpoint. <i>Journal of Neurophysiology</i> , 2005, 93, 3699-3702.	1.8	27
32	Sensory experience modifies feature map relationships in visual cortex. <i>ELife</i> , 2016, 5, .	6.0	27
33	Effects of saccades on visual processing in primate MSTd. <i>Vision Research</i> , 2010, 50, 2683-2691.	1.4	26
34	The role of visual deprivation and experience on the performance of sensory substitution devices. <i>Brain Research</i> , 2015, 1624, 140-152.	2.2	26
35	Advances in Carbon-Based Microfiber Electrodes for Neural Interfacing. <i>Frontiers in Neuroscience</i> , 2021, 15, 658703.	2.8	26
36	Optical stimulation of neural tissue. <i>Healthcare Technology Letters</i> , 2020, 7, 58-65.	3.3	25

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37	Analysis of extracellular spike waveforms and associated receptive fields of neurons in cat primary visual cortex. <i>Journal of Physiology</i> , 2021, 599, 2211-2238.	2.9	25
38	A system of insect neurons sensitive to horizontal and vertical image motion connects the medulla and midbrain. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1991, 169, 355.	1.6	23
39	Neurons in V1, V2, and PMLS of Cat Cortex Are Speed Tuned But Not Acceleration Tuned: The Influence of Motion Adaptation. <i>Journal of Neurophysiology</i> , 2006, 95, 660-673.	1.8	23
40	Edge Detection in Landing Budgerigars (<i>Melopsittacus undulatus</i>). <i>PLoS ONE</i> , 2009, 4, e7301.	2.5	23
41	Improved visual acuity using a retinal implant and an optimized stimulation strategy. <i>Journal of Neural Engineering</i> , 2020, 17, 016018.	3.5	23
42	Characterising temporal delay filters in biological motion detectors. <i>Vision Research</i> , 2001, 41, 2311-2323.	1.4	22
43	Influence of adapting speed on speed and contrast coding in the primary visual cortex of the cat. <i>Journal of Physiology</i> , 2007, 584, 451-462.	2.9	22
44	Impulse responses distinguish two classes of directional motion-sensitive neurons in the nucleus of the optic tract. <i>Journal of Neurophysiology</i> , 1996, 75, 996-1007.	1.8	21
45	Contrast and Temporal Frequency-Related Adaptation in the Pretectal Nucleus of the Optic Tract. <i>Journal of Neurophysiology</i> , 2005, 94, 136-146.	1.8	21
46	Complex cell receptive fields: evidence for a hierarchical mechanism. <i>Journal of Physiology</i> , 2010, 588, 3457-3470.	2.9	21
47	Phase sensitivity of complex cells in primary visual cortex. <i>Neuroscience</i> , 2013, 237, 19-28.	2.3	21
48	Neural and behavioral effects of early eye rotation on the optokinetic system in the wallaby, <i>Macropus eugenii</i> . <i>Journal of Neurophysiology</i> , 1995, 73, 727-735.	1.8	20
49	Differential changes in human perception of speed due to motion adaptation. <i>Journal of Vision</i> , 2008, 8, 6-6.	0.3	20
50	The influence of restricted orientation rearing on map structure in primary visual cortex. <i>NeuroImage</i> , 2010, 52, 875-883.	4.2	20
51	Neural basis of forward flight control and landing in honeybees. <i>Scientific Reports</i> , 2017, 7, 14591.	3.3	20
52	Pretectal Neurons Optimized for the Detection of Saccade-Like Movements of the Visual Image. <i>Journal of Neurophysiology</i> , 2001, 85, 1512-1521.	1.8	19
53	Upper stimulation threshold for retinal ganglion cell activation. <i>Journal of Neural Engineering</i> , 2018, 15, 046012.	3.5	19
54	Wide-field nondirectional visual units in the pretectum: do they suppress ocular following of saccade-induced visual stimulation. <i>Journal of Neurophysiology</i> , 1994, 72, 1448-1450.	1.8	18

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55	Neural basis of time changes during saccades. <i>Current Biology</i> , 2006, 16, R834-R836.	3.9	18
56	Bond graph modelling of chemoelectrical energy transduction. <i>IET Systems Biology</i> , 2017, 11, 127-138.	1.5	18
57	Orientation and spatiotemporal tuning of cells in the primary visual cortex of an Australian marsupial, the wallaby <i>Macropus eugenii</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2003, 189, 115-123.	1.6	17
58	Behavioral Lateralization and Optimal Route Choice in Flying Budgerigars. <i>PLoS Computational Biology</i> , 2014, 10, e1003473.	3.2	17
59	Tuning properties of radial phantom motion aftereffects. <i>Vision Research</i> , 2004, 44, 1971-1979.	1.4	16
60	A Three-Dimensional Atlas of the Honeybee Neck. <i>PLoS ONE</i> , 2010, 5, e10771.	2.5	16
61	3D Diamond Electrode Array for High-Acuity Stimulation in Neural Tissue. <i>ACS Applied Bio Materials</i> , 2020, 3, 1544-1552.	4.6	16
62	Physiological Mechanisms of Adaptation in the Visual System. , 2005, , 17-46.		16
63	Sensitivity to the acceleration of looming stimuli. <i>Clinical and Experimental Ophthalmology</i> , 2003, 31, 258-261.	2.6	15
64	Dynamic contrast change produces rapid gain control in visual cortex. <i>Journal of Physiology</i> , 2008, 586, 4107-4119.	2.9	15
65	Direction and Contrast Tuning of Macaque MSTd Neurons During Saccades. <i>Journal of Neurophysiology</i> , 2009, 101, 3100-3107.	1.8	15
66	Electrical receptive fields of retinal ganglion cells: Influence of presynaptic neurons. <i>PLoS Computational Biology</i> , 2018, 14, e1005997.	3.2	15
67	Mechanisms of Feature Selectivity and Invariance in Primary Visual Cortex. <i>Cerebral Cortex</i> , 2020, 30, 5067-5087.	2.9	13
68	Frequency Responses of Rat Retinal Ganglion Cells. <i>PLoS ONE</i> , 2016, 11, e0157676.	2.5	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. <i>Perception</i> , 2010, 39, 1303-1310.	1.2	12
71	Spatial phase sensitivity of complex cells in primary visual cortex depends on stimulus contrast. <i>Journal of Neurophysiology</i> , 2015, 114, 3326-3338.	1.8	12
72	Contrast-dependent phase sensitivity in V1 but not V2 of macaque visual cortex. <i>Journal of Neurophysiology</i> , 2015, 113, 434-444.	1.8	12

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73	Laminin coated diamond electrodes for neural stimulation. <i>Materials Science and Engineering C</i> , 2021, 118, 111454.	7.3	12
74	A quadratic nonlinearity underlies direction selectivity in the nucleus of the optic tract. <i>Visual Neuroscience</i> , 1999, 16, 991-1000.	1.0	11
75	Torsional eye movements during psychophysical testing with rotating patterns. <i>Experimental Brain Research</i> , 2005, 160, 264-267.	1.5	11
76	Direction-selective neurons with tonic and phasic response profiles contribute to the optokinetic system of <i>Apis mellifera</i> . <i>Die Naturwissenschaften</i> , 1992, 79, 467-470.	1.6	10
77	â€˜Vector white noiseâ€™: a technique for mapping the motion receptive fields of direction-selective visual neurons. <i>Biological Cybernetics</i> , 1993, 68, 199-207.	1.3	10
78	Response variability and information transfer in directional neurons of the mammalian horizontal optokinetic system. <i>Visual Neuroscience</i> , 2000, 17, 207-215.	1.0	10
79	Contrast Gain Control Is Drift-Rate Dependent: An Informational Analysis. <i>Journal of Neurophysiology</i> , 2007, 97, 1078-1087.	1.8	10
80	Spectral inputs and ocellar contributions to a pitch-sensitive descending neuron in the honeybee. <i>Journal of Neurophysiology</i> , 2013, 109, 1202-1213.	1.8	10
81	Single-compartment models of retinal ganglion cells with different electrophysiologies. <i>Network: Computation in Neural Systems</i> , 2017, 28, 74-93.	3.6	10
82	High Fidelity Bidirectional Neural Interfacing with Carbon Fiber Microelectrodes Coated with Boronâ€˜Doped Carbon Nanowalls: An Acute Study. <i>Advanced Functional Materials</i> , 2020, 30, 2006101.	14.9	10
83	Origins of Functional Organization in the Visual Cortex. <i>Frontiers in Systems Neuroscience</i> , 2020, 14, 10.	2.5	10
84	The morphology, physiology and function of suboesophageal neck motor neurons in the honeybee. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2007, 193, 289-304.	1.6	9
85	Sparse Coding on the Spot: Spontaneous Retinal Waves Suffice for Orientation Selectivity. <i>Neural Computation</i> , 2012, 24, 2422-2433.	2.2	9
86	Visual Neuroscience: Unique Neural System for Flight Stabilization in Hummingbirds. <i>Current Biology</i> , 2017, 27, R58-R61.	3.9	9
87	Investigations into the source of binocular input to the nucleus of the optic tract in an Australian marsupial, the wallaby <i>Macropus eugenii</i> . <i>Experimental Brain Research</i> , 2002, 147, 80-88.	1.5	8
88	Transient photoresponse of nitrogen-doped ultrananocrystalline diamond electrodes in saline solution. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	8
89	Feasibility of Nitrogen Doped Ultrananocrystalline Diamond Microelectrodes for Electrophysiological Recording From Neural Tissue. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 85.	4.1	8
90	Human ocular following responses are plastic: evidence for control by temporal frequency-dependent cortical adaptation. <i>Experimental Brain Research</i> , 1992, 91, 525-38.	1.5	7

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91	Employing following eye movements to discriminate normal from glaucoma subjects. <i>Clinical and Experimental Ophthalmology</i> , 2000, 28, 172-174.	2.6	7
92	Applicability of White-Noise Techniques to Analyzing Motion Responses. <i>Journal of Neurophysiology</i> , 2010, 103, 2642-2651.	1.8	7
93	A Possible Role for End-Stopped V1 Neurons in the Perception of Motion: A Computational Model. <i>PLoS ONE</i> , 2016, 11, e0164813.	2.5	7
94	The effects of adaptation to visual stimuli on the velocity of subsequent ocular following responses. <i>Experimental Brain Research</i> , 1994, 99, 148-54.	1.5	6
95	Direction-Selective Neurons in the Optokinetic System With Long-Lasting After-Responses. <i>Journal of Neurophysiology</i> , 2002, 88, 2224-2231.	1.8	6
96	Visual response properties of neck motor neurons in the honeybee. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2011, 197, 1173-1187.	1.6	6
97	Long-term sensorimotor adaptation in the ocular following system of primates. <i>PLoS ONE</i> , 2017, 12, e0189030.	2.5	6
98	A biologically-based computational model of visual cortex that overcomes the X-junction illusion. <i>Neural Networks</i> , 2018, 102, 10-20.	5.9	6
99	In vitro assessment of the differences in retinal ganglion cell responses to intra- and extracellular electrical stimulation. <i>Journal of Neural Engineering</i> , 2018, 15, 046022.	3.5	6
100	Pattern Motion Processing by MT Neurons. <i>Frontiers in Neural Circuits</i> , 2019, 13, 43.	2.8	6
101	Minimizing axon bundle activation of retinal ganglion cells with oriented rectangular electrodes. <i>Journal of Neural Engineering</i> , 2020, 17, 036016.	3.5	6
102	Synaptic Basis for Contrast-Dependent Shifts in Functional Identity in Mouse V1. <i>ENeuro</i> , 2019, 6, ENEURO.0480-18.2019.	1.9	6
103	Reshaping the binding problem of form and motion vision. <i>Journal of Physiology</i> , 2007, 585, 319-319.	2.9	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. <i>Frontiers in Systems Neuroscience</i> , 2015, 9, 122.	2.5	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. <i>NeuroImage</i> , 2014, 95, 305-319.	4.2	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?. <i>Clinical and Experimental Ophthalmology</i> , 2001, 29, 201-205.	2.6	1
112	Differential changes in perceived contrast following contrast adaptation in humans. <i>Vision Research</i> , 2010, 50, 12-19.	1.4	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?. <i>Australasian journal of optometry</i> , The, 2012, 95, 471-472.	1.3	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. <i>NeuroReport</i> , 2019, 30, 960-965.	1.2	1
117	Adaptive Surround Modulation of MT Neurons: A Computational Model. <i>Frontiers in Neural Circuits</i> , 2020, 14, 529345.	2.8	1
118	Eye health profile of affordable eye care service users. <i>Australasian journal of optometry</i> , The, 2022, 105, 649-657.	1.3	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. <i>European Journal of Neuroscience</i> , 2015, 42, 2963-2973.	2.6	0
122	Contrast-dependent phase sensitivity in area MT of macaque visual cortex. <i>NeuroReport</i> , 2019, 30, 195-201.	1.2	0
123	Visual Information Processing. , 2020, , 36-53.		0