Michael R Ibbotson

List of Publications by Year
in descending order

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123 papers	3,001 citations	201674 27 h-index	214800 47 g-index
126 all docs	126 docs citations	126 times ranked	2497 citing authors

#	Article	IF	Citations
1	Eye health profile of affordable eye care service users. Australasian journal of optometry, The, 2022, 105, 649-657.	1.3	1
2	Laminin coated diamond electrodes for neural stimulation. Materials Science and Engineering C, 2021, 118, 111454.	7.3	12
3	Analysis of extracellular spike waveforms and associated receptive fields of neurons in cat primary visual cortex. Journal of Physiology, 2021, 599, 2211-2238.	2.9	25
4	Advances in Carbon-Based Microfiber Electrodes for Neural Interfacing. Frontiers in Neuroscience, 2021, 15, 658703.	2.8	26
5	Improved visual acuity using a retinal implant and an optimized stimulation strategy. Journal of Neural Engineering, 2020, 17, 016018.	3.5	23
6	Hybrid diamond/ carbon fiber microelectrodes enable multimodal electrical/chemical neural interfacing. Biomaterials, 2020, 230, 119648.	11.4	41
7	Adaptive Surround Modulation of MT Neurons: A Computational Model. Frontiers in Neural Circuits, 2020, 14, 529345.	2.8	1
8	High Fidelity Bidirectional Neural Interfacing with Carbon Fiber Microelectrodes Coated with Boronâ€Doped Carbon Nanowalls: An Acute Study. Advanced Functional Materials, 2020, 30, 2006101.	14.9	10
9	Optical stimulation of neural tissue. Healthcare Technology Letters, 2020, 7, 58-65.	3.3	25
10	Mechanisms of Feature Selectivity and Invariance in Primary Visual Cortex. Cerebral Cortex, 2020, 30, 5067-5087.	2.9	13
11	Minimizing axon bundle activation of retinal ganglion cells with oriented rectangular electrodes. Journal of Neural Engineering, 2020, 17, 036016.	3.5	6
12	Origins of Functional Organization in the Visual Cortex. Frontiers in Systems Neuroscience, 2020, 14, 10.	2.5	10
13	3D Diamond Electrode Array for High-Acuity Stimulation in Neural Tissue. ACS Applied Bio Materials, 2020, 3, 1544-1552.	4.6	16
14	Stimulation Strategies for Improving the Resolution of Retinal Prostheses. Frontiers in Neuroscience, 2020, 14, 262.	2.8	38
15	Visual Information Processing. , 2020, , 36-53.		0
16	Pattern Motion Processing by MT Neurons. Frontiers in Neural Circuits, 2019, 13, 43.	2.8	6
17	Contrast-dependent phase sensitivity in area MT of macaque visual cortex. NeuroReport, 2019, 30, 195-201.	1.2	0
18	Comparison of contrast-dependent phase sensitivity in primary visual cortex of mouse, cat and macaque. NeuroReport, 2019, 30, 960-965.	1.2	1

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19	Synaptic Basis for Contrast-Dependent Shifts in Functional Identity in Mouse V1. ENeuro, 2019, 6, ENEURO.0480-18.2019.	1.9	6
20	Upper stimulation threshold for retinal ganglion cell activation. Journal of Neural Engineering, 2018, 15, 046012.	3.5	19
21	A biologically-based computational model of visual cortex that overcomes the X-junction illusion. Neural Networks, 2018, 102, 10-20.	5.9	6
22	Feasibility of Nitrogen Doped Ultrananocrystalline Diamond Microelectrodes for Electrophysiological Recording From Neural Tissue. Frontiers in Bioengineering and Biotechnology, 2018, 6, 85.	4.1	8
23	In vitro assessment of the differences in retinal ganglion cell responses to intra- and extracellular electrical stimulation. Journal of Neural Engineering, 2018, 15, 046022.	3.5	6
24	Electrical receptive fields of retinal ganglion cells: Influence of presynaptic neurons. PLoS Computational Biology, 2018, 14, e1005997.	3.2	15
25	Visual Neuroscience: Unique Neural System for Flight Stabilization in Hummingbirds. Current Biology, 2017, 27, R58-R61.	3.9	9
26	Diamond Devices for High Acuity Prosthetic Vision. Advanced Biology, 2017, 1, e1600003.	3.0	35
27	Bond graph modelling of chemoelectrical energy transduction. IET Systems Biology, 2017, 11, 127-138.	1.5	18
28	Neural basis of forward flight control and landing in honeybees. Scientific Reports, 2017, 7, 14591.	3.3	20
29	Single-compartment models of retinal ganglion cells with different electrophysiologies. Network: Computation in Neural Systems, 2017, 28, 74-93.	3.6	10
30	Long-term sensorimotor adaptation in the ocular following system of primates. PLoS ONE, 2017, 12, e0189030.	2.5	6
31	A Possible Role for End-Stopped V1 Neurons in the Perception of Motion: A Computational Model. PLoS ONE, 2016, 11, e0164813.	2.5	7
32	Transient photoresponse of nitrogen-doped ultrananocrystalline diamond electrodes in saline solution. Applied Physics Letters, 2016, 108, .	3.3	8
33	A Simple and Accurate Model to Predict Responses to Multi-electrode Stimulation in the Retina. PLoS Computational Biology, 2016, 12, e1004849.	3.2	30
34	Frequency Responses of Rat Retinal Ganglion Cells. PLoS ONE, 2016, 11, e0157676.	2.5	13
35	Sensory experience modifies feature map relationships in visual cortex. ELife, 2016, 5, .	6.0	27
36	Prosthetic vision: devices, patient outcomes and retinal research. Australasian journal of optometry, The, 2015, 98, 395-410.	1.3	30

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37	Spatial phase sensitivity of complex cells in primary visual cortex depends on stimulus contrast. Journal of Neurophysiology, 2015, 114, 3326-3338.	1.8	12
38	Contrast and response gain control depend on cortical map architecture. European Journal of Neuroscience, 2015, 42, 2963-2973.	2.6	0
39	Saccade-induced image motion cannot account for post-saccadic enhancement of visual processing in primate MST. Frontiers in Systems Neuroscience, 2015, 9, 122.	2.5	3
40	Contrast-dependent phase sensitivity in V1 but not V2 of macaque visual cortex. Journal of Neurophysiology, 2015, 113, 434-444.	1.8	12
41	The effects of temperature changes on retinal ganglion cell responses to electrical stimulation. , 2015, 2015, 7506-9.		4
42	Visual fatigue induced by optical misalignment in binocular devices: application to night vision binocular devices. , 2015, , .		1
43	Soft, Flexible Freestanding Neural Stimulation and Recording Electrodes Fabricated from Reduced Graphene Oxide. Advanced Functional Materials, 2015, 25, 3551-3559.	14.9	117
44	The role of visual deprivation and experience on the performance of sensory substitution devices. Brain Research, 2015, 1624, 140-152.	2.2	26
45	Optimizing the Electrical Stimulation of Retinal Ganglion Cells. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 169-178.	4.9	40
46	Ocellar structure and neural innervation in the honeybee. Frontiers in Neuroanatomy, 2014, 8, 6.	1.7	33
47	Behavioral Lateralization and Optimal Route Choice in Flying Budgerigars. PLoS Computational Biology, 2014, 10, e1003473.	3.2	17
48	Efficacy of electrical stimulation of retinal ganglion cells with temporal patterns resembling light-evoked spike trains. , 2014, 2014, 1707-10.		2
49	Stripe-rearing changes multiple aspects of the structure of primary visual cortex. NeuroImage, 2014, 95, 305-319.	4.2	2
50	Phase sensitivity of complex cells in primary visual cortex. Neuroscience, 2013, 237, 19-28.	2.3	21
51	Retinal ganglion cells electrophysiology: The effect of cell morphology on impulse waveform. , 2013, 2013, 2583-6.		0
52	A universal strategy for visually guided landing. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18686-18691.	7.1	122
53	Spectral inputs and ocellar contributions to a pitch-sensitive descending neuron in the honeybee. Journal of Neurophysiology, 2013, 109, 1202-1213.	1.8	10
54	Intrinsic physiological properties of rat retinal ganglion cells with a comparative analysis. Journal of Neurophysiology, 2012, 108, 2008-2023.	1.8	64

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55	Sparse Coding on the Spot: Spontaneous Retinal Waves Suffice for Orientation Selectivity. Neural Computation, 2012, 24, 2422-2433.	2.2	9
56	Epiretinal electrical stimulation and the inner limiting membrane in rat retina. , 2012, 2012, 2989-92.		5
57	Bionic eyes: where are we and what does the future hold?. Australasian journal of optometry, The, 2012, 95, 471-472.	1.3	1
58	Electrical stimulation of retinal ganglion cells with diamond and the development of an all diamond retinal prosthesis. Biomaterials, 2012, 33, 5812-5820.	11.4	109
59	Visual perception and saccadic eye movements. Current Opinion in Neurobiology, 2011, 21, 553-558.	4.2	138
60	Optic Flow Cues Guide Flight in Birds. Current Biology, 2011, 21, 1794-1799.	3.9	99
61	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.	1.6	6
62	Differential changes in perceived contrast following contrast adaptation in humans. Vision Research, 2010, 50, 12-19.	1.4	1
63	Effects of saccades on visual processing in primate MSTd. Vision Research, 2010, 50, 2683-2691.	1.4	26
64	Complex cell receptive fields: evidence for a hierarchical mechanism. Journal of Physiology, 2010, 588, 3457-3470.	2.9	21
65	A Three-Dimensional Atlas of the Honeybee Neck. PLoS ONE, 2010, 5, e10771.	2.5	16
66	Applicability of White-Noise Techniques to Analyzing Motion Responses. Journal of Neurophysiology, 2010, 103, 2642-2651.	1.8	7
67	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
68	Vestibular Stimulation Affects Optic-Flow Sensitivity. Perception, 2010, 39, 1303-1310.	1.2	12
69	The influence of restricted orientation rearing on map structure in primary visual cortex. NeuroImage, 2010, 52, 875-883.	4.2	20
70	Direction and Contrast Tuning of Macaque MSTd Neurons During Saccades. Journal of Neurophysiology, 2009, 101, 3100-3107.	1.8	15
71	Edge Detection in Landing Budgerigars (Melopsittacus undulatus). PLoS ONE, 2009, 4, e7301.	2.5	23
72	Visual Perception: Saccadic OmissionÂâ€" Suppression or TemporalÂMasking?. Current Biology, 2009, 19, R493-R496.	3.9	37

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73	Intrasaccadic Motion: Neural Evidence for Saccadic Suppression and Postsaccadic Enhancement. , 2009, , 239-257.		1
74	Dynamic contrast change produces rapid gain control in visual cortex. Journal of Physiology, 2008, 586, 4107-4119.	2.9	15
75	Saccadic Modulation of Neural Responses: Possible Roles in Saccadic Suppression, Enhancement, and Time Compression. Journal of Neuroscience, 2008, 28, 10952-10960.	3.6	88
76	Differential changes in human perception of speed due to motion adaptation. Journal of Vision, 2008, 8, 6-6.	0.3	20
77	Relative Sensitivities to Large-Field Optic-Flow Patterns Varying in Direction and Speed. Perception, 2007, 36, 113-124.	1.2	39
78	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.	1.5	30
79	Complex Cells Increase Their Phase Sensitivity at Low Contrasts and Following Adaptation. Journal of Neurophysiology, 2007, 98, 1155-1166.	1.8	41
80	Contrast Gain Control Is Drift-Rate Dependent: An Informational Analysis. Journal of Neurophysiology, 2007, 97, 1078-1087.	1.8	10
81	Influence of adapting speed on speed and contrast coding in the primary visual cortex of the cat. Journal of Physiology, 2007, 584, 451-462.	2.9	22
82	Reshaping the binding problem of form and motion vision. Journal of Physiology, 2007, 585, 319-319.	2.9	5
83	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.	1.6	9
84	Relationship Between Contrast Adaptation and Orientation Tuning in V1 and V2 of Cat Visual Cortex. Journal of Neurophysiology, 2006, 95, 271-283.	1.8	67
85	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.	1.8	23
86	Visual Functions of the Retinorecipient Nuclei in the Midbrain, Pretectum, and Ventral Thalamus of Primates. , 2006, , 213-265.		3
87	Neural basis of time changes during saccades. Current Biology, 2006, 16, R834-R836.	3.9	18
88	Enhanced Motion Sensitivity Follows Saccadic Suppression in the Superior Temporal Sulcus of the Macaque Cortex. Cerebral Cortex, 2006, 17, 1129-1138.	2.9	66
89	Comparing Acceleration and Speed Tuning in Macaque MT: Physiology and Modeling. Journal of Neurophysiology, 2005, 94, 3451-3464.	1.8	82
90	Torsional eye movements during psychophysical testing with rotating patterns. Experimental Brain Research, 2005, 160, 264-267.	1.5	11

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91	On the Division of Cortical Cells Into Simple and Complex Types: A Comparative Viewpoint. Journal of Neurophysiology, 2005, 93, 3699-3702.	1.8	27
92	Contrast and Temporal Frequency-Related Adaptation in the Pretectal Nucleus of the Optic Tract. Journal of Neurophysiology, 2005, 94, 136-146.	1.8	21
93	Rapid Processing of Retinal Slip During Saccades in Macaque Area MT. Journal of Neurophysiology, 2005, 94, 235-246.	1.8	60
94	Physiological Mechanisms of Adaptation in the Visual System. , 2005, , 17-46.		16
95	Tuning properties of radial phantom motion aftereffects. Vision Research, 2004, 44, 1971-1979.	1.4	16
96	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.	1.6	17
97	Sensitivity to the acceleration of looming stimuli. Clinical and Experimental Ophthalmology, 2003, 31, 258-261.	2.6	15
98	Fundamental mechanisms of visual motion detection: models, cells and functions. Progress in Neurobiology, 2002, 68, 409-437.	5.7	164
99	Direction-Selective Neurons in the Optokinetic System With Long-Lasting After-Responses. Journal of Neurophysiology, 2002, 88, 2224-2231.	1.8	6
100	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.	1.5	8
101	Characterising temporal delay filters in biological motion detectors. Vision Research, 2001, 41, 2311-2323.	1.4	22
102	Pretectal Neurons Optimized for the Detection of Saccade-Like Movements of the Visual Image. Journal of Neurophysiology, 2001, 85, 1512-1521.	1.8	19
103	Spatiotemporal Tuning of Directional Neurons in Mammalian and Avian Pretectum: A Comparison of Physiological Properties. Journal of Neurophysiology, 2001, 86, 2621-2624.	1.8	28
104	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.	2.6	1
105	Evidence for velocityâ€“tuned motion-sensitive descending neurons in the honeybee. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 2195-2201.	2.6	61
106	Identification of Mechanisms Underlying Motion Detection in Mammals. , 2001, , 57-65.		2
107	Response variability and information transfer in directional neurons of the mammalian horizontal optokinetic system. Visual Neuroscience, 2000, 17, 207-215.	1.0	10
108	Employing following eye movements to discriminate normal from glaucoma subjects. Clinical and Experimental Ophthalmology, 2000, 28, 172-174.	2.6	7

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109	Distribution of retinogeniculate cells in the Tammar wallaby in relation to decussation at the optic chiasm. , 1999, 405, 128-140.		12
110	A quadratic nonlinearity underlies direction selectivity in the nucleus of the optic tract. Visual Neuroscience, 1999, 16, 991-1000.	1.0	11
111	Adaptation to Visual Motion in Directional Neurons of the Nucleus of the Optic Tract. Journal of Neurophysiology, 1998, 79, 1481-1493.	1.8	40
112	An adaptive Reichardt detector model of motion adaptation in insects and mammals. Visual Neuroscience, 1997, 14, 741-749.	1.0	58
113	Impulse responses distinguish two classes of directional motion-sensitive neurons in the nucleus of the optic tract. Journal of Neurophysiology, 1996, 75, 996-1007.	1.8	21
114	Neural and behavioral effects of early eye rotation on the optokinetic system in the wallaby, Macropus eugenii. Journal of Neurophysiology, 1995, 73, 727-735.	1.8	20
115	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.	1.8	18
116	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.	1.8	67
117	The effects of adaptation to visual stimuli on the velocity of subsequent ocular following responses. Experimental Brain Research, 1994, 99, 148-54.	1.5	6
118	â€˜Vector white noiseâ€™: a technique for mapping the motion receptive fields of direction-selective visual neurons. Biological Cybernetics, 1993, 68, 199-207.	1.3	10
119	Human ocular following responses are plastic: evidence for control by temporal frequency-dependent cortical adaptation. Experimental Brain Research, 1992, 91, 525-38.	1.5	7
120	Direction-selective neurons with tonic and phasic response profiles contribute to the optokinetic system ofApis mellifera. Die Naturwissenschaften, 1992, 79, 467-470.	1.6	10
121	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.	1.6	23
122	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.	1.6	54
123	Response Characteristics of Four Wide-Field Motion-Sensitive Descending Interneurones IN Apis Melufera. Journal of Experimental Biology, 1990, 148, 255-279.	1.7	34