Michael H Dickinson

List of Publications by Year
in descending order

108	14,983	18436 62	27345 106
papers	citations	h-index	g-index

124	124	124	5905
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-throughput ethomics in large groups of Drosophila. Nature Methods, 2009, 6, 451-457.	9.0	690
2	Spanwise flow and the attachment of the leading-edge vortex on insect wings. Nature, 2001, 412, 729-733.	13.7	626
3	The aerodynamic effects of wing rotation and a revised quasi-steady model of flapping flight. Journal of Experimental Biology, 2002, 205, 1087-1096.	0.8	616
4	The control of flight force by a flapping wing: lift and drag production. Journal of Experimental Biology, 2001, 204, 2607-2626.	0.8	601
5	Rotational accelerations stabilize leading edge vortices on revolving fly wings. Journal of Experimental Biology, 2009, 212, 2705-2719.	0.8	489
6	The Aerodynamics of Free-Flight Maneuvers in Drosophila. Science, 2003, 300, 495-498.	6.0	484
7	Unsteady forces and flows in low Reynolds number hovering flight:two-dimensional computations vs robotic wing experiments. Journal of Experimental Biology, 2004, 207, 449-460.	0.8	456
8	Active flight increases the gain of visual motion processing in Drosophila. Nature Neuroscience, 2010, 13, 393-399.	7.1	391
9	Force production and flow structure of the leading edge vortex on flapping wings at high and low Reynolds numbers. Journal of Experimental Biology, 2004, 207, 1063-1072.	0.8	390
10	The aerodynamic effects of wing rotation and a revised quasi-steady model of flapping flight. Journal of Experimental Biology, 2002, 205, 1087-96.	0.8	368
11	The aerodynamics of hovering flight in Drosophila. Journal of Experimental Biology, 2005, 208, 2303-2318.	0.8	287
12	The influence of visual landscape on the free flight behavior of the fruit flyDrosophila melanogaster. Journal of Experimental Biology, 2002, 205, 327-343.	0.8	275
13	A modular display system for insect behavioral neuroscience. Journal of Neuroscience Methods, 2008, 167, 127-139.	1.3	267
14	Visually Mediated Motor Planning in the Escape Response of Drosophila. Current Biology, 2008, 18, 1300-1307.	1.8	245
15	Mosquitoes Use Vision to Associate Odor Plumes with Thermal Targets. Current Biology, 2015, 25, 2123-2129.	1.8	235
16	Flies Evade Looming Targets by Executing Rapid Visually Directed Banked Turns. Science, 2014, 344, 172-177.	6.0	234
17	The functional organization of descending sensory-motor pathways in Drosophila. ELife, 2018, 7, .	2.8	233
18	The Function of Dipteran Flight Muscle. Comparative Biochemistry and Physiology A, Comparative Physiology, 1997, 116, 223-238.	0.7	222

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19	Muscle efficiency and elastic storage in the flight motor of Drosophila. Science, 1995, 268, 87-90.	6.0	212
20	Collision-avoidance and landing responses are mediated by separate pathways in the fruit fly,Drosophila melanogaster. Journal of Experimental Biology, 2002, 205, 2785-2798.	0.8	206
21	Free-flight responses of Drosophila melanogaster to attractive odors. Journal of Experimental Biology, 2006, 209, 3001-3017.	0.8	204
22	A Simple Vision-Based Algorithm for Decision Making in Flying Drosophila. Current Biology, 2008, 18, 464-470.	1.8	201
23	Short-amplitude high-frequency wing strokes determine the aerodynamics of honeybee flight. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18213-18218.	3.3	198
24	Plume-Tracking Behavior of Flying Drosophila Emerges from a Set of Distinct Sensory-Motor Reflexes. Current Biology, 2014, 24, 274-286.	1.8	186
25	Multi-camera real-time three-dimensional tracking of multiple flying animals. Journal of the Royal Society Interface, 2011, 8, 395-409.	1.5	178
26	A comparison of visual and haltere-mediated equilibrium reflexes in the fruit flyDrosophila melanogaster. Journal of Experimental Biology, 2003, 206, 295-302.	0.8	161
27	Automated monitoring and quantitative analysis of feeding behaviour in Drosophila. Nature Communications, 2014, 5, 4560.	5.8	161
28	Haltereâ€“mediated equilibrium reflexes of the fruit fly, Drosophila melanogaster. Philosophical Transactions of the Royal Society B: Biological Sciences, 1999, 354, 903-916.	1.8	159
29	The influence of visual landscape on the free flight behavior of the fruit fly Drosophila melanogaster. Journal of Experimental Biology, 2002, 205, 327-43.	0.8	159
30	Visual Input to the Efferent Control System of a Fly's "Gyroscope". Science, 1998, 280, 289-292.	6.0	155
31	Octopamine Neurons Mediate Flight-Induced Modulation of Visual Processing in Drosophila. Current Biology, 2012, 22, 2294-2302.	1.8	155
32	Spatial organization of visuomotor reflexes in Drosophila. Journal of Experimental Biology, 2004, 207, 113-122.	0.8	151
33	Collision-avoidance and landing responses are mediated by separate pathways in the fruit fly, Drosophila melanogaster. Journal of Experimental Biology, 2002, 205, 2785-98.	0.8	146
34	The visual control of landing and obstacle avoidance in the fruit flyDrosophila melanogaster. Journal of Experimental Biology, 2012, 215, 1783-1798.	0.8	144
35	Haltere Afferents Provide Direct, Electrotonic Input to a Steering Motor Neuron in the Blowfly,Calliphora. Journal of Neuroscience, 1996, 16, 5225-5232.	1.7	142
36	Visual control of flight speed inDrosophila melanogaster. Journal of Experimental Biology, 2009, 212, 1120-1130.	0.8	140

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37	Performance trade-offs in the flight initiation ofDrosophila. Journal of Experimental Biology, 2008, 211, 341-353.	0.8	137
38	Sun Navigation Requires Compass Neurons in Drosophila. Current Biology, 2018, 28, 2845-2852.e4.	1.8	133
39	Summation of visual and mechanosensory feedback in Drosophilaflight control. Journal of Experimental Biology, 2004, 207, 133-142.	0.8	132
40	Visual stimulation of saccades in magnetically tethered Drosophila. Journal of Experimental Biology, 2006, 209, 3170-3182.	0.8	132
41	Flying Drosophila stabilize their vision-based velocity controller by sensing wind with their antennae. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1182-91.	3.3	130
42	The role of visual and mechanosensory cues in structuring forward flight inDrosophila melanogaster. Journal of Experimental Biology, 2007, 210, 4092-4103.	0.8	125
43	Idiothetic Path Integration in the Fruit Fly Drosophila melanogaster. Current Biology, 2017, 27, 2227-2238.e3.	1.8	120
44	The aerodynamics and control of free flight manoeuvres inDrosophila. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150388.	1.8	119
45	Algorithms for Olfactory Search across Species. Journal of Neuroscience, 2018, 38, 9383-9389.	1.7	117
46	A comparison of visual and haltere-mediated feedback in the control of body saccades in Drosophila melanogaster. Journal of Experimental Biology, 2006, 209, 4597-4606.	0.8	115
47	Functional divisions for visual processing in the central brain of flying Drosophila. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5523-32.	3.3	115
48	Flying Drosophila Orient to Sky Polarization. Current Biology, 2012, 22, 21-27.	1.8	112
49	Odor localization requires visual feedback during free flight inDrosophila melanogaster. Journal of Experimental Biology, 2003, 206, 843-855.	0.8	109
50	Body saccades of Drosophila consist of stereotyped banked turns. Journal of Experimental Biology, 2015, 218, 864-875.	0.8	102
51	Social structures depend on innate determinants and chemosensory processing in Drosophila. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17174-17179.	3.3	93
52	Insect flight. Current Biology, 2006, 16, R309-R314.	1.8	88
53	Wing and body motion during flight initiation inDrosophilarevealed by automated visual tracking. Journal of Experimental Biology, 2009, 212, 1307-1323.	0.8	87
54	An Array of Descending Visual Interneurons Encoding Self-Motion inDrosophila. Journal of Neuroscience, 2016, 36, 11768-11780.	1.7	87

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55	The correlation between wing kinematics and steering muscle activity in the blowfly Calliphora vicina. Journal of Experimental Biology, 2001, 204, 4213-4226.	0.8	87
56	Molecular dynamics of cyclically contracting insect flight muscle in vivo. Nature, 2005, 433, 330-334.	13.7	85
57	The Function and Organization of the Motor System Controlling Flight Maneuvers in Flies. Current Biology, 2017, 27, 345-358.	1.8	84
58	Motor output reflects the linear superposition of visual and olfactory inputs in Drosophila. Journal of Experimental Biology, 2004, 207, 123-131.	0.8	83
59	Visual Control of Altitude in Flying Drosophila. Current Biology, 2010, 20, 1550-1556.	1.8	83
60	Convergent Mechanosensory Input Structures the Firing Phase of a Steering Motor Neuron in the Blowfly,Calliphora. Journal of Neurophysiology, 1999, 82, 1916-1926.	0.9	82
61	Role of calcium in the regulation of mechanical power in insect flight. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4311-4315.	3.3	82
62	Modulation of Host Learning in Aedes aegypti Mosquitoes. Current Biology, 2018, 28, 333-344.e8.	1.8	82
63	Fly Flight. Neuron, 2001, 32, 385-388.	3.8	75
64	Death Valley,Drosophila, and the Devonian Toolkit. Annual Review of Entomology, 2014, 59, 51-72.	5.7	75
65	Distinct activity-gated pathways mediate attraction and aversion to CO2 in Drosophila. Nature, 2018, 564, 420-424.	13.7	75
66	Transforming representations of movement from body- to world-centric space. Nature, 2022, 601, 98-104.	13.7	71
67	Neuromuscular control of aerodynamic forces and moments in the blowfly, Calliphora vicina. Journal of Experimental Biology, 2004, 207, 3813-3838.	0.8	70
68	Active and Passive Antennal Movements during Visually Guided Steering in FlyingDrosophila. Journal of Neuroscience, 2011, 31, 6900-6914.	1.7	70
69	A Descending Neuron Correlated with the Rapid Steering Maneuvers of Flying Drosophila. Current Biology, 2017, 27, 1200-1205.	1.8	68
70	Anatomical Reconstruction and Functional Imaging Reveal an Ordered Array of Skylight Polarization Detectors inDrosophila. Journal of Neuroscience, 2016, 36, 5397-5404.	1.7	66
71	Motmot, an open-source toolkit for realtime video acquisition and analysis. Source Code for Biology and Medicine, 2009, 4, 5.	1.7	65
72	Visual-Olfactory Integration in the Human Disease Vector Mosquito Aedes aegypti. Current Biology, 2019, 29, 2509-2516.e5.	1.8	64

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73	Central complex neurons exhibit behaviorally gated responses to visual motion inDrosophila. Journal of Neurophysiology, 2014, 111, 62-71.	0.9	63
74	Cellular mechanisms for integral feedback in visually guided behavior. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5700-5705.	3.3	63
75	Object preference by walking fruit flies, Drosophila melanogaster, is mediated by vision and graviperception. Journal of Experimental Biology, 2010, 213, 2494-2506.	0.8	62
76	Imaging neural activity in the ventral nerve cord of behaving adult Drosophila. Nature Communications, 2018, 9, 4390.	5.8	62
77	FlyingDrosophilamaintain arbitrary but stable headings relative to the angle of polarized light. Journal of Experimental Biology, 2018, 221, .	0.8	59
78	Celestial navigation inDrosophila. Journal of Experimental Biology, 2019, 222, .	0.8	59
79	Position-specific central projections of mechanosensory neurons on the haltere of the blow fly,Calliphora vicina. , 1996, 369, 405-418.		57
80	The influence of sensory delay on the yaw dynamics of a flapping insect. Journal of the Royal Society Interface, 2012, 9, 1685-1696.	1.5	55
81	The Control of Mechanical Power in Insect Flight. American Zoologist, 1998, 38, 718-728.	0.7	53
82	Discriminating External and Internal Causes for Heading Changes in Freely Flying Drosophila. PLoS Computational Biology, 2013, 9, e1002891.	1.5	52
83	The long-distance flight behavior of Drosophila supports an agent-based model for wind-assisted dispersal in insects. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	52
84	Multifunctional Wing Motor Control of Song and Flight. Current Biology, 2018, 28, 2705-2717.e4.	1.8	51
85	Directional Sensitivity and Mechanical Coupling Dynamics of Campaniform Sensilla During Chord-Wise Deformations of the Fly Wing. Journal of Experimental Biology, 1992, 169, 221-233.	0.8	51
86	Closing the loop between neurobiology and flight behavior in Drosophila. Current Opinion in Neurobiology, 2004, 14, 729-736.	2.0	48
87	A Systematic Nomenclature for the Drosophila Ventral Nerve Cord. Neuron, 2020, 107, 1071-1079.e2.	3.8	48
88	History dependence in insect flight decisions during odor tracking. PLoS Computational Biology, 2018, 14, e1005969.	1.5	47
89	Diverse Food-Sensing Neurons Trigger Idiothetic Local Search in Drosophila. Current Biology, 2019, 29, 1660-1668.e4.	1.8	47
90	Flies Regulate Wing Motion via Active Control of a Dual-Function Gyroscope. Current Biology, 2019, 29, 3517-3524.e3.	1.8	44

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91	Flies compensate for unilateral wing damage through modular adjustments of wing and body kinematics. Interface Focus, 2017, 7, 20160103.	1.5	40
92	A population of descending neurons that regulates the flight motor of Drosophila. Current Biology, 2022, 32, 1189-1196.e6.	1.8	36
93	A task-level model for optomotor yaw regulation in drosophila melanogaster: A frequency-domain system identification approach. , 2012, , .		33
94	Burst muscle performance predicts the speed, acceleration, and turning performance of Annaâ€™s hummingbirds. ELife, 2015, 4, e11159.	2.8	29
95	Antennal Mechanosensory Neurons Mediate Wing Motor Reflexes in FlyingDrosophila. Journal of Neuroscience, 2015, 35, 7977-7991.	1.7	28
96	Octopaminergic modulation of the visual flight speed regulator ofDrosophila. Journal of Experimental Biology, 2014, 217, 1737-44.	0.8	27
97	Superhydrophobic diving flies (Ephydra hians) and the hypersaline waters of Mono Lake. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13483-13488.	3.3	23
98	Flow Structure and Force Generation on Flapping Wings at Low Reynolds Numbers Relevant to the Flight of Tiny Insects. Fluids, 2018, 3, 45.	0.8	23
99	Visual motion speed determines a behavioral switch from forward flight to expansion avoidance inDrosophila. Journal of Experimental Biology, 2013, 216, 719-32.	0.8	19
100	Drosophila re-zero their path integrator at the center of a fictive food patch. Current Biology, 2021, 31, 4534-4546.e5.	1.8	17
101	Genome editing in non-model organisms opens new horizons for comparative physiology. Journal of Experimental Biology, 2020, 223, .	0.8	15
102	The Generation of Forces and Moments during Visual-Evoked Steering Maneuvers in Flying Drosophila. PLoS ONE, 2009, 4, e4883.	1.1	14
103	Fly with a little flap from your friends. Nature, 2014, 505, 295-296.	13.7	14
104	The effects of target contrast on Drosophila courtship. Journal of Experimental Biology, 2019, 222, .	0.8	12
105	Animal Locomotion: A New Spin on Bat Flight. Current Biology, 2008, 18, R468-R470.	1.8	9
106	Visual Sensory Signals Dominate Tactile Cues during Docked Feeding in Hummingbirds. Frontiers in Neuroscience, 2017, 11, 622.	1.4	9
107	Motor Control: How Dragonflies Catch Their Prey. Current Biology, 2015, 25, R232-R234.	1.8	8
108	jumps with greater velocity and acceleration than previously reported. MicroPublication Biology, 2021, 2021, .	0.1	0