

Michael H Dickinson

List of Publications by Year in descending order

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Version: 2024-02-01

108
papers

14,983
citations

18436

62
h-index

27345

106
g-index

124
all docs

124
docs citations

124
times ranked

5905
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | A population of descending neurons that regulates the flight motor of <i>Drosophila</i> . <i>Current Biology</i> , 2022, 32, 1189-1196.e6. | 1.8 | 36 |
| 2 | Transforming representations of movement from body- to world-centric space. <i>Nature</i> , 2022, 601, 98-104. | 13.7 | 71 |
| 3 | The long-distance flight behavior of <i>Drosophila</i> supports an agent-based model for wind-assisted dispersal in insects. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, . | 3.3 | 52 |
| 4 | <i>Drosophila</i> re-zero their path integrator at the center of a fictive food patch. <i>Current Biology</i> , 2021, 31, 4534-4546.e5. | 1.8 | 17 |
| 5 | jumps with greater velocity and acceleration than previously reported. <i>MicroPublication Biology</i> , 2021, 2021, . | 0.1 | 0 |
| 6 | A Systematic Nomenclature for the <i>Drosophila</i> Ventral Nerve Cord. <i>Neuron</i> , 2020, 107, 1071-1079.e2. | 3.8 | 48 |
| 7 | Genome editing in non-model organisms opens new horizons for comparative physiology. <i>Journal of Experimental Biology</i> , 2020, 223, . | 0.8 | 15 |
| 8 | Visual-Olfactory Integration in the Human Disease Vector Mosquito <i>Aedes aegypti</i> . <i>Current Biology</i> , 2019, 29, 2509-2516.e5. | 1.8 | 64 |
| 9 | Flies Regulate Wing Motion via Active Control of a Dual-Function Gyroscope. <i>Current Biology</i> , 2019, 29, 3517-3524.e3. | 1.8 | 44 |
| 10 | The effects of target contrast on <i>Drosophila</i> courtship. <i>Journal of Experimental Biology</i> , 2019, 222, . | 0.8 | 12 |
| 11 | Diverse Food-Sensing Neurons Trigger Idiothetic Local Search in <i>Drosophila</i> . <i>Current Biology</i> , 2019, 29, 1660-1668.e4. | 1.8 | 47 |
| 12 | Celestial navigation in <i>Drosophila</i> . <i>Journal of Experimental Biology</i> , 2019, 222, . | 0.8 | 59 |
| 13 | Modulation of Host Learning in <i>Aedes aegypti</i> Mosquitoes. <i>Current Biology</i> , 2018, 28, 333-344.e8. | 1.8 | 82 |
| 14 | Flying <i>Drosophila</i> maintain arbitrary but stable headings relative to the angle of polarized light. <i>Journal of Experimental Biology</i> , 2018, 221, . | 0.8 | 59 |
| 15 | Distinct activity-gated pathways mediate attraction and aversion to CO ₂ in <i>Drosophila</i> . <i>Nature</i> , 2018, 564, 420-424. | 13.7 | 75 |
| 16 | Algorithms for Olfactory Search across Species. <i>Journal of Neuroscience</i> , 2018, 38, 9383-9389. | 1.7 | 117 |
| 17 | Imaging neural activity in the ventral nerve cord of behaving adult <i>Drosophila</i> . <i>Nature Communications</i> , 2018, 9, 4390. | 5.8 | 62 |
| 18 | Sun Navigation Requires Compass Neurons in <i>Drosophila</i> . <i>Current Biology</i> , 2018, 28, 2845-2852.e4. | 1.8 | 133 |

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|----|--|-----|-----------|
| 19 | The functional organization of descending sensory-motor pathways in <i>Drosophila</i> . <i>ELife</i> , 2018, 7, . | 2.8 | 233 |
| 20 | Flow Structure and Force Generation on Flapping Wings at Low Reynolds Numbers Relevant to the Flight of Tiny Insects. <i>Fluids</i> , 2018, 3, 45. | 0.8 | 23 |
| 21 | Multifunctional Wing Motor Control of Song and Flight. <i>Current Biology</i> , 2018, 28, 2705-2717.e4. | 1.8 | 51 |
| 22 | History dependence in insect flight decisions during odor tracking. <i>PLoS Computational Biology</i> , 2018, 14, e1005969. | 1.5 | 47 |
| 23 | The Function and Organization of the Motor System Controlling Flight Maneuvers in Flies. <i>Current Biology</i> , 2017, 27, 345-358. | 1.8 | 84 |
| 24 | A Descending Neuron Correlated with the Rapid Steering Maneuvers of Flying <i>Drosophila</i> . <i>Current Biology</i> , 2017, 27, 1200-1205. | 1.8 | 68 |
| 25 | Flies compensate for unilateral wing damage through modular adjustments of wing and body kinematics. <i>Interface Focus</i> , 2017, 7, 20160103. | 1.5 | 40 |
| 26 | Idiothetic Path Integration in the Fruit Fly <i>Drosophila melanogaster</i> . <i>Current Biology</i> , 2017, 27, 2227-2238.e3. | 1.8 | 120 |
| 27 | Superhydrophobic diving flies (<i>Ephydra hians</i>) and the hypersaline waters of Mono Lake. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 13483-13488. | 3.3 | 23 |
| 28 | Visual Sensory Signals Dominate Tactile Cues during Docked Feeding in Hummingbirds. <i>Frontiers in Neuroscience</i> , 2017, 11, 622. | 1.4 | 9 |
| 29 | Anatomical Reconstruction and Functional Imaging Reveal an Ordered Array of Skylight Polarization Detectors in <i>Drosophila</i> . <i>Journal of Neuroscience</i> , 2016, 36, 5397-5404. | 1.7 | 66 |
| 30 | The aerodynamics and control of free flight manoeuvres in <i>Drosophila</i> . <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016, 371, 20150388. | 1.8 | 119 |
| 31 | An Array of Descending Visual Interneurons Encoding Self-Motion in <i>Drosophila</i> . <i>Journal of Neuroscience</i> , 2016, 36, 11768-11780. | 1.7 | 87 |
| 32 | Antennal Mechanosensory Neurons Mediate Wing Motor Reflexes in Flying <i>Drosophila</i> . <i>Journal of Neuroscience</i> , 2015, 35, 7977-7991. | 1.7 | 28 |
| 33 | Body saccades of <i>Drosophila</i> consist of stereotyped banked turns. <i>Journal of Experimental Biology</i> , 2015, 218, 864-875. | 0.8 | 102 |
| 34 | Mosquitoes Use Vision to Associate Odor Plumes with Thermal Targets. <i>Current Biology</i> , 2015, 25, 2123-2129. | 1.8 | 235 |
| 35 | Motor Control: How Dragonflies Catch Their Prey. <i>Current Biology</i> , 2015, 25, R232-R234. | 1.8 | 8 |
| 36 | Functional divisions for visual processing in the central brain of flying <i>Drosophila</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E5523-32. | 3.3 | 115 |

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|----|--|------|-----------|
| 37 | Burst muscle performance predicts the speed, acceleration, and turning performance of Anna's hummingbirds. <i>ELife</i> , 2015, 4, e11159. | 2.8 | 29 |
| 38 | Central complex neurons exhibit behaviorally gated responses to visual motion in <i>Drosophila</i> . <i>Journal of Neurophysiology</i> , 2014, 111, 62-71. | 0.9 | 63 |
| 39 | Cellular mechanisms for integral feedback in visually guided behavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 5700-5705. | 3.3 | 63 |
| 40 | Plume-Tracking Behavior of Flying <i>Drosophila</i> Emerges from a Set of Distinct Sensory-Motor Reflexes. <i>Current Biology</i> , 2014, 24, 274-286. | 1.8 | 186 |
| 41 | Flying <i>Drosophila</i> stabilize their vision-based velocity controller by sensing wind with their antennae. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E1182-91. | 3.3 | 130 |
| 42 | Flies Evade Looming Targets by Executing Rapid Visually Directed Banked Turns. <i>Science</i> , 2014, 344, 172-177. | 6.0 | 234 |
| 43 | Death Valley, <i>Drosophila</i> , and the Devonian Toolkit. <i>Annual Review of Entomology</i> , 2014, 59, 51-72. | 5.7 | 75 |
| 44 | Fly with a little flap from your friends. <i>Nature</i> , 2014, 505, 295-296. | 13.7 | 14 |
| 45 | Octopaminergic modulation of the visual flight speed regulator of <i>Drosophila</i> . <i>Journal of Experimental Biology</i> , 2014, 217, 1737-44. | 0.8 | 27 |
| 46 | Automated monitoring and quantitative analysis of feeding behaviour in <i>Drosophila</i> . <i>Nature Communications</i> , 2014, 5, 4560. | 5.8 | 161 |
| 47 | Visual motion speed determines a behavioral switch from forward flight to expansion avoidance in <i>Drosophila</i> . <i>Journal of Experimental Biology</i> , 2013, 216, 719-32. | 0.8 | 19 |
| 48 | Discriminating External and Internal Causes for Heading Changes in Freely Flying <i>Drosophila</i> . <i>PLoS Computational Biology</i> , 2013, 9, e1002891. | 1.5 | 52 |
| 49 | The influence of sensory delay on the yaw dynamics of a flapping insect. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1685-1696. | 1.5 | 55 |
| 50 | The visual control of landing and obstacle avoidance in the fruit fly <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2012, 215, 1783-1798. | 0.8 | 144 |
| 51 | A task-level model for optomotor yaw regulation in <i>Drosophila melanogaster</i> : A frequency-domain system identification approach. , 2012, , . | | 33 |
| 52 | Social structures depend on innate determinants and chemosensory processing in <i>Drosophila</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 17174-17179. | 3.3 | 93 |
| 53 | Octopamine Neurons Mediate Flight-Induced Modulation of Visual Processing in <i>Drosophila</i> . <i>Current Biology</i> , 2012, 22, 2294-2302. | 1.8 | 155 |
| 54 | Flying <i>Drosophila</i> Orient to Sky Polarization. <i>Current Biology</i> , 2012, 22, 21-27. | 1.8 | 112 |

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|----|--|-----|-----------|
| 55 | Multi-camera real-time three-dimensional tracking of multiple flying animals. <i>Journal of the Royal Society Interface</i> , 2011, 8, 395-409. | 1.5 | 178 |
| 56 | Active and Passive Antennal Movements during Visually Guided Steering in Flying <i>Drosophila</i> . <i>Journal of Neuroscience</i> , 2011, 31, 6900-6914. | 1.7 | 70 |
| 57 | Visual Control of Altitude in Flying <i>Drosophila</i> . <i>Current Biology</i> , 2010, 20, 1550-1556. | 1.8 | 83 |
| 58 | Active flight increases the gain of visual motion processing in <i>Drosophila</i> . <i>Nature Neuroscience</i> , 2010, 13, 393-399. | 7.1 | 391 |
| 59 | Object preference by walking fruit flies, <i>Drosophila melanogaster</i> , is mediated by vision and graviperception. <i>Journal of Experimental Biology</i> , 2010, 213, 2494-2506. | 0.8 | 62 |
| 60 | The Generation of Forces and Moments during Visual-Evoked Steering Maneuvers in Flying <i>Drosophila</i> . <i>PLoS ONE</i> , 2009, 4, e4883. | 1.1 | 14 |
| 61 | Visual control of flight speed in <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2009, 212, 1120-1130. | 0.8 | 140 |
| 62 | Wing and body motion during flight initiation in <i>Drosophila</i> revealed by automated visual tracking. <i>Journal of Experimental Biology</i> , 2009, 212, 1307-1323. | 0.8 | 87 |
| 63 | Motmot, an open-source toolkit for realtime video acquisition and analysis. <i>Source Code for Biology and Medicine</i> , 2009, 4, 5. | 1.7 | 65 |
| 64 | High-throughput ethomics in large groups of <i>Drosophila</i> . <i>Nature Methods</i> , 2009, 6, 451-457. | 9.0 | 690 |
| 65 | Rotational accelerations stabilize leading edge vortices on revolving fly wings. <i>Journal of Experimental Biology</i> , 2009, 212, 2705-2719. | 0.8 | 489 |
| 66 | A modular display system for insect behavioral neuroscience. <i>Journal of Neuroscience Methods</i> , 2008, 167, 127-139. | 1.3 | 267 |
| 67 | A Simple Vision-Based Algorithm for Decision Making in Flying <i>Drosophila</i> . <i>Current Biology</i> , 2008, 18, 464-470. | 1.8 | 201 |
| 68 | Animal Locomotion: A New Spin on Bat Flight. <i>Current Biology</i> , 2008, 18, R468-R470. | 1.8 | 9 |
| 69 | Visually Mediated Motor Planning in the Escape Response of <i>Drosophila</i> . <i>Current Biology</i> , 2008, 18, 1300-1307. | 1.8 | 245 |
| 70 | Performance trade-offs in the flight initiation of <i>Drosophila</i> . <i>Journal of Experimental Biology</i> , 2008, 211, 341-353. | 0.8 | 137 |
| 71 | The role of visual and mechanosensory cues in structuring forward flight in <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2007, 210, 4092-4103. | 0.8 | 125 |
| 72 | Insect flight. <i>Current Biology</i> , 2006, 16, R309-R314. | 1.8 | 88 |

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|----|---|------|-----------|
| 73 | 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 |
| 74 | Free-flight responses of <i>Drosophila melanogaster</i> to attractive odors. Journal of Experimental Biology, 2006, 209, 3001-3017. | 0.8 | 204 |
| 75 | Visual stimulation of saccades in magnetically tethered <i>Drosophila</i> . Journal of Experimental Biology, 2006, 209, 3170-3182. | 0.8 | 132 |
| 76 | A comparison of visual and haltere-mediated feedback in the control of body saccades in <i>Drosophila melanogaster</i> . Journal of Experimental Biology, 2006, 209, 4597-4606. | 0.8 | 115 |
| 77 | Molecular dynamics of cyclically contracting insect flight muscle in vivo. Nature, 2005, 433, 330-334. | 13.7 | 85 |
| 78 | 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 |
| 79 | The aerodynamics of hovering flight in <i>Drosophila</i> . Journal of Experimental Biology, 2005, 208, 2303-2318. | 0.8 | 287 |
| 80 | Summation of visual and mechanosensory feedback in <i>Drosophila</i> flight control. Journal of Experimental Biology, 2004, 207, 133-142. | 0.8 | 132 |
| 81 | 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 |
| 82 | Neuromuscular control of aerodynamic forces and moments in the blowfly, <i>Calliphora vicina</i> . Journal of Experimental Biology, 2004, 207, 3813-3838. | 0.8 | 70 |
| 83 | Spatial organization of visuomotor reflexes in <i>Drosophila</i> . Journal of Experimental Biology, 2004, 207, 113-122. | 0.8 | 151 |
| 84 | Closing the loop between neurobiology and flight behavior in <i>Drosophila</i> . Current Opinion in Neurobiology, 2004, 14, 729-736. | 2.0 | 48 |
| 85 | 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 |
| 86 | Motor output reflects the linear superposition of visual and olfactory inputs in <i>Drosophila</i> . Journal of Experimental Biology, 2004, 207, 123-131. | 0.8 | 83 |
| 87 | The Aerodynamics of Free-Flight Maneuvers in <i>Drosophila</i> . Science, 2003, 300, 495-498. | 6.0 | 484 |
| 88 | A comparison of visual and haltere-mediated equilibrium reflexes in the fruit fly <i>Drosophila melanogaster</i> . Journal of Experimental Biology, 2003, 206, 295-302. | 0.8 | 161 |
| 89 | Odor localization requires visual feedback during free flight in <i>Drosophila melanogaster</i> . Journal of Experimental Biology, 2003, 206, 843-855. | 0.8 | 109 |
| 90 | Collision-avoidance and landing responses are mediated by separate pathways in the fruit fly, <i>Drosophila melanogaster</i> . Journal of Experimental Biology, 2002, 205, 2785-2798. | 0.8 | 206 |

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| 91 | The influence of visual landscape on the free flight behavior of the fruit fly <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2002, 205, 327-343. | 0.8 | 275 |
| 92 | The aerodynamic effects of wing rotation and a revised quasi-steady model of flapping flight. <i>Journal of Experimental Biology</i> , 2002, 205, 1087-1096. | 0.8 | 616 |
| 93 | The influence of visual landscape on the free flight behavior of the fruit fly <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2002, 205, 327-43. | 0.8 | 159 |
| 94 | The aerodynamic effects of wing rotation and a revised quasi-steady model of flapping flight. <i>Journal of Experimental Biology</i> , 2002, 205, 1087-96. | 0.8 | 368 |
| 95 | Collision-avoidance and landing responses are mediated by separate pathways in the fruit fly, <i>Drosophila melanogaster</i> . <i>Journal of Experimental Biology</i> , 2002, 205, 2785-98. | 0.8 | 146 |
| 96 | Fly Flight. <i>Neuron</i> , 2001, 32, 385-388. | 3.8 | 75 |
| 97 | Spanwise flow and the attachment of the leading-edge vortex on insect wings. <i>Nature</i> , 2001, 412, 729-733. | 13.7 | 626 |
| 98 | The control of flight force by a flapping wing: lift and drag production. <i>Journal of Experimental Biology</i> , 2001, 204, 2607-2626. | 0.8 | 601 |
| 99 | The correlation between wing kinematics and steering muscle activity in the blowfly <i>Calliphora vicina</i> . <i>Journal of Experimental Biology</i> , 2001, 204, 4213-4226. | 0.8 | 87 |
| 100 | Convergent Mechanosensory Input Structures the Firing Phase of a Steering Motor Neuron in the Blowfly, <i>Calliphora</i> . <i>Journal of Neurophysiology</i> , 1999, 82, 1916-1926. | 0.9 | 82 |
| 101 | Haltere-mediated equilibrium reflexes of the fruit fly, <i>Drosophila melanogaster</i> . <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 1999, 354, 903-916. | 1.8 | 159 |
| 102 | Visual Input to the Efferent Control System of a Fly's "Gyroscope". <i>Science</i> , 1998, 280, 289-292. | 6.0 | 155 |
| 103 | The Control of Mechanical Power in Insect Flight. <i>American Zoologist</i> , 1998, 38, 718-728. | 0.7 | 53 |
| 104 | The Function of Dipteran Flight Muscle. <i>Comparative Biochemistry and Physiology A, Comparative Physiology</i> , 1997, 116, 223-238. | 0.7 | 222 |
| 105 | Haltere Afferents Provide Direct, Electrotonic Input to a Steering Motor Neuron in the Blowfly, <i>Calliphora</i> . <i>Journal of Neuroscience</i> , 1996, 16, 5225-5232. | 1.7 | 142 |
| 106 | Position-specific central projections of mechanosensory neurons on the haltere of the blow fly, <i>Calliphora vicina</i> . , 1996, 369, 405-418. | | 57 |
| 107 | Muscle efficiency and elastic storage in the flight motor of <i>Drosophila</i> . <i>Science</i> , 1995, 268, 87-90. | 6.0 | 212 |
| 108 | Directional Sensitivity and Mechanical Coupling Dynamics of Campaniform Sensilla During Chord-Wise Deformations of the Fly Wing. <i>Journal of Experimental Biology</i> , 1992, 169, 221-233. | 0.8 | 51 |