

Richard J Bomphrey

List of Publications by Year in descending order

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Version: 2024-02-01

44
papers

2,597
citations

236833

25
h-index

289141

40
g-index

50
all docs

50
docs citations

50
times ranked

2027
citing authors

#	ARTICLE	IF	CITATIONS
1	Stability and manoeuvrability in animal movement: lessons from biology, modelling and robotics. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, 20212492.	1.2	6
2	Virtual manipulation of tail postures of a gliding barn owl (<i>Tyto alba</i>) demonstrates drag minimization when gliding. Journal of the Royal Society Interface, 2022, 19, 20210710.	1.5	7
3	Systematic characterization of wing mechanosensors that monitor airflow and wing deformations. IScience, 2022, 25, 104150.	1.9	14
4	Raptor wing morphing with flight speed. Journal of the Royal Society Interface, 2021, 18, 20210349.	1.5	23
5	Bird wings act as a suspension system that rejects gusts. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201748.	1.2	30
6	Aerodynamic imaging by mosquitoes inspires a surface detector for autonomous flying vehicles. Science, 2020, 368, 634-637.	6.0	46
7	Recent progress on the flight of dragonflies and damselflies. International Journal of Odonatology, 2020, 23, 41-49.	0.5	7
8	High aerodynamic lift from the tail reduces drag in gliding raptors. Journal of Experimental Biology, 2020, 223, .	0.8	34
9	Insect and insect-inspired aerodynamics: unsteadiness, structural mechanics and flight control. Current Opinion in Insect Science, 2018, 30, 26-32.	2.2	23
10	Petiolate wings: effects on the leading-edge vortex in flapping flight. Interface Focus, 2017, 7, 20160084.	1.5	25
11	Smart wing rotation and trailing-edge vortices enable high frequency mosquito flight. Nature, 2017, 544, 92-95.	13.7	181
12	Flight of the dragonflies and damselflies. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150389.	1.8	97
13	Morphomechanical Innovation Drives Explosive Seed Dispersal. Cell, 2016, 166, 222-233.	13.5	128
14	Leading Edge Vortex Evolution and Lift Production on Rotating Wings (Invited). , 2016, , .		10
15	Low Reynolds Number Acceleration of Flat Plate Wings at High Incidence (Invited). , 2016, , .		13
16	Enhanced flight performance by genetic manipulation of wing shape in Drosophila. Nature Communications, 2016, 7, 10851.	5.8	63
17	A CFD-informed quasi-steady model of flapping-wing aerodynamics. Journal of Fluid Mechanics, 2015, 783, 323-343.	1.4	70
18	The complex aerodynamic footprint of desert locusts revealed by large-volume tomographic particle image velocimetry. Journal of the Royal Society Interface, 2015, 12, 20150119.	1.5	31

#	ARTICLE	IF	CITATIONS
19	The effect of aspect ratio on the leading-edge vortex over an insect-like flapping wing. <i>Bioinspiration and Biomimetics</i> , 2015, 10, 056020.	1.5	61
20	Efficiency of Lift Production in Flapping and Gliding Flight of Swifts. <i>PLoS ONE</i> , 2014, 9, e90170.	1.1	41
21	W053001 Bio-inspiration from Nature's fliers. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _W053001-1-_W053001-4.	0.0	0
22	See-saw rocking: an <i>in vitro</i> model for mechanotransduction research. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140330.	1.5	12
23	Vision-based flight control in the hawkmoth <i>Hyles lineata</i> . <i>Journal of the Royal Society Interface</i> , 2014, 11, 20130921.	1.5	43
24	Iodine vapor staining for atomic number contrast in backscattered electron and X-ray imaging. <i>Microscopy Research and Technique</i> , 2014, 77, 1044-1051.	1.2	45
25	Wake Development behind Paired Wings with Tip and Root Trailing Vortices: Consequences for Animal Flight Force Estimates. <i>PLoS ONE</i> , 2014, 9, e91040.	1.1	8
26	Span efficiency in hawkmoths. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20130099.	1.5	34
27	Time-varying span efficiency through the wingbeat of desert locusts. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1177-1186.	1.5	25
28	Tomographic particle image velocimetry of desert locust wakes: instantaneous volumes combine to reveal hidden vortex elements and rapid wake deformation. <i>Journal of the Royal Society Interface</i> , 2012, 9, 3378-3386.	1.5	33
29	Advances in Animal Flight Aerodynamics Through Flow Measurement. <i>Evolutionary Biology</i> , 2012, 39, 1-11.	0.5	26
30	Rhythmic actomyosin-driven contractions induced by sperm entry predict mammalian embryo viability. <i>Nature Communications</i> , 2011, 2, 417.	5.8	107
31	Smoke visualization of free-flying bumblebees indicates independent leading-edge vortices on each wing pair. , 2010, , 249-259.		4
32	The Typical Flight Performance of Blowflies: Measuring the Normal Performance Envelope of <i>Calliphora vicina</i> Using a Novel Corner-Cube Arena. <i>PLoS ONE</i> , 2009, 4, e7852.	1.1	30
33	Smoke visualization of free-flying bumblebees indicates independent leading-edge vortices on each wing pair. <i>Experiments in Fluids</i> , 2009, 46, 811-821.	1.1	91
34	Details of Insect Wing Design and Deformation Enhance Aerodynamic Function and Flight Efficiency. <i>Science</i> , 2009, 325, 1549-1552.	6.0	390
35	Jumping robots: a biomimetic solution to locomotion across rough terrain. <i>Bioinspiration and Biomimetics</i> , 2008, 3, 039801.	1.5	5
36	New experimental approaches to the biology of flight control systems. <i>Journal of Experimental Biology</i> , 2008, 211, 258-266.	0.8	46

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37	Jumping robots: a biomimetic solution to locomotion across rough terrain. <i>Bioinspiration and Biomimetics</i> , 2007, 2, S65-S82.	1.5	167
38	Swimming performance of a subcarangiform, the blind Mexican cave fish (<i>Astyanax fasciatus</i>). <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2007, 146, S119.	0.8	1
39	Insect Flight Dynamics and Control. , 2006, , .		21
40	Digital particle image velocimetry measurements of the downwash distribution of a desert locust <i>Schistocerca gregaria</i> . <i>Journal of the Royal Society Interface</i> , 2006, 3, 311-317.	1.5	37
41	Application of digital particle image velocimetry to insect aerodynamics: measurement of the leading-edge vortex and near wake of a Hawkmoth. <i>Experiments in Fluids</i> , 2006, 40, 546-554.	1.1	80
42	Insects in flight: direct visualization and flow measurements. <i>Bioinspiration and Biomimetics</i> , 2006, 1, S1-S9.	1.5	24
43	The aerodynamics of <i>Manduca sexta</i> : digital particle image velocimetry analysis of the leading-edge vortex. <i>Journal of Experimental Biology</i> , 2005, 208, 1079-1094.	0.8	158
44	Dragonfly flight: free-flight and tethered flow visualizations reveal a diverse array of unsteady lift-generating mechanisms, controlled primarily via angle of attack. <i>Journal of Experimental Biology</i> , 2004, 207, 4299-4323.	0.8	276