

# John J Socha

## List of Publications by Year in descending order

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Version: 2024-02-01

58  
papers

1,708  
citations

257450

24  
h-index

289244

40  
g-index

58  
all docs

58  
docs citations

58  
times ranked

1431  
citing authors

#	ARTICLE	IF	CITATIONS
1	The impact of sampling frequency on ground reaction force variables. <i>Journal of Biomechanics</i> , 2022, 135, 111034.	2.1	4
2	Validity of Using Automated Two-Dimensional Video Analysis to Measure Continuous Sagittal Plane Running Kinematics. <i>Annals of Biomedical Engineering</i> , 2021, 49, 455-468.	2.5	16
3	Nonlinear elasticity and damping govern ultrafast dynamics in click beetles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	24
4	Frequency-specific, valveless flow control in insect-mimetic microfluidic devices. <i>Bioinspiration and Biomimetics</i> , 2021, 16, 036004.	2.9	4
5	Poor Leg Plumbing Design Saves Earth From Giant Bugs. <i>FASEB Journal</i> , 2021, 35, .	0.5	1
6	The aerodynamics of flying snake airfoils in tandem configuration. <i>Journal of Experimental Biology</i> , 2021, 224, .	1.7	8
7	Dynamic movements facilitate extreme gap crossing in flying snakes. <i>Journal of Experimental Biology</i> , 2021, 224, .	1.7	2
8	Going the distance: The biomechanics of gap crossing behaviors. <i>Journal of Experimental Zoology Part A: Ecological and Integrative Physiology</i> , 2020, 333, 60-73.	1.9	24
9	Physiological responses to gravity in an insect. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2180-2186.	7.1	2
10	Visual Acuity in the Flying Snake, <i>Chrysopelea paradisi</i> . <i>Integrative and Comparative Biology</i> , 2020, , .	2.0	6
11	Circulation in Insect Wings. <i>Integrative and Comparative Biology</i> , 2020, 60, 1208-1220.	2.0	30
12	Flying lizards plan ahead to avoid clutter. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	0
13	Undulation enables gliding in flying snakes. <i>Nature Physics</i> , 2020, 16, 974-982.	16.7	32
14	Functional compartmentalization in the hemocoel of insects. <i>Scientific Reports</i> , 2019, 9, 6075.	3.3	11
15	Burst mode pumping: A new mechanism of drinking in mosquitoes. <i>Scientific Reports</i> , 2018, 8, 4885.	3.3	17
16	Developmental plasticity and stability in the tracheal networks supplying <i>Drosophila</i> flight muscle in response to rearing oxygen level. <i>Journal of Insect Physiology</i> , 2018, 106, 189-198.	2.0	19
17	How temperature influences the viscosity of hornworm hemolymph. <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	11
18	Patterns of Tracheal Compression in the Thorax of the Ground Beetle,. <i>Yale Journal of Biology and Medicine</i> , 2018, 91, 409-430.	0.2	0

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19	Global dynamics of non-equilibrium gliding in animals. <i>Bioinspiration and Biomimetics</i> , 2017, 12, 026013.	2.9	8
20	Control of gliding in a flying snake-inspired n-chain model. <i>Bioinspiration and Biomimetics</i> , 2017, 12, 066002.	2.9	10
21	Bare-Hand Volume Cracker for Raw Volume Data Analysis. <i>Frontiers in Robotics and AI</i> , 2016, 3, .	3.2	2
22	Recovering signals in physiological systems with large datasets. <i>Biology Open</i> , 2016, 5, 1163-1174.	1.2	2
23	Multigenerational Effects of Rearing Atmospheric Oxygen Level on the Tracheal Dimensions and Diffusing Capacities of Pupal and Adult <i>Drosophila melanogaster</i> . <i>Advances in Experimental Medicine and Biology</i> , 2016, 903, 285-300.	1.6	5
24	A classification of user tasks in visual analysis of volume data. , 2015, , .		9
25	Structure of tracheae and the functional implications for collapse in the American cockroach. <i>Bioinspiration and Biomimetics</i> , 2015, 10, 066011.	2.9	14
26	Estimation of Instantaneous Gas Exchange in Flow-Through Respirometry Systems: A Modern Revision of Bartholomew's Z-Transform Method. <i>PLoS ONE</i> , 2015, 10, e0139508.	2.5	10
27	Dogs lap using acceleration-driven open pumping. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 15798-15802.	7.1	20
28	Tracheal compression in pupae of the beetle <i>Zophobas morio</i> . <i>Biology Letters</i> , 2015, 11, 20150259.	2.3	21
29	How animals glide: from trajectory to morphology. <i>Canadian Journal of Zoology</i> , 2015, 93, 901-924.	1.0	54
30	A theoretical analysis of pitch stability during gliding in flying snakes. <i>Bioinspiration and Biomimetics</i> , 2014, 9, 025014.	2.9	17
31	Variation in the mechanical properties of tracheal tubes in the American cockroach. <i>Smart Materials and Structures</i> , 2014, 23, 057001.	3.5	1
32	Lift and wakes of flying snakes. <i>Physics of Fluids</i> , 2014, 26, .	4.0	25
33	Aerodynamics of the flying snake <i>Chrysopelea paradisi</i> : how a bluff body cross-sectional shape contributes to gliding performance. <i>Journal of Experimental Biology</i> , 2014, 217, 382-394.	1.7	40
34	Effects of VR System Fidelity on Analyzing Isosurface Visualization of Volume Datasets. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2014, 20, 513-522.	4.4	67
35	Of snakes and robots. <i>Science</i> , 2014, 346, 160-161.	12.6	3
36	Dynamics of tracheal compression in the horned passalus beetle. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2013, 304, R621-R627.	1.8	17

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37	Biomechanics of Turtle Shells: How Whole Shells Fail in Compression. <i>Journal of Experimental Zoology</i> , 2013, 319, 86-98.	1.2	44
38	Hypoxia-induced compression in the tracheal system of the tobacco hornworm caterpillar, <i>Manduca sexta</i> L. <i>Journal of Experimental Biology</i> , 2013, 216, 2293-301.	1.7	30
39	How Locusts Breathe. <i>Physiology</i> , 2013, 28, 18-27.	3.1	56
40	Mechanical properties of tracheal tubes in the American cockroach ( <i>Periplaneta americana</i> ). <i>Smart Materials and Structures</i> , 2011, 20, 094017.	3.5	16
41	Gliding Flight in Chrysopelea: Turning a Snake into a Wing. <i>Integrative and Comparative Biology</i> , 2011, 51, 969-982.	2.0	53
42	Effects of Body Cross-sectional Shape on Flying Snake Aerodynamics. <i>Experimental Mechanics</i> , 2010, 50, 1335-1348.	2.0	28
43	Issues of convection in insect respiration: Insights from synchrotron X-ray imaging and beyond. <i>Respiratory Physiology and Neurobiology</i> , 2010, 173, S65-S73.	1.6	59
44	Visceral-Locomotory Pistoning in Crawling Caterpillars. <i>Current Biology</i> , 2010, 20, 1458-1463.	3.9	52
45	Canaliculi in the tessellated skeleton of cartilaginous fishes. <i>Journal of Applied Ichthyology</i> , 2010, 26, 263-267.	0.7	30
46	Non-equilibrium trajectory dynamics and the kinematics of gliding in a flying snake. <i>Bioinspiration and Biomimetics</i> , 2010, 5, 045002.	2.9	38
47	Synchrotron X-Ray Visualisation of Ice Formation in Insects during Lethal and Non-Lethal Freezing. <i>PLoS ONE</i> , 2009, 4, e8259.	2.5	26
48	Direct visualization of hemolymph flow in the heart of a grasshopper ( <i>Schistocerca americana</i> ). <i>BMC Physiology</i> , 2009, 9, 2.	3.6	31
49	A plesiosaur containing an ichthyosaur embryo as stomach contents from the Sundance Formation of the Bighorn Basin, Wyoming. <i>Journal of Vertebrate Paleontology</i> , 2009, 29, 1306-1310.	1.0	22
50	Use of synchrotron tomography to image naturalistic anatomy in insects. <i>Proceedings of SPIE</i> , 2008, , .	0.8	17
51	Advances in Biological Structure, Function, and Physiology Using Synchrotron X-Ray Imaging. <i>Annual Review of Physiology</i> , 2008, 70, 119-142.	13.1	126
52	Correlated patterns of tracheal compression and convective gas exchange in a carabid beetle. <i>Journal of Experimental Biology</i> , 2008, 211, 3409-3420.	1.7	70
53	Increase in tracheal investment with beetle size supports hypothesis of oxygen limitation on insect gigantism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 13198-13203.	7.1	134
54	Real-time phase-contrast x-ray imaging: a new technique for the study of animal form and function. <i>BMC Biology</i> , 2007, 5, 6.	3.8	117

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55	Becoming airborne without legs: the kinematics of take-off in a flying snake, <i>Chrysopelea paradisi</i> . <i>Journal of Experimental Biology</i> , 2006, 209, 3358-3369.	1.7	29
56	A 3-D kinematic analysis of gliding in a flying snake, <i>Chrysopelea paradisi</i> . <i>Journal of Experimental Biology</i> , 2005, 208, 1817-1833.	1.7	77
57	Effects of size and behavior on aerial performance of two species of flying snakes ( <i>Chrysopelea</i> ). <i>Journal of Experimental Biology</i> , 2005, 208, 1835-1847.	1.7	39
58	Gliding flight in the paradise tree snake. <i>Nature</i> , 2002, 418, 603-604.	27.8	78