Steven D Wiederman

List of Publications by Year
in descending order

44	811	623188	580395
papers	citations	14 h-index	25 g-index

54	54	54	449
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Model for the Detection of Moving Targets in Visual Clutter Inspired by Insect Physiology. PLoS ONE, 2008, 3, e2784.	1.1	121
2	Selective Attention in an Insect Visual Neuron. Current Biology, 2013, 23, 156-161.	1.8	87
3	Contrast sensitivity and the detection of moving patterns and features. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130043.	1.8	57
4	A predictive focus of gain modulation encodes target trajectories in insect vision. ELife, 2017, 6, .	2.8	55
5	Assessment outcome is weakly correlated with lecture attendance: influence of learning style and use of alternative materials. American Journal of Physiology - Advances in Physiology Education, 2012, 36, 108-115.	0.8	51
6	Correlation between OFF and ON Channels Underlies Dark Target Selectivity in an Insect Visual System. Journal of Neuroscience, 2013, 33, 13225-13232.	1.7	46
7	Discrimination of Features in Natural Scenes by a Dragonfly Neuron. Journal of Neuroscience, 2011, 31, 7141-7144.	1.7	40
8	Facilitation of dragonfly target-detecting neurons by slow moving features on continuous paths. Frontiers in Neural Circuits, 2012, 6, 79.	1.4	39
9	Performance of an insect-inspired target tracker in natural conditions. Bioinspiration and Biomimetics, 2017, 12, 025006.	1.5	38
10	An autonomous robot inspired by insect neurophysiology pursues moving features in natural environments. Journal of Neural Engineering, 2017, 14, 046030.	1.8	34
11	Visual acuity of the honey bee retina and the limits for feature detection. Scientific Reports, 2017, 7, 45972.	1.6	32
12	A Target-Detecting Visual Neuron in the Dragonfly Locks on to Selectively Attended Targets. Journal of Neuroscience, 2019, 39, 8497-8509.	1.7	26
13	Performance of a Bio-Inspired Model for the Robust Detection of Moving Targets in High Dynamic Range Natural Scenes. Journal of Computational and Theoretical Nanoscience, 2010, 7, 911-920.	0.4	23
14	Properties of predictive gain modulation in a dragonfly visual neuron. Journal of Experimental Biology, 2019, 222, .	0.8	17
15	Biologically Inspired Feature Detection Using Cascaded Correlations of off and on Channels. Journal of Artificial Intelligence and Soft Computing Research, 2013, 3, 5-14.	3.5	15
16	Properties of neuronal facilitation that improve target tracking in natural pursuit simulations. Journal of the Royal Society Interface, 2015, 12, 20150083.	1.5	15
17	Differential Tuning to Visual Motion Allows Robust Encoding of Optic Flow in the Dragonfly. Journal of Neuroscience, 2019, 39, 8051-8063.	1.7	13
18	Biomimetic target detection: Modeling 2nd order correlation of OFF and ON channels. , 2013, , .		10

#	Article	IF	Citations
19	Discrete implementation of biologically inspired image processing for target detection. , 2011, , .		9
20	Biologically Inspired Small Target Detection Mechanisms. , 2007, , .		8
21	Modelling the temporal response properties of an insect small target motion detector. , 2011, , .		8
22	The visual neuroecology of anisoptera. Current Opinion in Insect Science, 2020, 42, 14-22.	2.2	8
23	Bio-inspired small target discrimination in high dynamic range natural scenes. , 2008, , .		7
24	Spike bursting in a dragonfly target-detecting neuron. Scientific Reports, 2021, 11, 4005.	1.6	6
25	Bio-inspired target detection in natural scenes: optimal thresholds and ego-motion. , 2008, , .		5
26	Photoreceptor signalling is sufficient to explain the detectability threshold of insect aerial pursuers. Journal of Experimental Biology, 2017, 220, 4364-4369.	0.8	5
27	Dragonfly Neurons Selectively Attend to Targets Within Natural Scenes. Frontiers in Cellular Neuroscience, 2022, 16, 857071.	1.8	5
28	Multicompartment Simulations of NMDA Receptor Based Facilitation in an Insect Target Tracking Neuron. Lecture Notes in Computer Science, 2017, , 397-404.	1.0	4
29	Bio-inspired feature extraction and enhancement of targets moving against visual clutter during closed loop pursuit. , 2013, , .		3
30	Quantifying asynchrony of multiple cameras using aliased optical devices. , 2015, , .		3
31	Salience invariance with divisive normalization in higher-order insect neurons. , 2016, , .		2
32	A Biologically Inspired Facilitation Mechanism Enhances the Detection and Pursuit of Targets of Varying Contrast. , 2014, , .		1
33	Performance assessment of an insect-inspired target tracking model in background clutter. , 2014, , .		1
34	Multi-focal video fusion with a beam splitter prism. , 2015, , .		1
35	Robustness and Real-Time Performance of an Insect Inspired Target Tracking Algorithm Under Natural Conditions. , 2015, , .		1
36	Cytoplasmic delivery of quantum dots via microelectrophoresis technique. Electrophoresis, 2021, 42, 1247-1254.	1.3	1

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37	Modeling Nonlinear Dendritic Processing of Facilitation in a Dragonfly Target-Tracking Neuron. Frontiers in Neural Circuits, 2021, 15, 684872.	1.4	1
38	Nonlinear, neuronal adaptation in insect vision models improves target discrimination within repetitively moving backgrounds. Bioinspiration and Biomimetics, 2021, 16, .	1.5	1
39	Recurrent Motion Neural Network for Low Resolution Drone Detection. , 2020, , .		1
40	Modeling inhibitory interactions shaping neural responses of target neurons to multiple features. , 2011, , .		0
41	Can a competitive neural network explain selective attention in insect target tracking neurons?. , 2013, , .		0
42	Wound Repair on Horses with Equine CPNNB1 and PECAM1. , 2011, , 126-140.		0
43	Selective attention in the dragonfly. Frontiers in Physiology, 0, 4, .	1.3	0
44	Controlled delivery of quantum dots using microelectrophoresis technique: Intracellular behavior and preservation of cell viability. Bioelectrochemistry, 2022, 144, 108035.	2.4	0