Paul Graham

List of Publications by Year
in descending order

81 papers	3,322 citations	117625 34 h-index	168389 53 g-index
92 all docs	92 docs citations	92 times ranked	1367 citing authors

#	Article	IF	Citations
1	Ants use the panoramic skyline as a visual cue during navigation. Current Biology, 2009, 19, R935-R937.	3.9	204
2	A Model of Ant Route Navigation Driven by Scene Familiarity. PLoS Computational Biology, 2012, 8, e1002336.	3.2	174
3	Route learning by insects. Current Opinion in Neurobiology, 2003, 13, 718-725.	4.2	125
4	Animal Navigation: Path Integration, Visual Landmarks and Cognitive Maps. Current Biology, 2004, 14, R475-R477.	3.9	109
5	The influence of beacon-aiming on the routes of wood ants. Journal of Experimental Biology, 2003, 206, 535-541.	1.7	102
6	Image-matching during ant navigation occurs through saccade-like body turns controlled by learned visual features. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16348-16353.	7.1	100
7	The Sensory Ecology of Ant Navigation: From Natural Environments to Neural Mechanisms. Annual Review of Entomology, 2016, 61, 63-76.	11.8	97
8	What can we learn from studies of insect navigation?. Animal Behaviour, 2012, 84, 13-20.	1.9	96
9	Priming of visual route memories. Nature, 2005, 438, 302-302.	27.8	90
10	Navigational Memories in Ants and Bees: Memory Retrieval When Selecting and Following Routes. Advances in the Study of Behavior, 2006, 36, 123-172.	1.6	87
11	How might ants use panoramic views for route navigation?. Journal of Experimental Biology, 2011, 214, 445-451.	1.7	85
12	Land-use and sustainability under intersecting global change and domestic policy scenarios: Trajectories for Australia to 2050. Global Environmental Change, 2016, 38, 130-152.	7.8	85
13	Desert Ants Locate Food by Combining High Sensitivity to Food Odors with Extensive Crosswind Runs. Current Biology, 2014, 24, 960-964.	3.9	84
14	Mushroom Bodies Are Required for Learned Visual Navigation, but Not for Innate Visual Behavior, in Ants. Current Biology, 2020, 30, 3438-3443.e2.	3.9	81
15	Animal Cognition: Multi-modal Interactions in Ant Learning. Current Biology, 2010, 20, R639-R640.	3.9	77
16	Which portion of the natural panorama is used for view-based navigation in the Australian desert ant?. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2009, 195, 681-689.	1.6	76
17	View-based navigation in insects: how wood ants (<i>Formica rufa</i>L.) look at and are guided by extended landmarks. Journal of Experimental Biology, 2002, 205, 2499-2509.	1.7	76
18	Visual scanning behaviours and their role in the navigation of the Australian desert ant Melophorus bagoti. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2014, 200, 615-626.	1.6	75

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19	Multimodal interactions in insect navigation. Animal Cognition, 2020, 23, 1129-1141.	1.8	68
20	Snapshot Memories and Landmark Guidance in Wood Ants. Current Biology, 2003, 13, 1614-1618.	3.9	67
21	Visual Cues for the Retrieval of Landmark Memories by Navigating Wood Ants. Current Biology, 2007, 17, 93-102.	3.9	67
22	View-based navigation in insects: how wood ants (Formica rufa L.) look at and are guided by extended landmarks. Journal of Experimental Biology, 2002, 205, 2499-509.	1.7	62
23	Still no convincing evidence for cognitive map use by honeybees. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4396-7.	7.1	61
24	Modelling Australian land use competition and ecosystem services with food price feedbacks at high spatial resolution. Environmental Modelling and Software, 2015, 69, 141-154.	4.5	58
25	Social Life in Arid Environments: The Case Study of <i>Cataglyphis</i> Ants. Annual Review of Entomology, 2017, 62, 305-321.	11.8	57
26	Desert ants use olfactory scenes for navigation. Animal Behaviour, 2015, 106, 99-105.	1.9	51
27	Linked Local Navigation for Visual Route Guidance. Adaptive Behavior, 2007, 15, 257-271.	1.9	50
28	Snapshots in ants? New interpretations of paradigmatic experiments. Journal of Experimental Biology, 2013, 216, 1766-70.	1.7	49
29	The binding and recall of snapshot memories in wood ants (Formica rufa L.). Journal of Experimental Biology, 2004, 207, 393-398.	1.7	47
30	Novel landmark-guided routes in ants. Journal of Experimental Biology, 2007, 210, 2025-2032.	1.7	46
31	Rapid Aversive and Memory Trace Learning during Route Navigation in Desert Ants. Current Biology, 2020, 30, 1927-1933.e2.	3.9	44
32	Bi-directional route learning in wood ants. Journal of Experimental Biology, 2006, 209, 3677-3684.	1.7	43
33	A Motor Component to the Memories of Habitual Foraging Routes in Wood Ants?. Current Biology, 2009, 19, 115-121.	3.9	42
34	Visual Scene Perception in Navigating Wood Ants. Current Biology, 2013, 23, 684-690.	3.9	42
35	Connecting brain to behaviour: a role for general purpose steering circuits in insect orientation?. Journal of Experimental Biology, 2020, 223, .	1.7	39
36	Running paths to nowhere: repetition of routes shows how navigating ants modulate online the weights accorded to cues. Animal Cognition, 2019, 22, 213-222.	1.8	31

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37	What is the relationship between visual environment and the form of ant learning-walks? An in silico investigation of insect navigation. Adaptive Behavior, 2014, 22, 163-179.	1.9	30
38	How do field of view and resolution affect the information content of panoramic scenes for visual navigation? A computational investigation. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2016, 202, 87-95.	1.6	30
39	Vision for navigation: What can we learn from ants?. Arthropod Structure and Development, 2017, 46, 718-722.	1.4	30
40	Scene perception and the visual control of travel direction in navigating wood ants. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130035.	4.0	29
41	Phase-Dependent Visual Control of the Zigzag Paths of Navigating Wood Ants. Current Biology, 2013, 23, 2393-2399.	3.9	28
42	A unified mechanism for innate and learned visual landmark guidance in the insect central complex. PLoS Computational Biology, 2021, 17, e1009383.	3.2	28
43	The interaction of path integration and terrestrial visual cues in navigating desert ants: what can we learn from path characteristics?. Journal of Experimental Biology, 2018, 221, .	1.7	27
44	Switching destinations: memory change in wood ants. Journal of Experimental Biology, 2004, 207, 2401-2408.	1.7	21
45	Insect Navigation: Do Honeybees Learn to Follow Highways?. Current Biology, 2015, 25, R240-R242.	3.9	21
46	Dynamic multimodal interactions in navigating wood ants: What do path details tell us about cue integration?. Journal of Experimental Biology, 2020, 223, .	1.7	18
47	Insect Vision: Emergence of Pattern Recognition from Coarse Encoding. Current Biology, 2014, 24, R78-R80.	3.9	17
48	Navigation-specific neural coding in the visual system of Drosophila. BioSystems, 2015, 136, 120-127.	2.0	17
49	Dynamic reconfiguration for management of radiation-induced faults in FPGAs. International Journal of Embedded Systems, 2006, 2, 28.	0.3	16
50	What can be learnt from analysing insect orientation flights using probabilistic SLAM?. Biological Cybernetics, 2009, 101, 169-182.	1.3	16
51	Insect navigation: do ants live in the now?. Journal of Experimental Biology, 2015, 218, 819-823.	1.7	15
52	Neural coding in the visual system of Drosophila melanogaster: How do small neural populations support visually guided behaviours?. PLoS Computational Biology, 2017, 13, e1005735.	3.2	15
53	Recent advances in evolutionary and bio-inspired adaptive robotics: Exploiting embodied dynamics. Applied Intelligence, 2021, 51, 6467-6496.	5.3	15
54	View-Based Matching Can Be More than Image Matching: The Importance of considering an Animal's Perspective. I-Perception, 2012, 3, 547-549.	1.4	14

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55	Insect-Inspired Navigation Algorithm for an Aerial Agent Using Satellite Imagery. PLoS ONE, 2015, 10, e0122077.	2.5	12
56	Insect Navigation: What Backward Walking Reveals about the Control of Movement. Current Biology, 2017, 27, R141-R144.	3.9	11
57	The co-activation of snapshot memories in wood ants. Journal of Experimental Biology, 2007, 210, 2128-2136.	1.7	10
58	A motion compensation treadmill for untethered wood ants (<i>Formica rufa</i>): evidence for transfer of orientation memories from free-walking training. Journal of Experimental Biology, 2020, 223, .	1.7	8
59	Using Neural Networks to Understand the Information That Guides Behavior: A Case Study in Visual Navigation. Methods in Molecular Biology, 2015, 1260, 227-244.	0.9	6
60	Models of Visually Guided Routes in Ants: Embodiment Simplifies Route Acquisition. Lecture Notes in Computer Science, 2011, , 75-84.	1.3	6
61	Insect-Inspired Visual Navigation On-Board an Autonomous Robot: Real-World Routes Encoded in a Single Layer Network. , 2019, , .		5
62	Multimodal influences on learning walks in desert ants (Cataglyphis fortis). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2020, 206, 701-709.	1.6	5
63	Insect Inspired View Based Navigation Exploiting Temporal Information. Lecture Notes in Computer Science, 2020, , 204-216.	1.3	5
64	Linked Local Visual Navigation and Robustness to Motor Noise and Route Displacement. Lecture Notes in Computer Science, 2008, , 179-188.	1.3	5
65	HPC-Europa single point of access as a framework for building science gateways. Concurrency Computation Practice and Experience, 2007, 19, 851-866.	2.2	4
66	Insect Orientation: The Travails of Going Straight. Current Biology, 2016, 26, R461-R463.	3.9	4
67	Snapshot Navigation in the Wavelet Domain. Lecture Notes in Computer Science, 2020, , 245-256.	1.3	3
68	Insect-Inspired Visual Navigation for Flying Robots. Lecture Notes in Computer Science, 2016, , 263-274.	1.3	3
69	Using Deep Autoencoders to Investigate Image Matching in Visual Navigation. Lecture Notes in Computer Science, 2017, , 465-474.	1.3	3
70	A neural network based holistic model of ant route navigation. BMC Neuroscience, 2012, 13, O1.	1.9	1
71	How Can Embodiment Simplify the Problem of View-Based Navigation?. Lecture Notes in Computer Science, 2012, , 216-227.	1.3	1
72	Applying the Grid to 3D capture technology. Concurrency Computation Practice and Experience, 2007, 19, 235-249.	2.2	0

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73	Spatial Cognition: Allowing Natural Behaviours toÂFlourish in the Lab. Current Biology, 2019, 29, R639-R641.	3.9	0
74	Exploring the robustness of insect-inspired visual navigation for flying robots. , 2020, , .		0
75	How Active Vision Facilitates Familiarity-Based Homing. Lecture Notes in Computer Science, 2013, , 427-430.	1.3	0
76	A Situated and Embodied Model of Ant Route Navigation. , 0, , .		0
77	Insect-Inspired Visual Systems and Visually Guided Behavior. , 2015, , 1-9.		0
78	Insect-Inspired Visual Systems and Visually Guided Behavior. , 2016, , 1646-1653.		0
79	View-Based Homing. , 2018, , 1-3.		0
80	Insect Navigation. , 2019, , 581-587.		0
81	View-Based Homing. , 2022, , 7194-7196.		0