Rachel I Wilson

List of Publications by Year
in descending order

66	12,316	53660 45	98622 67
papers	citations	h-index	g-index

81	81	81	8556
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Transforming representations of movement from body- to world-centric space. Nature, 2022, 601, 98-104.	13.7	71
2	Fly Cell Atlas: A single-nucleus transcriptomic atlas of the adult fruit fly. Science, 2022, 375, eabk2432.	6.0	295
3	Automatic detection of synaptic partners in a whole-brain Drosophilaâ€‰electron microscopy data set. Nature Methods, 2021, 18, 771-774.	9.0	81
4	SPARC enables genetic manipulation of precise proportions of cells. Nature Neuroscience, 2020, 23, 1168-1175.	7.1	39
5	A Neural Network for Wind-Guided Compass Navigation. Neuron, 2020, 107, 924-940.e18.	3.8	87
6	Sound localization behavior inDrosophilaâ€melanogasterdepends on inter-antenna vibration amplitude comparisons. Journal of Experimental Biology, 2019, 222, .	0.8	16
7	Sensorimotor experience remaps visual input to a heading-direction network. Nature, 2019, 576, 121-125.	13.7	137
8	Functional Maps of Mechanosensory Features in the Drosophila Brain. Current Biology, 2018, 28, 1189-1203.e5.	1.8	77
9	Human peptidergic nociceptive sensory neurons generated from human epidermal neural crest stem cells (hEPI-NCSC). PLoS ONE, 2018, 13, e0199996.	1.1	13
10	The Organization of Projections from Olfactory Glomeruli onto Higher-Order Neurons. Neuron, 2018, 98, 1198-1213.e6.	3.8	85
11	Active Mechanisms of Vibration Encoding and Frequency Filtering in Central Mechanosensory Neurons. Neuron, 2017, 96, 446-460.e9.	3.8	32
12	Wiring variations that enable and constrain neural computation in a sensory microcircuit. ELife, 2017, 6, .	2.8	108
13	Behavior Reveals Selective Summation and Max Pooling among Olfactory Processing Channels. Neuron, 2016, 91, 425-438.	3.8	72
14	Mechanisms Underlying Population Response Dynamics in Inhibitory Interneurons of the Drosophila Antennal Lobe. Journal of Neuroscience, 2016, 36, 4325-4338.	1.7	48
15	Mechanosensation and Adaptive Motor Control in Insects. Current Biology, 2016, 26, R1022-R1038.	1.8	188
16	A Mechanosensory Circuit that Mixes Opponent Channels to Produce Selectivity for Complex Stimulus Features. Neuron, 2016, 92, 888-901.	3.8	27
17	Parallel Transformation of Tactile Signals in Central Circuits of Drosophila. Cell, 2016, 164, 1046-1059.	13.5	78
18	Separate TRP channels mediate amplification and transduction in drosophila. AIP Conference Proceedings, 2015, , .	0.3	1

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19	Synaptic and circuit mechanisms promoting broadband transmission of olfactory stimulus dynamics. Nature Neuroscience, 2015, 18, 56-65.	7.1	86
20	Simultaneous Encoding of Odors by Channels with Diverse Sensitivity to Inhibition. Neuron, 2015, 85, 573-589.	3.8	76
21	Thermosensory processing in the Drosophila brain. Nature, 2015, 519, 353-357.	13.7	82
22	Optogenetics: 10 years after ChR2 in neuronsâ€"views from the community. Nature Neuroscience, 2015, 18, 1202-1212.	7.1	122
23	Convergence, Divergence, and Reconvergence in a Feedforward Network Improves Neural Speed and Accuracy. Neuron, 2015, 88, 1014-1026.	3.8	77
24	Stereotyped connectivity and computations in higher-order olfactory neurons. Nature Neuroscience, 2014, 17, 280-288.	7.1	101
25	Early Olfactory Processing in Drosophila: Mechanisms and Principles. Annual Review of Neuroscience, 2013, 36, 217-241.	5.0	336
26	Olfactory Neuroscience: Normalization Is the Norm. Current Biology, 2013, 23, R1091-R1093.	1.8	10
27	Distinct Roles of TRP Channels in Auditory Transduction and Amplification in Drosophila. Neuron, 2013, 77, 115-128.	3.8	151
28	Vertebrate versus invertebrate neural circuits. Current Biology, 2013, 23, R504-R506.	1.8	9
29	Transient and Specific Inactivation of Drosophila Neurons InÂVivo Using a Native Ligand-Gated Ion Channel. Current Biology, 2013, 23, 1202-1208.	1.8	27
30	Asymmetric neurotransmitter release enables rapid odour lateralization in Drosophila. Nature, 2013, 493, 424-428.	13.7	127
31	Glutamate is an inhibitory neurotransmitter in the Drosophila olfactory system. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10294-10299.	3.3	228
32	Transduction inDrosophilaolfactory receptor neurons is invariant to air speed. Journal of Neurophysiology, 2012, 108, 2051-2059.	0.9	11
33	Smelling on the fly: sensory cues and strategies for olfactory navigation in Drosophila. Current Opinion in Neurobiology, 2012, 22, 216-222.	2.0	57
34	Biophysical mechanisms underlying olfactory receptor neuron dynamics. Nature Neuroscience, 2011, 14, 208-216.	7.1	193
35	Understanding the functional consequences of synaptic specialization: insight from the Drosophila antennal lobe. Current Opinion in Neurobiology, 2011, 21, 254-260.	2.0	28
36	Sensory and motor systems. Current Opinion in Neurobiology, 2011, 21, 517-519.	2.0	2

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37	Cell Death Triggers Olfactory Circuit Plasticity via Glial Signaling inDrosophila. Journal of Neuroscience, 2011, 31, 7619-7630.	1.7	24
38	Diversity and wiring variability of olfactory local interneurons in the Drosophila antennal lobe. Nature Neuroscience, 2010, 13, 439-449.	7.1	310
39	It takes all kinds to make a brain. Nature Neuroscience, 2010, 13, 1158-1160.	7.1	7
40	Olfactory modulation of flight in Drosophila is sensitive, selective and rapid. Journal of Experimental Biology, 2010, 213, 3625-3635.	0.8	75
41	Divisive Normalization in Olfactory Population Codes. Neuron, 2010, 66, 287-299.	3.8	399
42	The Force Be With You: A Mechanoreceptor Channel in Proprioception and Touch. Neuron, 2010, 67, 349-351.	3.8	10
43	Electrical Coupling between Olfactory Glomeruli. Neuron, 2010, 67, 1034-1047.	3.8	171
44	Signal Propagation inDrosophilaCentral Neurons. Journal of Neuroscience, 2009, 29, 6239-6249.	1.7	130
45	Origins of correlated activity in an olfactory circuit. Nature Neuroscience, 2009, 12, 1136-1144.	7.1	138
46	Lateral presynaptic inhibition mediates gain control in an olfactory circuit. Nature, 2008, 452, 956-960.	13.7	455
47	Neural and behavioral mechanisms of olfactory perception. Current Opinion in Neurobiology, 2008, 18, 408-412.	2.0	53
48	Homeostatic Matching and Nonlinear Amplification at Identified Central Synapses. Neuron, 2008, 58, 401-413.	3.8	153
49	Cracking neural circuits in a tiny brain: new approaches for understanding the neural circuitry of Drosophila. Trends in Neurosciences, 2008, 31, 512-520.	4.2	124
50	Receptors, Circuits, and Behaviors: New Directions in Chemical Senses. Journal of Neuroscience, 2008, 28, 11802-11805.	1.7	11
51	Neural Circuits Underlying Chemical Perception. Science, 2007, 318, 584-585.	6.0	24
52	Excitatory Interactions between Olfactory Processing Channels in the Drosophila Antennal Lobe. Neuron, 2007, 54, 89-103.	3.8	251
53	Scent secrets of insects. Nature, 2007, 445, 30-31.	13.7	2
54	Olfactory processing and behavior downstream from highly selective receptor neurons. Nature Neuroscience, 2007, 10, 623-630.	7.1	132

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55	Sensory processing in the Drosophila antennal lobe increases reliability and separability of ensemble odor representations. Nature Neuroscience, 2007, 10, 1474-1482.	7.1	319
56	EARLY EVENTS IN OLFACTORY PROCESSING. Annual Review of Neuroscience, 2006, 29, 163-201.	5.0	367
57	Role of GABAergic Inhibition in Shaping Odor-Evoked Spatiotemporal Patterns in the Drosophila Antennal Lobe. Journal of Neuroscience, 2005, 25, 9069-9079.	1.7	418
58	Transformation of Olfactory Representations in the Drosophila Antennal Lobe. Science, 2004, 303, 366-370.	6.0	497
59	painless, a Drosophila Gene Essential for Nociception. Cell, 2003, 113, 261-273.	13.5	696
60	Oscillations and Sparsening of Odor Representations in the Mushroom Body. Science, 2002, 297, 359-365.	6.0	712
61	Endocannabinoid Signaling in the Brain. Science, 2002, 296, 678-682.	6.0	1,124
62	Presynaptic Specificity of Endocannabinoid Signaling in the Hippocampus. Neuron, 2001, 31, 453-462.	3.8	497
63	Endogenous cannabinoids mediate retrograde signalling at hippocampal synapses. Nature, 2001, 410, 588-592.	13.7	1,413
64	The Role of Brain-Derived Neurotrophic Factor Receptors in the Mature Hippocampus: Modulation of Long-Term Potentiation through a Presynaptic Mechanism involving TrkB. Journal of Neuroscience, 2000, 20, 6888-6897.	1.7	357
65	A Phosphorylation Site Regulates Sorting of the Vesicular Acetylcholine Transporter to Dense Core Vesicles. Journal of Cell Biology, 2000, 149, 379-396.	2.3	97
66	Endothelial nitric oxide synthase and LTP. Nature, 1997, 386, 338-338.	13.7	61