Claire J Wyart

List of Publications by Year
in descending order

70	4,306	147801	123424
papers	citations	31 h-index	61 g-index

95	95	95	4612
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optogenetic dissection of a behavioural module in the vertebrate spinal cord. Nature, 2009, 461, 407-410.	27.8	387
2	Remote Control of Neuronal Activity with a Light-Gated Glutamate Receptor. Neuron, 2007, 54, 535-545.	8.1	310
3	Filtering of Visual Information in the Tectum by an Identified Neural Circuit. Science, 2010, 330, 669-673.	12.6	223
4	Plaque-induced neurite abnormalities: Implications for disruption of neural networks in Alzheimer's disease. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 5274-5279.	7.1	216
5	Smelling a Single Component of Male Sweat Alters Levels of Cortisol in Women. Journal of Neuroscience, 2007, 27, 1261-1265.	3.6	180
6	Endothelial Cilia Mediate Low Flow Sensing during Zebrafish Vascular Development. Cell Reports, 2014, 6, 799-808.	6.4	180
7	Emergence of Patterned Activity in the Developing Zebrafish Spinal Cord. Current Biology, 2012, 22, 93-102.	3.9	163
8	CSF-contacting neurons regulate locomotion by relaying mechanical stimuli to spinal circuits. Nature Communications, 2016, 7, 10866.	12.8	162
9	Ultrafast random-access scanning in two-photon microscopy using acousto-optic deflectors. Journal of Neuroscience Methods, 2006, 154, 161-174.	2.5	139
10	A light-gated, potassium-selective glutamate receptor for the optical inhibition of neuronal firing. Nature Neuroscience, 2010, 13, 1027-1032.	14.8	124
11	Three-dimensional spatiotemporal focusing of holographic patterns. Nature Communications, 2016, 7, 11928.	12.8	114
12	Pkd2l1 is required for mechanoception in cerebrospinal fluid-contacting neurons and maintenance of spine curvature. Nature Communications, 2018, 9, 3804.	12.8	112
13	Optogenetics in a transparent animal: circuit function in the larval zebrafish. Current Opinion in Neurobiology, 2013, 23, 119-126.	4.2	105
14	ZebraZoom: an automated program for high-throughput behavioral analysis and categorization. Frontiers in Neural Circuits, 2013, 7, 107.	2.8	104
15	Investigation of spinal cerebrospinal fluid-contacting neurons expressing PKD2L1: evidence for a conserved system from fish to primates. Frontiers in Neuroanatomy, 2014, 8, 26.	1.7	101
16	The Reissner Fiber in the Cerebrospinal Fluid Controls Morphogenesis of the Body Axis. Current Biology, 2018, 28, 2479-2486.e4.	3.9	98
17	Constrained synaptic connectivity in functional mammalian neuronal networks grown on patterned surfaces. Journal of Neuroscience Methods, 2002, 117, 123-131.	2.5	97
18	Colloid-guided assembly of oriented 3D neuronal networks. Nature Methods, 2008, 5, 735-740.	19.0	97

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19	Intraspinal Sensory Neurons Provide Powerful Inhibition to Motor Circuits Ensuring Postural Control during Locomotion. Current Biology, 2016, 26, 2841-2853.	3.9	97
20	State-Dependent Modulation of Locomotion by GABAergic Spinal Sensory Neurons. Current Biology, 2015, 25, 3035-3047.	3.9	86
21	Optogenetics: A new enlightenment age for zebrafish neurobiology. Developmental Neurobiology, 2012, 72, 404-414.	3.0	75
22	Sensory Neurons Contacting the Cerebrospinal Fluid Require the Reissner Fiber to Detect Spinal Curvature InÂVivo. Current Biology, 2020, 30, 827-839.e4.	3.9	72
23	Cholinergic left-right asymmetry in the habenulo-interpeduncular pathway. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 21171-21176.	7.1	70
24	Optimization of a Neurotoxin to Investigate the Contribution of Excitatory Interneurons to Speed Modulation InÂVivo. Current Biology, 2016, 26, 2319-2328.	3.9	62
25	Tracking Calcium Dynamics and Immune Surveillance at the Choroid Plexus Blood-Cerebrospinal Fluid Interface. Neuron, 2020, 108, 623-639.e10.	8.1	56
26	Mechanosensory neurons control the timing of spinal microcircuit selection during locomotion. ELife, 2017, 6, .	6.0	56
27	Remote z-scanning with a macroscopic voice coil motor for fast 3D multiphoton laser scanning microscopy. Biomedical Optics Express, 2016, 7, 1656.	2.9	55
28	The dual developmental origin of spinal cerebrospinal fluid-contacting neurons gives rise to distinct functional subtypes. Scientific Reports, 2017, 7, 719.	3.3	52
29	Origin and role of the cerebrospinal fluid bidirectional flow in the central canal. ELife, 2020, 9, .	6.0	52
30	Comparative Distribution and In Vitro Activities of the Urotensin II-Related Peptides URP1 and URP2 in Zebrafish: Evidence for Their Colocalization in Spinal Cerebrospinal Fluid-Contacting Neurons. PLoS ONE, 2015, 10, e0119290.	2.5	45
31	A calibrated optogenetic toolbox of stable zebrafish opsin lines. ELife, 2020, 9, .	6.0	43
32	Multiplexed temporally focused light shaping for high-resolution multi-cell targeting. Optica, 2018, 5, 1478.	9.3	42
33	Cerebrospinal-fluid-contacting neurons. Current Biology, 2017, 27, R1198-R1200.	3.9	37
34	Let there be light: zebrafish neurobiology and the optogenetic revolution. Reviews in the Neurosciences, 2011, 22, 121-130.	2.9	35
35	Active mechanosensory feedback during locomotion in the zebrafish spinal cord. Current Opinion in Neurobiology, 2018, 52, 48-53.	4.2	30
36	Deletion of a kinesin I motor unmasks a mechanism of homeostatic branching control by neurotrophin-3. ELife, 2015, 4, .	6.0	30

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37	Dynactin1 depletion leads to neuromuscular synapse instability and functional abnormalities. Molecular Neurodegeneration, 2019, 14, 27.	10.8	29
38	Regulation of the apical extension morphogenesis tunes the mechanosensory response of microvilliated neurons. PLoS Biology, 2019, 17, e3000235.	5.6	28
39	Dynamics of Excitatory Synaptic Components in Sustained Firing at Low Rates. Journal of Neurophysiology, 2005, 93, 3370-3380.	1.8	27
40	Spinal sensory neurons project onto the hindbrain to stabilize posture and enhance locomotor speed. Current Biology, 2021, 31, 3315-3329.e5.	3.9	26
41	Investigation of hindbrain activity during active locomotion reveals inhibitory neurons involved in sensorimotor processing. Scientific Reports, 2018, 8, 13615.	3.3	25
42	Light on a sensory interface linking the cerebrospinal fluid to motor circuits in vertebrates. Journal of Neurogenetics, 2017, 31, 113-127.	1.4	24
43	Experience, circuit dynamics, and forebrain recruitment in larval zebrafish prey capture. ELife, 2020, 9, .	6.0	24
44	Adrenergic activation modulates the signal from the Reissner fiber to cerebrospinal fluid-contacting neurons during development. ELife, 2020, 9, .	6.0	24
45	Hierarchy of Neural Organization in the Embryonic Spinal Cord: Granger-Causality Graph Analysis of In Vivo Calcium Imaging Data. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 333-341.	4.9	22
46	Fast Calcium Imaging with Optical Sectioning via HiLo Microscopy. PLoS ONE, 2015, 10, e0143681.	2.5	17
47	Inhibition and motor control in the developing zebrafish spinal cord. Current Opinion in Neurobiology, 2014, 26, 103-109.	4.2	16
48	Statistical physics and Alzheimerâ€™s disease. Physica A: Statistical Mechanics and Its Applications, 1998, 249, 460-471.	2.6	13
49	Taking a Big Step towards Understanding Locomotion. Trends in Neurosciences, 2018, 41, 869-870.	8.6	13
50	Evolutionary divergence of locomotion in two related vertebrate species. Cell Reports, 2022, 38, 110585.	6.4	12
51	Somatostatin 1.1 contributes to the innate exploration of zebrafish larva. Scientific Reports, 2020, 10, 15235.	3.3	10
52	Spinal sensory circuits in motion. Current Opinion in Neurobiology, 2016, 41, 38-43.	4.2	9
53	Optogenetic neuromodulation: New tools for monitoring and breaking neural circuits. Annals of Physical and Rehabilitation Medicine, 2015, 58, 259-264.	2.3	7
54	Tracking microscopy enables whole-brain imaging in freely moving zebrafish. Nature Methods, 2017, 14, 1041-1042.	19.0	6

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55	Bioluminescence Monitoring of Neuronal Activity in Freely Moving Zebrafish Larvae. Bio-protocol, 2017, 7, e2550.	0.4	6
56	A lexical approach for identifying behavioural action sequences. PLoS Computational Biology, 2022, 18, e1009672.	3.2	6
57	Central Sensory Neurons Detect and Combat Pathogens Invading the Cerebrospinal Fluid. SSRN Electronic Journal, 0, , .	0.4	4
58	A brain conditioned for social defeat. Science, 2016, 352, 42-43.	12.6	3
59	Automated Analysis of Cerebrospinal Fluid Flow and Motile Cilia Properties in The Central Canal of Zebrafish Embryos. Bio-protocol, 2021, 11, e3932.	0.4	3
60	A norepinephrineâ€dependent glial calcium wave travels in the spinal cord upon acoustovestibular stimuli. Glia, 2022, 70, 491-507.	4.9	3
61	A New Technique to Control the Architecture of Neuronal Networks in vitro. , 2005, 1, 23-57.		2
62	Sensorimotor Integration in the Spinal Cord, from Behaviors to Circuits: New Tools to Close the Loop?. Biological and Medical Physics Series, 2015, , 197-234.	0.4	2
63	Toward a comprehensive model of circuits underlying locomotion: What did we learn from zebrafish?. , 2020, , 125-152.		2
64	Locomotion: Electrical Coupling of Motor and Premotor Neurons. Current Biology, 2016, 26, R235-R237.	3.9	1
65	Locomotion: Control from the Periphery?. Current Biology, 2017, 27, R152-R153.	3.9	1
66	Glia: A Gate Controlling Animal Behavior?. Current Biology, 2019, 29, R847-R850.	3.9	1
67	Building behaviors, one layer at a time. ELife, 2019, 8, .	6.0	1
68	Engineering light-gated glutamate receptors. Biophysical Journal, 2009, 96, 489a.	0.5	0
69	Neuronal Wiring: Linking Dendrite Placement to Synapse Formation. Current Biology, 2015, 25, R190-R191.	3.9	0
70	Imaging the nervous system at different spatiotemporal scales with SCAPE microscopy. , 2017, , .		0