Lisa M Giocomo

List of Publications by Citations

57 papers	2,498 citations	23 h-index	49 g-index
69 ext. papers	3,111 ext. citations	13.7 avg, IF	5.56 L-index

#	Paper	IF	Citations
57	Temporal frequency of subthreshold oscillations scales with entorhinal grid cell field spacing. *Science*, **2007**, 315, 1719-22	33.3	300
56	Grid cell firing may arise from interference of theta frequency membrane potential oscillations in single neurons. *Hippocampus*, **2007**, 17, 1252-71	3.5	230
55	Computational models of grid cells. *Neuron*, **2011**, 71, 589-603	13.9	164
54	Environmental boundaries as an error correction mechanism for grid cells. *Neuron*, **2015**, 86, 827-39	13.9	140
53	Cholinergic modulation of cortical function. *Journal of Molecular Neuroscience*, **2006**, 30, 133-5	3.3	138
52	A Multiplexed, Heterogeneous, and Adaptive Code for Navigation in Medial Entorhinal Cortex. *Neuron*, **2017**, 94, 375-387.e7	13.9	133
51	Neuromodulation by glutamate and acetylcholine can change circuit dynamics by regulating the relative influence of afferent input and excitatory feedback. *Molecular Neurobiology*, **2007**, 36, 184-200	6.2	121
50	Phase precession and variable spatial scaling in a periodic attractor map model of medial entorhinal grid cells with realistic after-spike dynamics. *Hippocampus*, **2012**, 22, 772-89	3.5	116
49	Grid cells use HCN1 channels for spatial scaling. *Cell*, **2011**, 147, 1159-70	56.2	116
48	Knock-out of HCN1 subunit flattens dorsal-ventral frequency gradient of medial entorhinal neurons in adult mice. *Journal of Neuroscience*, **2009**, 29, 7625-30	6.6	94
47	Time constants of h current in layer ii stellate cells differ along the dorsal to ventral axis of medial entorhinal cortex. *Journal of Neuroscience*, **2008**, 28, 9414-25	6.6	94
46	Topography of head direction cells in medial entorhinal cortex. *Current Biology*, **2014**, 24, 252-62	6.3	88
45	Cholinergic modulation of the resonance properties of stellate cells in layer II of medial entorhinal cortex. *Journal of Neurophysiology*, **2010**, 104, 258-70	3.2	82
44	Principles governing the integration of landmark and self-motion cues in entorhinal cortical codes for navigation. *Nature Neuroscience*, **2018**, 21, 1096-1106	25.5	80
43	Remembered reward locations restructure entorhinal spatial maps. *Science*, **2019**, 363, 1447-1452	33.3	61
42	Computation by oscillations: implications of experimental data for theoretical models of grid cells. *Hippocampus*, **2008**, 18, 1186-99	3.5	60
41	Evaluation of the oscillatory interference model of grid cell firing through analysis and measured period variance of some biological oscillators. *PLoS Computational Biology*, **2009**, 5, e1000573	5	49

40	Muscarinic suppression in stratum radiatum of CA1 shows dependence on presynaptic M1 receptors and is not dependent on effects at GABA(B) receptors. *Neurobiology of Learning and Memory*, **2006**, 85, 153-63	3.1	46
39	Emergent elasticity in the neural code for space. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E11798-E11806	11.5	42
38	Frequency of subthreshold oscillations at different membrane potential voltages in neurons at different anatomical positions on the dorsoventral axis in the rat medial entorhinal cortex. *Journal of Neuroscience*, **2011**, 31, 12683-94	6.6	41
37	Nicotinic modulation of glutamatergic synaptic transmission in region CA3 of the hippocampus. *European Journal of Neuroscience*, **2005**, 22, 1349-56	3.5	40
36	Cellular dynamical mechanisms for encoding the time and place of events along spatiotemporal trajectories in episodic memory. *Behavioural Brain Research*, **2010**, 215, 261-74	3.4	32
35	Cell types for our sense of location: where we are and where we are going. *Nature Neuroscience*, **2017**, 20, 1474-1482	25.5	24
34	Grid scale drives the scale and long-term stability of place maps. *Nature Neuroscience*, **2018**, 21, 270-282	25.5	22
33	Environmental boundaries as a mechanism for correcting and anchoring spatial maps. *Journal of Physiology*, **2016**, 594, 6501-6511	3.9	21
32	Entorhinal velocity signals reflect environmental geometry. *Nature Neuroscience*, **2020**, 23, 239-251	25.5	19
31	Hyperpolarization-activated cyclic nucleotide-gated 1 independent grid cell-phase precession in mice. *Hippocampus*, **2014**, 24, 249-56	3.5	19
30	A phase code for memory could arise from circuit mechanisms in entorhinal cortex. *Neural Networks*, **2009**, 22, 1129-38	9.1	19
29	Heterogeneity in hippocampal place coding. *Current Opinion in Neurobiology*, **2018**, 49, 158-167	7.6	13
28	Difference in time course of modulation of synaptic transmission by group II versus group III metabotropic glutamate receptors in region CA1 of the hippocampus. *Hippocampus*, **2006**, 16, 1004-16	3.5	9
27	Experience-dependent contextual codes in the hippocampus. *Nature Neuroscience*, **2021**, 24, 705-714	25.5	9
26	Self-motion processing in visual and entorhinal cortices: inputs, integration, and implications for position coding. *Journal of Neurophysiology*, **2018**, 120, 2091-2106	3.2	8
25	Topography in the Bursting Dynamics of Entorhinal Neurons. *Cell Reports*, **2020**, 30, 2349-2359.e7	10.6	7
24	Mouse entorhinal cortex encodes a diverse repertoire of self-motion signals. *Nature Communications*, **2021**, 12, 671	17.4	7
23	Multiple head direction signals within entorhinal cortex: origin and function. *Current Opinion in Neurobiology*, **2020**, 64, 32-40	7.6	6

22	Spatial representation: maps of fragmented space. *Current Biology*, **2015**, 25, R362-3	6.3	5
21	A unified theory for the computational and mechanistic origins of grid cells		5
20	Navigating for reward. *Nature Reviews Neuroscience*, **2021**, 22, 472-487	13.5	5
19	Large scale in vivo recordings to study neuronal biophysics. *Current Opinion in Neurobiology*, **2015**, 32, 1-7	7.6	4
18	A positively tuned voltage indicator reveals electrical correlates of calcium activity in the brain		4
17	The grid code for ordered experience. *Nature Reviews Neuroscience*, **2021**, 22, 637-649	13.5	4
16	Spatial representation: maps in a temporal void. *Current Biology*, **2011**, 21, R962-4	6.3	3
15	Experience dependent contextual codes in the hippocampus		3
14	Neuroscience: Internal compass puts flies in their place. *Nature*, **2015**, 521, 165-6	50.4	2
13	The neural encoding of space in parahippocampal cortices. *Frontiers in Neural Circuits*, **2012**, 6, 53	3.5	2
12	Distinct algorithms for combining landmarks and path integration in medial entorhinal, visual and retrosplenial cortex		2
11	Distance-tuned neurons drive specialized path integration calculations in medial entorhinal cortex. *Cell Reports*, **2021**, 36, 109669	10.6	2
10	Dynamic and reversible remapping of network representations in an unchanging environment. *Neuron*, **2021**, 109, 2967-2980.e11	13.9	2
9	The Shifting Sands of Cortical Divisions. *Neuron*, **2019**, 102, 8-11	13.9	1
8	Flexible analysis of animal behavior via time-resolved manifold embedding		1
7	Dynamic and reversible remapping of network representations in an unchanging environment		1
6	Spatial memory: Place cell activity is causally related to behavior. *Current Biology*, **2021**, 31, R335-R337	6.3	0
5	Computational diversity in the hippocampus: a matter of components. *Journal of Physiology*, **2015**, 593, 1525-6	3.9	

List of Publications

4	From entorhinal neural codes to navigation. *Nature Neuroscience*, **2018**, 21, 7-8	25.5
3	Imagine a journey through time and space. *Nature Neuroscience*, **2015**, 18, 163-4	25.5
2	Nicotinic modulation of glutamatergic synaptic transmission in region CA3 of the hippocampus. *European Journal of Neuroscience*, **2005**, 22, 2679-2679	3.5
1	Mechanisms for Memory-Guided Behavior Involving Persistent Firing and Theta Rhythm Oscillations in the Entorhinal Cortex. *Lecture Notes in Computer Science*, **2008**, 28-37	0.9