Caswell Barry

List of Publications by Year
in descending order

41	5,772	236612	276539
papers	citations	25 h-index	41 g-index

59	59	59	3755
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ripple band phase precession of place cell firing during replay. Current Biology, 2022, 32, 64-73.e5.	1.8	10
2	Spatial goal coding in the hippocampal formation. Neuron, 2022, 110, 394-422.	3.8	62
3	State transitions in the statistically stable place cell population correspond to rate of perceptual change. Current Biology, 2022, 32, 3505-3514.e7.	1.8	15
4	Temporally delayed linear modelling (TDLM) measures replay in both animals and humans. ELife, 2021, 10, .	2.8	22
5	Choice of method of place cell classification determines the population of cells identified. PLoS Computational Biology, 2021, 17, e1008835.	1.5	10
6	Interpreting wide-band neural activity using convolutional neural networks. ELife, 2021, 10, .	2.8	17
7	Deforming the metric of cognitive maps distorts memory. Nature Human Behaviour, 2020, 4, 177-188.	6.2	45
8	The Tolman-Eichenbaum Machine: Unifying Space and Relational Memory through Generalization in the Hippocampal Formation. Cell, 2020, 183, 1249-1263.e23.	13.5	259
9	Neurobiological successor features for spatial navigation. Hippocampus, 2020, 30, 1347-1355.	0.9	31
10	Efficient neural decoding of self-location with a deep recurrent network. PLoS Computational Biology, 2019, 15, e1006822.	1.5	33
11	The Role of Hippocampal Replay in Memory andÂPlanning. Current Biology, 2018, 28, R37-R50.	1.8	251
12	Vector-based navigation using grid-like representations in artificial agents. Nature, 2018, 557, 429-433.	13.7	414
13	Entorhinal Neurons Exhibit Cue Locking in Rodent VR. Frontiers in Cellular Neuroscience, 2018, 12, 512.	1.8	14
14	Task Demands Predict a Dynamic Switch in the Content of Awake Hippocampal Replay. Neuron, 2017, 96, 925-935.e6.	3.8	84
15	NKX2-1 Is Required in the Embryonic Septum for Cholinergic System Development, Learning, and Memory. Cell Reports, 2017, 20, 1572-1584.	2.9	61
16	Modulating medial septal cholinergic activity reduces medial entorhinal theta frequency without affecting speed or grid coding. Scientific Reports, 2017, 7, 14573.	1.6	30
17	Coordinated grid and place cell replay during rest. Nature Neuroscience, 2016, 19, 792-794.	7.1	147
18	Hippocampal Attractor Dynamics Predict Memory-Based Decision Making. Current Biology, 2016, 26, 1750-1757.	1.8	36

#	Article	IF	Citations
19	Distorted Grids as a Spatial Label and Metric. Trends in Cognitive Sciences, 2016, 20, 164-167.	4.0	9
20	Neural systems supporting navigation. Current Opinion in Behavioral Sciences, 2015, 1, 47-55.	2.0	109
21	Grid cell symmetry is shaped by environmental geometry. Nature, 2015, 518, 232-235.	13.7	288
22	Grid Cells Form a Global Representation of Connected Environments. Current Biology, 2015, 25, 1176-1182.	1.8	112
23	Spatial Cognition: Grid Cell Firing Depends on Self-Motion Cues. Current Biology, 2015, 25, R827-R829.	1.8	8
24	Using Grid Cells for Navigation. Neuron, 2015, 87, 507-520.	3.8	210
25	Hippocampal place cells construct reward related sequences through unexplored space. ELife, 2015, 4, e06063.	2.8	206
26	Optimal configurations of spatial scale for grid cell firing under noise and uncertainty. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130290.	1.8	24
27	What do grid cells contribute to place cell firing?. Trends in Neurosciences, 2014, 37, 136-145.	4.2	116
28	Specific evidence of low-dimensional continuous attractor dynamics in grid cells. Nature Neuroscience, 2013, 16, 1077-1084.	7.1	248
29	3D Mapping in the Brain. Science, 2013, 340, 279-280.	6.0	9
30	Grid cell firing patterns signal environmental novelty by expansion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17687-17692.	3.3	175
31	From A to Z: a potential role for grid cells in spatial navigation. Neural Systems & Circuits, 2012, 2, 6.	1.8	12
32	Models of grid cells and theta oscillations. Nature, 2012, 488, E1-E1.	13.7	38
33	From Cells to Systems. Neuroscientist, 2012, 18, 556-566.	2.6	8
34	Possible role of acetylcholine in regulating spatial novelty effects on theta rhythm and grid cells. Frontiers in Neural Circuits, 2012, 6, 5.	1.4	58
35	The abrupt development of adult-like grid cell firing in the medial entorhinal cortex. Frontiers in Neural Circuits, 2012, 6, 21.	1.4	72
36	Evidence for grid cells in a human memory network. Nature, 2010, 463, 657-661.	13.7	904

#	Article	IF	Citations
37	Conjunctive Representations in the Hippocampus: What and Where?. Journal of Neuroscience, 2010, 30, 799-801.	1.7	4
38	Learning in a geometric model of place cell firing. Hippocampus, 2007, 17, 786-800.	0.9	45
39	An oscillatory interference model of grid cell firing. Hippocampus, 2007, 17, 801-812.	0.9	655
40	Experience-dependent rescaling of entorhinal grids. Nature Neuroscience, 2007, 10, 682-684.	7.1	489
41	The Boundary Vector Cell Model of Place Cell Firing and Spatial Memory. Reviews in the Neurosciences, 2006, 17, 71-97.	1.4	316