Ila R Fiete

List of Publications by Year
in descending order

37 papers	3,412 citations	279487 23 h-index	414034 32 g-index
54 all docs	54 docs citations	54 times ranked	2583 citing authors

#	Article	IF	Citations
1	Accurate Path Integration in Continuous Attractor Network Models of Grid Cells. PLoS Computational Biology, 2009, 5, e1000291.	1.5	569
2	What Grid Cells Convey about Rat Location. Journal of Neuroscience, 2008, 28, 6858-6871.	1.7	274
3	Spike-Time-Dependent Plasticity and Heterosynaptic Competition Organize Networks to Produce Long Scale-Free Sequences of Neural Activity. Neuron, 2010, 65, 563-576.	3.8	253
4	Specific evidence of low-dimensional continuous attractor dynamics in grid cells. Nature Neuroscience, 2013, 16, 1077-1084.	7.1	248
5	The intrinsic attractor manifold and population dynamics of a canonical cognitive circuit across waking and sleep. Nature Neuroscience, 2019, 22, 1512-1520.	7.1	214
6	Computational principles of memory. Nature Neuroscience, 2016, 19, 394-403.	7.1	176
7	Grid cells generate an analog error-correcting code for singularly precise neural computation. Nature Neuroscience, 2011, 14, 1330-1337.	7.1	165
8	Testing Odor Response Stereotypy in the Drosophila Mushroom Body. Neuron, 2008, 59, 1009-1023.	3.8	157
9	Model of Birdsong Learning Based on Gradient Estimation by Dynamic Perturbation of Neural Conductances. Journal of Neurophysiology, 2007, 98, 2038-2057.	0.9	151
10	The Mind of a Mouse. Cell, 2020, 182, 1372-1376.	13.5	127
11	Fundamental limits on persistent activity in networks of noisy neurons. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17645-17650.	3.3	102
12	Gradient Learning in Spiking Neural Networks by Dynamic Perturbation of Conductances. Physical Review Letters, 2006, 97, 048104.	2.9	89
13	A Map-like Micro-Organization of Grid Cells in the Medial Entorhinal Cortex. Cell, 2018, 175, 736-750.e30.	13.5	84
14	A Model of Grid Cell Development through Spatial Exploration and Spike Time-Dependent Plasticity. Neuron, 2014, 83, 481-495.	3.8	81
15	Grid cells: The position code, neural network models of activity, and the problem of learning. Hippocampus, 2008, 18, 1283-1300.	0.9	80
16	Temporal Sparseness of the Premotor Drive Is Important for Rapid Learning in a Neural Network Model of Birdsong. Journal of Neurophysiology, 2004, 92, 2274-2282.	0.9	71
17	Grid cell co-activity patterns during sleep reflect spatial overlap of grid fields during active behaviors. Nature Neuroscience, 2019, 22, 609-617.	7.1	67
18	Cortical ensembles orchestrate social competition through hypothalamic outputs. Nature, 2022, 603, 667-671.	13.7	64

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19	Grid Cell Responses in 1D Environments Assessed as Slices through a 2D Lattice. Neuron, 2016, 89, 1086-1099.	3.8	60
20	An International Laboratory for Systems and Computational Neuroscience. Neuron, 2017, 96, 1213-1218.	3.8	60
21	Systematic errors in connectivity inferred from activity in strongly recurrent networks. Nature Neuroscience, 2020, 23, 1286-1296.	7.1	50
22	Do We Understand the Emergent Dynamics of Grid Cell Activity?. Journal of Neuroscience, 2006, 26, 9352-9354.	1.7	46
23	Bias in Human Path Integration Is Predicted by Properties of Grid Cells. Current Biology, 2015, 25, 1771-1776.	1.8	42
24	Sources of path integration error in young and aging humans. Nature Communications, 2020, 11, 2626.	5.8	35
25	Fundamental bound on the persistence and capacity of short-term memory stored as graded persistent activity. ELife, 2017, 6, .	2.8	26
26	Efficient and flexible representation of higher-dimensional cognitive variables with grid cells. PLoS Computational Biology, 2020, 16, e1007796.	1.5	22
27	Inferring circuit mechanisms from sparse neural recording and global perturbation in grid cells. ELife, 2018, 7, .	2.8	11
28	Making our way through the world: Towards a functional understanding of the brain's spatial circuits. Current Opinion in Systems Biology, 2017, 3, 186-194.	1.3	8
29	Place-cell capacity and volatility with grid-like inputs. ELife, 2021, 10, .	2.8	8
30	Robust parallel decision-making in neural circuits with nonlinear inhibition. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25505-25516.	3.3	7
31	Losing Phase. Neuron, 2010, 66, 331-334.	3.8	5
32	Multi-periodic neural coding for adaptive information transfer. Theoretical Computer Science, 2016, 633, 37-53.	0.5	3
33	How Does the Brain Solve the Computational Problems of Spatial Navigation?. , 2014, , 373-407.		2
34	Dynamic shift-map coding with side information at the decoder. , 2012, , .		1
35	Efficient Inference in Structured Spaces. Cell, 2020, 183, 1147-1148.	13.5	0
36	Editorial overview: Theoretical and computational approaches to decipher brain function from molecules to behavior. Current Opinion in Neurobiology, 2021, 70, iii-vii.	2.0	0

#	Article	IF	Citations
37	Ila Fiete. Current Biology, 2021, 31, R1552-R1555.	1.8	0