

# Christian K Machens

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8002940/publications.pdf>

Version: 2024-02-01

45  
papers

4,202  
citations

279798

23  
h-index

315739

38  
g-index

56  
all docs

56  
docs citations

56  
times ranked

3976  
citing authors

#	ARTICLE	IF	CITATIONS
1	Feedforward and feedback interactions between visual cortical areas use different population activity patterns. Nature Communications, 2022, 13, 1099.	12.8	36
2	Efficient coding of cognitive variables underlies dopamine response and choice behavior. Nature Neuroscience, 2022, 25, 738-748.	14.8	2
3	Sensory Coding, Efficiency. , 2022, , 3072-3081.		0
4	Representational geometry of perceptual decisions in the monkey parietal cortex. Cell, 2021, 184, 3748-3761.e18.	28.9	58
5	Principles of Corticocortical Communication: Proposed Schemes and Design Considerations. Trends in Neurosciences, 2020, 43, 725-737.	8.6	67
6	Statistical methods for dissecting interactions between brain areas. Current Opinion in Neurobiology, 2020, 65, 59-69.	4.2	41
7	Learning to represent signals spike by spike. PLoS Computational Biology, 2020, 16, e1007692.	3.2	26
8	Learning to represent signals spike by spike. , 2020, 16, e1007692.		0
9	Learning to represent signals spike by spike. , 2020, 16, e1007692.		0
10	Learning to represent signals spike by spike. , 2020, 16, e1007692.		0
11	Learning to represent signals spike by spike. , 2020, 16, e1007692.		0
12	Decoding and encoding (de)mixed population responses. Current Opinion in Neurobiology, 2019, 58, 112-121.	4.2	25
13	Cortical Areas Interact through a Communication Subspace. Neuron, 2019, 102, 249-259.e4.	8.1	239
14	State-dependent geometry of population activity in rat auditory cortex. ELife, 2019, 8, .	6.0	14
15	Editorial overview: Computational neuroscience. Current Opinion in Neurobiology, 2017, 46, A1-A5.	4.2	4
16	Distributed and Mixed Information in Monosynaptic Inputs to Dopamine Neurons. Neuron, 2016, 91, 1374-1389.	8.1	195
17	Efficient codes and balanced networks. Nature Neuroscience, 2016, 19, 375-382.	14.8	364
18	Demixed principal component analysis of neural population data. ELife, 2016, 5, .	6.0	397

#	ARTICLE	IF	CITATIONS
19	Optimal compensation for neuron loss. <i>ELife</i> , 2016, 5, .	6.0	28
20	On the Number of Neurons and Time Scale of Integration Underlying the Formation of Percepts in the Brain. <i>PLoS Computational Biology</i> , 2015, 11, e1004082.	3.2	6
21	Striatal dynamics explain duration judgments. <i>ELife</i> , 2015, 4, .	6.0	145
22	Variability in neural activity and behavior. <i>Current Opinion in Neurobiology</i> , 2014, 25, 211-220.	4.2	178
23	Optogenetic perturbations reveal the dynamics of an oculomotor integrator. <i>Frontiers in Neural Circuits</i> , 2014, 8, 10.	2.8	27
24	Sensory Coding, Efficiency. , 2014, , 1-12.		0
25	Population-wide distributions of neural activity during perceptual decision-making. <i>Progress in Neurobiology</i> , 2013, 103, 156-193.	5.7	71
26	Percept and the single neuron. <i>Nature Neuroscience</i> , 2013, 16, 112-113.	14.8	1
27	Predictive Coding of Dynamical Variables in Balanced Spiking Networks. <i>PLoS Computational Biology</i> , 2013, 9, e1003258.	3.2	171
28	Building the Human Brain. <i>Science</i> , 2012, 338, 1156-1157.	12.6	84
29	Disentangling the functional consequences of the connectivity between optic-flow processing neurons. <i>Nature Neuroscience</i> , 2012, 15, 441-448.	14.8	24
30	Demixing Population Activity in Higher Cortical Areas. <i>Frontiers in Computational Neuroscience</i> , 2010, 4, 126.	2.1	37
31	Functional, But Not Anatomical, Separation of "What" and "When" in Prefrontal Cortex. <i>Journal of Neuroscience</i> , 2010, 30, 350-360.	3.6	243
32	Spatiotemporal Response Properties of Optic-Flow Processing Neurons. <i>Neuron</i> , 2010, 67, 629-642.	8.1	19
33	Design of Continuous Attractor Networks with Monotonic Tuning Using a Symmetry Principle. <i>Neural Computation</i> , 2008, 20, 452-485.	2.2	33
34	From response to stimulus: adaptive sampling in sensory physiology. <i>Current Opinion in Neurobiology</i> , 2007, 17, 430-436.	4.2	54
35	Modeling Single-Neuron Dynamics and Computations: A Balance of Detail and Abstraction. <i>Science</i> , 2006, 314, 80-85.	12.6	396
36	Testing the Efficiency of Sensory Coding with Optimal Stimulus Ensembles. <i>Neuron</i> , 2005, 47, 447-456.	8.1	125

#	ARTICLE	IF	CITATIONS
37	Flexible Control of Mutual Inhibition: A Neural Model of Two-Interval Discrimination. <i>Science</i> , 2005, 307, 1121-1124.	12.6	458
38	Linearity of Cortical Receptive Fields Measured with Natural Sounds. <i>Journal of Neuroscience</i> , 2004, 24, 1089-1100.	3.6	260
39	Searching for Optimal Sensory Signals: Iterative Stimulus Reconstruction in Closed-Loop Experiments. <i>Journal of Computational Neuroscience</i> , 2004, 17, 47-56.	1.0	19
40	Single auditory neurons rapidly discriminate conspecific communication signals. <i>Nature Neuroscience</i> , 2003, 6, 341-342.	14.8	103
41	Auditory Modeling Gets an Edge. <i>Journal of Neurophysiology</i> , 2003, 90, 3581-3582.	1.8	2
42	Energy-Efficient Coding with Discrete Stochastic Events. <i>Neural Computation</i> , 2002, 14, 1323-1346.	2.2	67
43	Adaptive Sampling by Information Maximization. <i>Physical Review Letters</i> , 2002, 88, 228104.	7.8	22
44	Representation of Acoustic Communication Signals by Insect Auditory Receptor Neurons. <i>Journal of Neuroscience</i> , 2001, 21, 3215-3227.	3.6	131
45	The geometry of robustness in spiking neural networks. <i>ELife</i> , 0, 11, .	6.0	10