

# Vijay Balasubramanian

## List of Publications by Year in descending order

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33  
papers

1,501  
citations

516561

16  
h-index

414303

32  
g-index

49  
all docs

49  
docs citations

49  
times ranked

1391  
citing authors

#	ARTICLE	IF	CITATIONS
1	Connectivity and dynamics in the olfactory bulb. PLoS Computational Biology, 2022, 18, e1009856.	1.5	9
2	Human inference reflects a normative balance of complexity and accuracy. Nature Human Behaviour, 2022, 6, 1153-1168.	6.2	7
3	Environmental deformations dynamically shift human spatial memory. Hippocampus, 2021, 31, 89-101.	0.9	17
4	Temporal stability of stimulus representation increases along rodent visual cortical hierarchies. Nature Communications, 2021, 12, 4448.	5.8	27
5	Brain power. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	19
6	What the odor is not: Estimation by elimination. Physical Review E, 2021, 104, 024415.	0.8	3
7	Cortical feedback and gating in odor discrimination and generalization. PLoS Computational Biology, 2021, 17, e1009479.	1.5	2
8	Dynamical self-organization and efficient representation of space by grid cells. Current Opinion in Neurobiology, 2021, 70, 206-213.	2.0	2
9	Rat sensitivity to multipoint statistics is predicted by efficient coding of natural scenes. ELife, 2021, 10, .	2.8	6
10	Efficient coding of natural scene statistics predicts discrimination thresholds for grayscale textures. ELife, 2020, 9, .	2.8	18
11	What is optimal in optimal inference?. Current Opinion in Behavioral Sciences, 2019, 29, 117-126.	2.0	9
12	Competitive binding predicts nonlinear responses of olfactory receptors to complex mixtures. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9598-9603.	3.3	59
13	Adaptation of olfactory receptor abundances for efficient coding. ELife, 2019, 8, .	2.8	23
14	A geometric attractor mechanism for self-organization of entorhinal grid modules. ELife, 2019, 8, .	2.8	26
15	A bias-variance trade-off governs individual differences in on-line learning in an unpredictable environment. Nature Human Behaviour, 2018, 2, 213-224.	6.2	61
16	Cortical Neural Activity Predicts Sensory Acuity Under Optogenetic Manipulation. Journal of Neuroscience, 2018, 38, 2094-2105.	1.7	18
17	Environmental deformations dynamically shift the grid cell spatial metric. ELife, 2018, 7, .	2.8	44
18	Rules and mechanisms for efficient two-stage learning in neural circuits. ELife, 2017, 6, .	2.8	22

#	ARTICLE	IF	CITATIONS
19	A principle of economy predicts the functional architecture of grid cells. <i>ELife</i> , 2015, 4, e08362.	2.8	53
20	How a well-adapted immune system is organized. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5950-5955.	3.3	114
21	Heterogeneity and Efficiency in the Brain. <i>Proceedings of the IEEE</i> , 2015, 103, 1346-1358.	16.4	34
22	Variance predicts salience in central sensory processing. <i>ELife</i> , 2014, 3, .	2.8	60
23	Transformation of Stimulus Correlations by the Retina. <i>PLoS Computational Biology</i> , 2013, 9, e1003344.	1.5	16
24	Global embeddings for branes at toric singularities. <i>Journal of High Energy Physics</i> , 2012, 2012, 1.	1.6	13
25	Thin walls and junctions: Vacuum decay in multidimensional field landscapes. <i>Physical Review D</i> , 2011, 84, .	1.6	7
26	Natural Images from the Birthplace of the Human Eye. <i>PLoS ONE</i> , 2011, 6, e20409.	1.1	79
27	Toric Lego: a method for modular model building. <i>Journal of High Energy Physics</i> , 2010, 2010, 1.	1.6	11
28	Retina is structured to process an excess of darkness in natural scenes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 17368-17373.	3.3	171
29	Local statistics in natural scenes predict the saliency of synthetic textures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 18149-18154.	3.3	75
30	Design of a Trichromatic Cone Array. <i>PLoS Computational Biology</i> , 2010, 6, e1000677.	1.5	47
31	Receptive fields and functional architecture in the retina. <i>Journal of Physiology</i> , 2009, 587, 2753-2767.	1.3	116
32	Design of a Neuronal Array. <i>Journal of Neuroscience</i> , 2008, 28, 3178-3189.	1.7	132
33	Statistical Inference, Occam's Razor, and Statistical Mechanics on the Space of Probability Distributions. <i>Neural Computation</i> , 1997, 9, 349-368.	1.3	160