Mriganka Sur

List of Publications by Year
in descending order

108 papers	12,953 citations	30070 54 h-index	28297 105 g-index
120 all docs	120 docs citations	120 times ranked	13613 citing authors

#	Article	IF	Citations
1	Cortical-subcortical interactions in goal-directed behavior. Physiological Reviews, 2023, 103, 347-389.	28.8	13
2	Multiplexed action-outcome representation by striatal striosome-matrix compartments detected with a mouse cost-benefit foraging task. Nature Communications, 2022, 13, 1541.	12.8	11
3	Brainâ€wide mapping of inputs to the mouse lateral posterior (LP/Pulvinar) thalamusâ€"anterior cingulate cortex network. Journal of Comparative Neurology, 2022, 530, 1992-2013.	1.6	12
4	Molecular Signatures of Response to Mecasermin in Children With Rett Syndrome. Frontiers in Neuroscience, 2022, 16, .	2.8	2
5	Spatiotemporal dynamics of noradrenaline during learned behaviour. Nature, 2022, 606, 732-738.	27.8	48
6	Evidence of Task-Independent Person-Specific Signatures in EEG Using Subspace Techniques. IEEE Transactions on Information Forensics and Security, 2021, 16, 2856-2871.	6.9	8
7	Functional parcellation of mouse visual cortex using statistical techniques reveals response-dependent clustering of cortical processing areas. PLoS Computational Biology, 2021, 17, e1008548.	3.2	4
8	The role of GABAergic signalling in neurodevelopmental disorders. Nature Reviews Neuroscience, 2021, 22, 290-307.	10.2	83
9	Signal-to-signal neural networks for improved spike estimation from calcium imaging data. PLoS Computational Biology, 2021, 17, e1007921.	3.2	9
10	Astrocyte glutamate uptake coordinates experienceâ€dependent, eyeâ€specific refinement in developing visual cortex. Glia, 2021, 69, 1723-1735.	4.9	11
11	GSK3ÃŸ inhibitor CHIR 99021 modulates cerebral organoid development through dose-dependent regulation of apoptosis, proliferation, differentiation and migration. PLoS ONE, 2021, 16, e0251173.	2.5	12
12	Locus Coeruleus Norepinephrine in Learned Behavior: Anatomical Modularity and Spatiotemporal Integration in Targets. Frontiers in Neural Circuits, 2021, 15, 638007.	2.8	57
13	De-scattering with Excitation Patterning enables rapid wide-field imaging through scattering media. Science Advances, 2021, 7, .	10.3	11
14	Reliable Sensory Processing in Mouse Visual Cortex through Cooperative Interactions between Somatostatin and Parvalbumin Interneurons. Journal of Neuroscience, 2021, 41, 8761-8778.	3.6	17
15	A Platform for Spatiotemporal â€œMatrixâ€• Stimulation in Brain Networks Reveals Novel Forms of Circuit Plasticity. Frontiers in Neural Circuits, 2021, 15, 792228.	2.8	0
16	Heterosynaptic Plasticity and the Experience-Dependent Refinement of Developing Neuronal Circuits. Frontiers in Neural Circuits, 2021, 15, 803401.	2.8	12
17	Hemodynamic molecular imaging of tumor-associated enzyme activity in the living brain. ELife, 2021, 10, .	6.0	1
18	Distinct prefrontal top-down circuits differentially modulate sensorimotor behavior. Nature Communications, 2020, 11, 6007.	12.8	46

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19	Neural Speech Decoding During Audition, Imagination and Production. IEEE Access, 2020, 8, 149714-149729.	4.2	17
20	Reflections on the past two decades of neuroscience. Nature Reviews Neuroscience, 2020, 21, 524-534.	10.2	35
21	Quantitative third-harmonic generation imaging of mouse visual cortex areas reveals correlations between functional maps and structural substrates. Biomedical Optics Express, 2020, 11, 5650.	2.9	9
22	Neural mechanisms of sensorimotor transformation and action selection. European Journal of Neuroscience, 2019, 49, 1055-1060.	2.6	23
23	Pharmacological enhancement of <i>KCC2</i> gene expression exerts therapeutic effects on human Rett syndrome neurons and <i>Mecp2</i> mutant mice. Science Translational Medicine, 2019, 11, .	12.4	111
24	Noradrenergic signaling in the wakeful state inhibits microglial surveillance and synaptic plasticity in the mouse visual cortex. Nature Neuroscience, 2019, 22, 1782-1792.	14.8	211
25	Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. IEEE Transactions on Signal Processing, 2019, 67, 2923-2936.	5.3	9
26	Subspace techniques for task-independent EEG person identification. , 2019, 2019, 4545-4548.		3
27	Towards a better diagnosis and treatment of Rett syndrome: a model synaptic disorder. Brain, 2019, 142, 239-248.	7.6	82
28	Functional imaging of visual cortical layers and subplate in awake mice with optimized three-photon microscopy. Nature Communications, 2019, 10, 177.	12.8	121
29	Active control of arousal by a locus coeruleus GABAergic circuit. Nature Neuroscience, 2019, 22, 218-228.	14.8	211
30	Major Vault Protein, a Candidate Gene in 16p11.2 Microdeletion Syndrome, Is Required for the Homeostatic Regulation of Visual Cortical Plasticity. Journal of Neuroscience, 2018, 38, 3890-3900.	3.6	26
31	Task-dependent representations of stimulus and choice in mouse parietal cortex. Nature Communications, 2018, 9, 2596.	12.8	103
32	Locally coordinated synaptic plasticity of visual cortex neurons in vivo. Science, 2018, 360, 1349-1354.	12.6	137
33	Rett syndrome: insights into genetic, molecular and circuit mechanisms. Nature Reviews Neuroscience, 2018, 19, 368-382.	10.2	164
34	GDspike: An accurate spike estimation algorithm from noisy calcium fluorescence signals. , 2017, , .		8
35	Induction of Expansion and Folding in Human Cerebral Organoids. Cell Stem Cell, 2017, 20, 385-396.e3.	11.1	346
36	Two-photon imaging in mice shows striosomes and matrix have overlapping but differential reinforcement-related responses. ELife, 2017, 6, .	6.0	86

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37	Direct modulation of GFAP-expressing glia in the arcuate nucleus bi-directionally regulates feeding. ELife, 2016, 5, .	6.0	91
38	Developmental Dynamics of Rett Syndrome. Neural Plasticity, 2016, 2016, 1-9.	2.2	65
39	Distinct roles of visual, parietal, and frontal motor cortices in memory-guided sensorimotor decisions. ELife, 2016, 5, .	6.0	183
40	Cell-specific modulation of plasticity and cortical state by cholinergic inputs to the visual cortex. Journal of Physiology (Paris), 2016, 110, 37-43.	2.1	17
41	Jointly reduced inhibition and excitation underlies circuit-wide changes in cortical processing in Rett syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7287-E7296.	7.1	148
42	An acetylcholine-activated microcircuit drives temporal dynamics of cortical activity. Nature Neuroscience, 2015, 18, 892-902.	14.8	182
43	Spatial Correlations in Natural Scenes Modulate Response Reliability in Mouse Visual Cortex. Journal of Neuroscience, 2015, 35, 14661-14680.	3.6	51
44	Genes, circuits, and precision therapies for autism and related neurodevelopmental disorders. Science, 2015, 350, .	12.6	230
45	In vivo interrogation of gene function in the mammalian brain using CRISPR-Cas9. Nature Biotechnology, 2015, 33, 102-106.	17.5	675
46	Functional recovery with recombinant human IGF1 treatment in a mouse model of Rett Syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9941-9946.	7.1	172
47	El-Boustani et al. reply. Nature, 2014, 508, E3-E4.	27.8	17
48	Response-dependent dynamics of cell-specific inhibition in cortical networks in vivo. Nature Communications, 2014, 5, 5689.	12.8	50
49	Safety, pharmacokinetics, and preliminary assessment of efficacy of mecasermin (recombinant human) Tj ETQq1 1 0.784314 rgBT /Ov United States of America, 2014, 111, 4596-4601.	7.1	178
50	STAT1 Regulates the Homeostatic Component of Visual Cortical Plasticity via an AMPA Receptor-Mediated Mechanism. Journal of Neuroscience, 2014, 34, 10256-10263.	3.6	16
51	Î²2-Adrenergic receptor agonist ameliorates phenotypes and corrects microRNA-mediated IGF1 deficits in a mouse model of Rett syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9947-9952.	7.1	67
52	Neuron-glia networks: integral gear of brain function. Frontiers in Cellular Neuroscience, 2014, 8, 378.	3.7	175
53	Global Transcriptional and Translational Repression in Human-Embryonic-Stem-Cell-Derived Rett Syndrome Neurons. Cell Stem Cell, 2013, 13, 446-458.	11.1	273
54	Two-way communication with neural networks in vivo using focused light. Nature Protocols, 2013, 8, 1184-1203.	12.0	14

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55	Mechanisms and therapeutic challenges in autism spectrum disorders. Current Opinion in Neurology, 2013, 26, 154-159.	3.6	46
56	Mechanisms of Plasticity in the Developing and Adult Visual Cortex. Progress in Brain Research, 2013, 207, 243-254.	1.4	34
57	Nucleus basalis-enabled stimulus-specific plasticity in the visual cortex is mediated by astrocytes. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2832-41.	7.1	162
58	Rett Syndrome: Genes, Synapses, Circuits, and Therapeutics. Frontiers in Psychiatry, 2012, 3, 34.	2.6	50
59	Division and subtraction by distinct cortical inhibitory networks in vivo. Nature, 2012, 488, 343-348.	27.8	490
60	The Emerging Role of microRNAs in Schizophrenia and Autism Spectrum Disorders. Frontiers in Psychiatry, 2012, 3, 39.	2.6	98
61	miR-132, an experience-dependent microRNA, is essential for visual cortex plasticity. Nature Neuroscience, 2011, 14, 1240-1242.	14.8	167
62	Experience-dependent regulation of CaMKII activity within single visual cortex synapses in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 21241-21246.	7.1	28
63	Rapid experience-dependent plasticity of synapse function and structure in ferret visual cortex in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 21235-21240.	7.1	40
64	Loss of Arc renders the visual cortex impervious to the effects of sensory experience or deprivation. Nature Neuroscience, 2010, 13, 450-457.	14.8	142
65	Response Features of Parvalbumin-Expressing Interneurons Suggest Precise Roles for Subtypes of Inhibition in Visual Cortex. Neuron, 2010, 67, 847-857.	8.1	214
66	Differential Gene Expression in the Developing Lateral Geniculate Nucleus and Medial Geniculate Nucleus Reveals Novel Roles for Zic4 and Foxp2 in Visual and Auditory Pathway Development. Journal of Neuroscience, 2009, 29, 13672-13683.	3.6	48
67	Molecular mechanisms of experience-dependent plasticity in visual cortex. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 341-355.	4.0	113
68	Intrinsic patterning and experience-dependent mechanisms that generate eye-specific projections and binocular circuits in the visual pathway. Current Opinion in Neurobiology, 2009, 19, 181-187.	4.2	26
69	Partial reversal of Rett Syndrome-like symptoms in MeCP2 mutant mice. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2029-2034.	7.1	511
70	Tuned Responses of Astrocytes and Their Influence on Hemodynamic Signals in the Visual Cortex. Science, 2008, 320, 1638-1643.	12.6	552
71	Gene expression patterns in visual cortex during the critical period: Synaptic stabilization and reversal by visual deprivation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9409-9414.	7.1	66
72	Differential Gene Expression between Sensory Neocortical Areas: Potential Roles for Ten_m3 and Bcl6 in Patterning Visual and Somatosensory Pathways. Cerebral Cortex, 2008, 18, 53-66.	2.9	62

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73	The Emerging Nature of Nurture. Science, 2008, 322, 1636-1636.	12.6	1
74	Alteration of Visual Input Results in a Coordinated Reorganization of Multiple Visual Cortex Maps. Journal of Neuroscience, 2007, 27, 10299-10310.	3.6	48
75	Ten_m3 Regulates Eye-Specific Patterning in the Mammalian Visual Pathway and Is Required for Binocular Vision. PLoS Biology, 2007, 5, e241.	5.6	135
76	Dynamics of orientation tuning in cat V1 neurons depend on location within layers and orientation maps. Frontiers in Neuroscience, 2007, 1, 145-159.	2.8	31
77	Remodeling of Synaptic Structure in Sensory Cortical Areas<i>In Vivo</i>. Journal of Neuroscience, 2006, 26, 3021-3029.	3.6	216
78	Gene expression changes and molecular pathways mediating activity-dependent plasticity in visual cortex. Nature Neuroscience, 2006, 9, 660-668.	14.8	199
79	Visual activity and cortical rewiring: activity-dependent plasticity of cortical networks. Progress in Brain Research, 2006, 157, 3-381.	1.4	35
80	Plasticity and specificity of cortical processing networks. Trends in Neurosciences, 2006, 29, 323-329.	8.6	72
81	Effects of Synaptic Activity on Dendritic Spine Motility of Developing Cortical Layer V Pyramidal Neurons. Cerebral Cortex, 2006, 16, 730-741.	2.9	51
82	Invariant computations in local cortical networks with balanced excitation and inhibition. Nature Neuroscience, 2005, 8, 194-201.	14.8	282
83	Ephrin-A2 and -A5 influence patterning of normal and novel retinal projections to the thalamus: Conserved mapping mechanisms in visual and auditory thalamic targets. Journal of Comparative Neurology, 2005, 488, 140-151.	1.6	28
84	Normal eye-specific patterning of retinal inputs to murine subcortical visual nuclei in the absence of brain-derived neurotrophic factor. Visual Neuroscience, 2005, 22, 27-36.	1.0	14
85	Patterning and Plasticity of the Cerebral Cortex. Science, 2005, 310, 805-810.	12.6	591
86	The Coordinated Mapping of Visual Space and Response Features in Visual Cortex. Neuron, 2005, 47, 267-280.	8.1	110
87	Bottom-up and top-down dynamics in visual cortex. Progress in Brain Research, 2005, 149, 65-81.	1.4	23
88	Acceleration of visually cued conditioned fear through the auditory pathway. Nature Neuroscience, 2004, 7, 968-973.	14.8	36
89	Local networks in visual cortex and their influence on neuronal responses and dynamics. Journal of Physiology (Paris), 2004, 98, 429-441.	2.1	21
90	Dendritic Spine Dynamics Are Regulated by Monocular Deprivation and Extracellular Matrix Degradation. Neuron, 2004, 44, 1021-1030.	8.1	267

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91	Motility of dendritic spines in visual cortex in vivo: Changes during the critical period and effects of visual deprivation. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 16024-16029.	7.1	179
92	Synaptic Integration by V1 Neurons Depends on Location within the Orientation Map. Neuron, 2002, 36, 969-978.	8.1	130
93	Dynamics of neuronal sensitivity in visual cortex and local feature discrimination. Nature Neuroscience, 2002, 5, 883-891.	14.8	185
94	Enhanced Plasticity of Retinothalamic Projections in an Ephrin-A2/A5 Double Mutant. Journal of Neuroscience, 2001, 21, 7684-7690.	3.6	42
95	Development and plasticity of cortical areas and networks. Nature Reviews Neuroscience, 2001, 2, 251-262.	10.2	317
96	Foci of orientation plasticity in visual cortex. Nature, 2001, 411, 80-86.	27.8	158
97	Induction of visual orientation modules in auditory cortex. Nature, 2000, 404, 841-847.	27.8	477
98	Visual behaviour mediated by retinal projections directed to the auditory pathway. Nature, 2000, 404, 871-876.	27.8	414
99	Adaptation-Induced Plasticity of Orientation Tuning in Adult Visual Cortex. Neuron, 2000, 28, 287-298.	8.1	437
100	Pattern formation by retinal afferents in the ferret lateral geniculate nucleus: Developmental segregation and the role of N-methyl-D-aspartate receptors. Journal of Comparative Neurology, 1999, 411, 327-345.	1.6	49
101	Brainstem inputs to the ferret medial geniculate nucleus and the effect of early deafferentation on novel retinal projections to the auditory thalamus. , 1998, 400, 417-439.		37
102	Experimentally Induced Retinal Projections to the Ferret Auditory Thalamus: Development of Clustered Eye-Specific Patterns in a Novel Target. Journal of Neuroscience, 1997, 17, 2040-2055.	3.6	43
103	Optically imaged maps of orientation preference in primary visual cortex of cats and ferrets. Journal of Comparative Neurology, 1997, 387, 358-370.	1.6	87
104	Experimentally induced visual projections to the auditory thalamus in ferrets: Evidence for a W cell pathway. Journal of Comparative Neurology, 1993, 334, 263-280.	1.6	46
105	Disruption of retinogeniculate afferent segregation by antagonists to NMDA receptors. Nature, 1991, 351, 568-570.	27.8	248
106	Visual projections induced into the auditory pathway of ferrets. I. Novel inputs to primary auditory cortex (AI) from the LP/pulvinar complex and the topography of the MGN-AI projection. Journal of Comparative Neurology, 1990, 298, 50-68.	1.6	117
107	Cross-modal plasticity in cortical development: differentiation and specification of sensory neocortex. Trends in Neurosciences, 1990, 13, 227-233.	8.6	213
108	Development of X- and Y-cell retinogeniculate terminations in kittens. Nature, 1984, 310, 246-249.	27.8	91