Frank Sengpiel

List of Publications by Year
in descending order

76 papers	3,569 citations	159358 30 h-index	143772 57 g-index
78 all docs	78 docs citations	78 times ranked	3273 citing authors

#	Article	IF	Citations
1	Responses of neurons in primary and inferior temporal visual cortices to natural scenes. Proceedings of the Royal Society B: Biological Sciences, 1997, 264, 1775-1783.	1.2	366
2	The `Ideal Homunculus': decoding neural population signals. Trends in Neurosciences, 1998, 21, 259-265.	4.2	221
3	Influence of experience on orientation maps in cat visual cortex. Nature Neuroscience, 1999, 2, 727-732.	7.1	199
4	Characteristics of surround inhibition in cat area 17. Experimental Brain Research, 1997, 116, 216-228.	0.7	195
5	Interocular suppression in the primary visual cortex: a possible neural basis of binocular rivalry. Vision Research, 1995, 35, 179-195.	0.7	142
6	Different mechanisms underlie three inhibitory phenomena in cat area 17. Vision Research, 1998, 38, 2067-2080.	0.7	138
7	The Role of Activity in Development of the Visual System. Current Biology, 2002, 12, R818-R826.	1.8	125
8	Homeostatic plasticity mechanisms are required for juvenile, but not adult, ocular dominance plasticity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1311-1316.	3.3	120
9	The neural basis of suppression and amblyopia in strabismus. Eye, 1996, 10, 250-258.	1.1	115
10	Optical imaging of intrinsic signals: recent developments in the methodology and its applications. Journal of Neuroscience Methods, 2004, 136, 1-21.	1.3	114
11	Strabismic Suppression Is Mediated by Inhibitory Interactions in the Primary Visual Cortex. Cerebral Cortex, 2005, 16, 1750-1758.	1.6	105
12	Interocular control of neuronal responsiveness in cat visual cortex. Nature, 1994, 368, 847-850.	13.7	101
13	Spatial Memory Engram in the Mouse Retrosplenial Cortex. Current Biology, 2018, 28, 1975-1980.e6.	1.8	87
14	Correlated binocular activity guides recovery from monocular deprivation. Nature, 2002, 416, 430-433.	13.7	77
15	Intracortical Origins of Interocular Suppression in the Visual Cortex. Journal of Neuroscience, 2005, 25, 6394-6400.	1.7	71
16	Principal Component Analysis and Blind Separation of Sources for Optical Imaging of Intrinsic Signals. NeuroImage, 2000, 11, 482-490.	2.1	69
17	Direct, Live Imaging of Cortical Spreading Depression and Anoxic Depolarisation Using a Fluorescent, Voltage-Sensitive Dye. Journal of Cerebral Blood Flow and Metabolism, 2008, 28, 251-262.	2.4	60
18	Neural mechanisms of recovery following early visual deprivation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 383-398.	1.8	52

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19	Plasticity of the Visual Cortex and Treatment of Amblyopia. Current Biology, 2014, 24, R936-R940.	1.8	51
20	Functional architecture of area 17 in normal and monocularly deprived marmosets (Callithrix) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702	0.5	48
21	Functional Reorganization of Visual Cortex Maps after Ischemic Lesions Is Accompanied by Changes in Expression of Cytoskeletal Proteins and NMDA and GABAA Receptor Subunits. Journal of Neuroscience, 2004, 24, 1812-1821.	1.7	47
22	Effects of Digesting Chondroitin Sulfate Proteoglycans on Plasticity in Cat Primary Visual Cortex. Journal of Neuroscience, 2013, 33, 234-243.	1.7	47
23	Brief Daily Periods of Binocular Vision Prevent Deprivation-Induced Acuity Loss. Current Biology, 2003, 13, 1704-1708.	1.8	44
24	Visual response properties and afferents of nucleus of the optic tract in the ferret. Experimental Brain Research, 1990, 83, 178-89.	0.7	41
25	Intrinsic and environmental factors in the development of functional maps in cat visual cortex. Neuropharmacology, 1998, 37, 607-621.	2.0	40
26	Neuroprotective Effects of Hydrated Fullerene C60: Cortical and Hippocampal EEG Interplay in an Amyloid-Infused Rat Model of Alzheimer's Disease. Journal of Alzheimer's Disease, 2015, 45, 217-233.	1.2	38
27	Brief daily binocular vision prevents monocular deprivation effects in visual cortex. European Journal of Neuroscience, 2007, 25, 270-280.	1.2	37
28	Mammillothalamic Disconnection Alters Hippocampocortical Oscillatory Activity and Microstructure: Implications for Diencephalic Amnesia. Journal of Neuroscience, 2019, 39, 6696-6713.	1.7	36
29	Interocular suppression in cat striate cortex is not orientation selective. NeuroReport, 1995, 6, 2235-2239.	0.6	31
30	The critical period. Current Biology, 2007, 17, R742-R743.	1.8	31
31	The Development and Activity-Dependent Expression of Aggrecan in the Cat Visual Cortex. Cerebral Cortex, 2013, 23, 349-360.	1.6	31
32	Reorganization of Visual Cortical Maps after Focal Ischemic Lesions. Journal of Cerebral Blood Flow and Metabolism, 2003, 23, 811-820.	2.4	30
33	Visual perception: Spotlight on the primary visual cortex. Current Biology, 1999, 9, R318-R321.	1.8	29
34	Contrast invariance of functional maps in cat primary visual cortex. Journal of Vision, 2004, 4, 1.	0.1	27
35	Enhancement of visual cortex plasticity by dark exposure. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160159.	1.8	27
36	Short periods of concordant binocular vision prevent the development of deprivation amblyopia. European Journal of Neuroscience, 2006, 23, 2458-2466.	1.2	26

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37	Loss of Midbrain Dopamine Neurons and Altered Apomorphine EEG Effects in the 5xFAD Mouse Model of Alzheimerâ€™s Disease. Journal of Alzheimer's Disease, 2019, 70, 241-256.	1.2	26
38	Orientation specificity of contrast adaptation in visual cortical pinwheel centres and iso-orientation domains. European Journal of Neuroscience, 2002, 15, 876-886.	1.2	21
39	The Role of GluA1 in Ocular Dominance Plasticity in the Mouse Visual Cortex. Journal of Neuroscience, 2013, 33, 15220-15225.	1.7	20
40	Daily mixed visual experience that prevents amblyopia in cats does not always allow the development ofgood binocular depth perception. Journal of Vision, 2009, 9, 22-22.	0.1	19
41	Protection against deprivation amblyopia depends on relative not absolute daily binocular exposure. Journal of Vision, 2011, 11, 13-13.	0.1	18
42	Experienceâ€dependent regulation of functional maps and synaptic protein expression in the cat visual cortex. European Journal of Neuroscience, 2012, 35, 1281-1294.	1.2	18
43	Visual Cortical Recovery From Reverse Occlusion Depends on Concordant Binocular Experience. Journal of Neurophysiology, 2006, 95, 1718-1726.	0.9	17
44	Interocular Transfer of Adaptation in the Primary Visual Cortex. Cerebral Cortex, 2009, 19, 1835-1843.	1.6	16
45	Comparable reduction in Zif268 levels and cytochrome oxidase activity in the retrosplenial cortex following mammillothalamic tract lesions. Neuroscience, 2016, 330, 39-49.	1.1	15
46	Intrahippocampal Pathways Involved in Learning/Memory Mechanisms are Affected by Intracerebral Infusions of Amyloid-Î²25-35 Peptide and Hydrated Fullerene C60 in Rats. Journal of Alzheimer's Disease, 2017, 58, 711-724.	1.2	15
47	Binocular rivalry: Ambiguities resolved. Current Biology, 1997, 7, R447-R450.	1.8	14
48	Cortical and hippocampal EEG effects of neurotransmitter agonists in spontaneously hypertensive vs. kainate-treated rats. Brain Research, 2011, 1383, 154-168.	1.1	14
49	Animal models of amblyopia. Visual Neuroscience, 2018, 35, E017.	0.5	14
50	Monocular deprivation reduces reliability of visual cortical responses to binocular disparity stimuli. European Journal of Neuroscience, 2007, 26, 3553-3563.	1.2	13
51	Apomorphine-induced differences in cortical and striatal EEG and their glutamatergic mediation in 6-hydroxydopamine-treated rats. Experimental Brain Research, 2008, 191, 277-287.	0.7	13
52	Experimental Models of Amblyopia: Insights for Prevention and Treatment. Strabismus, 2011, 19, 87-90.	0.4	13
53	Plasticity in Adult Mouse Visual Cortex Following Optic Nerve Injury. Cerebral Cortex, 2019, 29, 1767-1777.	1.6	13
54	Immunization Against Specific Fragments of Neurotrophin p75 Receptor Protects Forebrain Cholinergic Neurons in the Olfactory Bulbectomized Mice. Journal of Alzheimer's Disease, 2016, 53, 289-301.	1.2	11

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55	Natural scene statistics and the structure of orientation maps in the visual cortex. NeuroImage, 2009, 47, 157-172.	2.1	10
56	Effects of nootropics on the EEG in conscious rats and their modification by glutamatergic inhibitors. Brain Research Bulletin, 2011, 85, 123-132.	1.4	10
57	Optophysiological Characterisation of Inner Retina Responses with High-Resolution Optical Coherence Tomography. Scientific Reports, 2018, 8, 1813.	1.6	9
58	Limited Protection of the Primary Visual Cortex from the Effects of Monocular Deprivation by Strabismus. Cerebral Cortex, 2005, 15, 1822-1833.	1.6	8
59	Visual perception: An alternative view of perceptual rivalry. Current Biology, 2000, 10, R482-R485.	1.8	7
60	Contrast adaptation and interocular transfer in cortical cells: A re-analysis & a two-stage gain-control model of binocular combination. Vision Research, 2021, 185, 29-49.	0.7	7
61	Title is missing!. Brain and Mind, 2001, 2, 39-54.	0.6	6
62	Cortical plasticity: Learning while you sleep?. Current Biology, 2001, 11, R647-R650.	1.8	5
63	Visual Cortex: Overcoming a No-Go for Plasticity. Current Biology, 2005, 15, R1000-R1002.	1.8	5
64	A novel system for the classification of diseased retinal ganglion cells. Visual Neuroscience, 2014, 31, 373-380.	0.5	5
65	Spatial summation across the visual field in strabismic and anisometropic amblyopia. Scientific Reports, 2018, 8, 3858.	1.6	5
66	Effects of early monocular deprivation on response properties and afferents of nucleus of the optic tract in the ferret. Experimental Brain Research, 1990, 83, 190-9.	0.7	3
67	Motion perception is learned, not innate. Nature Neuroscience, 2006, 9, 591-592.	7.1	3
68	Effects of different forms of monocular deprivation on primary visual cortex maps. Visual Neuroscience, 2012, 29, 247-253.	0.5	3
69	Amblyopia: Out of the Dark, Into the Light. Current Biology, 2013, 23, R195-R196.	1.8	3
70	Stripe-rearing changes multiple aspects of the structure of primary visual cortex. NeuroImage, 2014, 95, 305-319.	2.1	2
71	Overview: neuroplasticity and synaptic function in neuropsychiatric disorders. Journal of Physiology, 2018, 596, 2745-2746.	1.3	2
72	Vision: In the Brain of the Beholder. Current Biology, 2004, 14, R997-R999.	1.8	1

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73	Binocular Vision: Only Half a Brain Needed. Current Biology, 2008, 18, R1054-R1056.	1.8	1
74	Spatial memory deficits initiated by agroclavine injection or olfactory bulbectomy in rats are characterized by different levels of long-term potentiation expression in the hippocampus. International Journal of Neuroscience, 2020, 130, 1225-1229.	0.8	1
75	Cortical and Striatal Electroencephalograms and Apomorphine Effects in the FUS Mouse Model of Amyotrophic Lateral Sclerosis. Journal of Alzheimer's Disease, 2021, 81, 1429-1443.	1.2	1
76	Recruitment of frontal sensory circuits during visual discrimination. Cell Reports, 2022, 39, 110932.	2.9	0