Stephen G Lomber

List of Publications by Year
in descending order

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Version: 2024-02-01

140	6,892	66234	69108
papers	citations	42 h-index	77 g-index

152	152	152	4258
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cortical feedback improves discrimination between figure and background by V1, V2 and V3 neurons. Nature, 1998, 394, 784-787.	13.7	927
2	Cross-modal plasticity in specific auditory cortices underlies visual compensations in the deaf. Nature Neuroscience, 2010, 13, 1421-1427.	7.1	409
3	Feedback Connections Act on the Early Part of the Responses in Monkey Visual Cortex. Journal of Neurophysiology, 2001, 85, 134-145.	0.9	293
4	Double dissociation of 'what' and 'where' processing in auditory cortex. Nature Neuroscience, 2008, 11, 609-616.	7.1	280
5	The cryoloop: an adaptable reversible cooling deactivation method for behavioral or electrophysiological assessment of neural function. Journal of Neuroscience Methods, 1999, 86, 179-194.	1.3	204
6	The advantages and limitations of permanent or reversible deactivation techniques in the assessment of neural function. Journal of Neuroscience Methods, 1999, 86, 109-117.	1.3	185
7	Corticocortical Feedback Contributes to Surround Suppression in V1 of the Alert Primate. Journal of Neuroscience, 2013, 33, 8504-8517.	1.7	161
8	Cortical Control of Sound Localization in the Cat: Unilateral Cooling Deactivation of 19 Cerebral Areas. Journal of Neurophysiology, 2004, 92, 1625-1643.	0.9	150
9	Removal of two halves restores the whole: Reversal of visual hemineglect during bilateral cortical or collicular inactivation in the cat. Visual Neuroscience, 1996, 13, 1143-1156.	0.5	139
10	Crossmodal reorganization in the early deaf switches sensory, but not behavioral roles of auditory cortex. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8856-8861.	3.3	125
11	Reversible deactivation of cerebral network components. Trends in Neurosciences, 1996, 19, 535-542.	4.2	118
12	Impact of repetitive transcranial magnetic stimulation of the parietal cortex on metabolic brain activity: a 14C-2DG tracing study in the cat. Experimental Brain Research, 2005, 163, 1-12.	0.7	114
13	Role of the superior colliculus in analyses of space: Superficial and intermediate layer contributions to visual orienting, auditory orienting, and visuospatial discriminations during unilateral and bilateral deactivations. Journal of Comparative Neurology, 2001, 441, 44-57.	0.9	104
14	Integrating motion and depth via parallel pathways. Nature Neuroscience, 2008, 11, 216-223.	7.1	99
15	Somatosensory and visual crossmodal plasticity in the anterior auditory field of early-deaf cats. Hearing Research, 2011, 280, 38-47.	0.9	97
16	The role of feedback in shaping neural representations in cat visual cortex. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 17083-17088.	3.3	96
17	Sound Localization During Homotopic and Heterotopic Bilateral Cooling Deactivation of Primary and Nonprimary Auditory Cortical Areas in the Cat. Journal of Neurophysiology, 2007, 97, 26-43.	0.9	90
18	Reconstructing functional systems after lesions of cerebral cortex. Nature Reviews Neuroscience, 2001, 2, 911-919.	4.9	89

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19	Perceptual and Cognitive Visual Functions of Parietal and Temporal Cortices in the Cat. Cerebral Cortex, 1996, 6, 673-695.	1.6	84
20	Reversible visual hemineglect.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 290-294.	3.3	82
21	Cross-Modal Plasticity in Higher-Order Auditory Cortex of Congenitally Deaf Cats Does Not Limit Auditory Responsiveness to Cochlear Implants. Journal of Neuroscience, 2016, 36, 6175-6185.	1.7	79
22	Functional impact of cerebral connections. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7617-7620.	3.3	77
23	Evidence for greater sight in blindsight following damage of primary visual cortex early in life. Neuropsychologia, 1996, 34, 741-774.	0.7	73
24	Functional and structural changes throughout the auditory system following congenital and early-onset deafness: implications for hearing restoration. Frontiers in Systems Neuroscience, 2013, 7, 92.	1.2	71
25	Auditory cortex projections target the peripheral field representation of primary visual cortex. Experimental Brain Research, 2008, 190, 413-430.	0.7	65
26	Functional circuitry underlying visual neglect. Brain, 2006, 129, 1803-1821.	3.7	64
27	Reversible inactivation of visual processing operations in middle suprasylvian cortex of the behaving cat.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 2999-3003.	3.3	61
28	Sound Localization Deficits During Reversible Deactivation of Primary Auditory Cortex and/or the Dorsal Zone. Journal of Neurophysiology, 2008, 99, 1628-1642.	0.9	60
29	A Causal Role for the Cortical Frontal Eye Fields in Microsaccade Deployment. PLoS Biology, 2016, 14, e1002531.	2.6	60
30	Thalamic and cortical projections to middle suprasylvian cortex of cats: constancy and variation. Experimental Brain Research, 1997, 114, 24-32.	0.7	59
31	Crossâ€modal reorganization of cortical afferents to dorsal auditory cortex following earlyâ€and lateâ€onset deafness. Journal of Comparative Neurology, 2014, 522, 654-675.	0.9	58
32	Cooling produces minimal neuropathology in neocortex and hippocampus. Neurobiology of Disease, 2006, 23, 637-643.	2.1	57
33	Complex transcallosal interactions in visual cortex. Visual Neuroscience, 1991, 6, 283-287.	0.5	56
34	Macaque Dorsolateral Prefrontal Cortex Does not Suppress Saccade-Related Activity in the Superior Colliculus. Cerebral Cortex, 2014, 24, 1373-1388.	1.6	53
35	Areas of cat auditory cortex as defined by neurofilament proteins expressing SMI-32. Hearing Research, 2010, 267, 119-136.	0.9	50
36	Amplification of Thalamic Projections to Middle Suprasylvian Cortex following Ablation of Immature Primary Visual Cortex in the Cat. Cerebral Cortex, 1995, 5, 166-191.	1.6	49

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37	Differential modification of cortical and thalamic projections to cat primary auditory cortex following earlyâ€•and lateâ€•onset deafness. Journal of Comparative Neurology, 2015, 523, 2297-2320.	0.9	49
38	Amplified somatosensory and visual cortical projections to a core auditory area, the anterior auditory field, following earlyâ€•and lateâ€•onset deafness. Journal of Comparative Neurology, 2015, 523, 1925-1947.	0.9	48
39	Prefrontal Cortex Deactivation in Macaques Alters Activity in the Superior Colliculus and Impairs Voluntary Control of Saccades. Journal of Neuroscience, 2011, 31, 8659-8668.	1.7	47
40	Functional specialization in non-primary auditory cortex of the cat: Areal and laminar contributions to sound localization. Hearing Research, 2007, 229, 31-45.	0.9	46
41	Restoration of visual orienting into a cortically blind hemifield by reversible deactivation of posterior parietal cortex or the superior colliculus. Experimental Brain Research, 2002, 142, 463-474.	0.7	45
42	Learning and recall of form discriminations during reversible cooling deactivation of ventral-posterior suprasylvian cortex in the cat.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 1654-1658.	3.3	43
43	Cortical and thalamic connectivity of the auditory anterior ectosylvian cortex of early-deaf cats: Implications for neural mechanisms of crossmodal plasticity. Hearing Research, 2016, 333, 25-36.	0.9	43
44	The spatial relationship between the cerebral cortex and fiber trajectory through the corpus callosum of the cat. Behavioural Brain Research, 1994, 64, 25-35.	1.2	42
45	Modified Areal Cartography in Auditory Cortex Following Early- and Late-Onset Deafness. Cerebral Cortex, 2014, 24, 1778-1792.	1.6	42
46	A method to assess the functional impact of cerebral connections on target populations of neurons. Journal of Neuroscience Methods, 1999, 86, 195-208.	1.3	41
47	Translaminar Differentiation of Visually Guided Behaviors Revealed by Restricted Cerebral Cooling Deactivation. Cerebral Cortex, 2000, 10, 1066-1077.	1.6	41
48	Evidence for Hierarchical Processing in Cat Auditory Cortex: Nonreciprocal Influence of Primary Auditory Cortex on the Posterior Auditory Field. Journal of Neuroscience, 2009, 29, 14323-14333.	1.7	41
49	Differential Modulatory Influences between Primary Auditory Cortex and the Anterior Auditory Field. Journal of Neuroscience, 2009, 29, 8350-8362.	1.7	38
50	Specificity of Neuronal Responses in Primary Visual Cortex Is Modulated by Interhemispheric CorticoCortical Input. Cerebral Cortex, 2010, 20, 2776-2786.	1.6	37
51	Origins of thalamic and cortical projections to the posterior auditory field in congenitally deaf cats. Hearing Research, 2017, 343, 118-127.	0.9	37
52	Frontal Eye Field Inactivation Diminishes Superior Colliculus Activity, But Delayed Saccadic Accumulation Governs Reaction Time Increases. Journal of Neuroscience, 2017, 37, 11715-11730.	1.7	37
53	Parietal Cortex Regulates Visual Salience and Salience-Driven Behavior. Neuron, 2020, 106, 177-187.e4.	3.8	37
54	Transient deactivation of dorsal premotor cortex or parietal area 5 impairs feedback control of the limb in macaques. Current Biology, 2021, 31, 1476-1487.e5.	1.8	37

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55	Age dependent modification of cytochrome oxidase activity in the cat dorsal lateral geniculate nucleus following removal of primary visual cortex. Visual Neuroscience, 1996, 13, 805-816.	0.5	36
56	A Modality-Specific Feedforward Component of Choice-Related Activity in MT. Neuron, 2015, 87, 208-219.	3.8	36
57	Synaptic Basis for Cross-modal Plasticity: Enhanced Supragranular Dendritic Spine Density in Anterior Ectosylvian Auditory Cortex of the Early Deaf Cat. Cerebral Cortex, 2016, 26, 1365-1376.	1.6	36
58	Catlas: An magnetic resonance imagingâ€based threeâ€dimensional cortical atlas and tissue probability maps for the domestic cat (Felis catus). Journal of Comparative Neurology, 2017, 525, 3190-3206.	0.9	36
59	Species-dependent role of crossmodal connectivity among the primary sensory cortices. Hearing Research, 2017, 343, 83-91.	0.9	35
60	Capacity of the retinogeniculate pathway to reorganize following ablation of visual cortical areas in developing and mature cats. Journal of Comparative Neurology, 1993, 338, 432-457.	0.9	33
61	Adaptive crossmodal plasticity in deaf auditory cortex. Progress in Brain Research, 2011, 191, 251-270.	0.9	33
62	Learning to see the trees before the forest: Reversible deactivation of the superior colliculus during learning of local and global visual features. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4049-4054.	3.3	32
63	Neuronal activation times to simple, complex, and natural sounds in cat primary and nonprimary auditory cortex. Journal of Neurophysiology, 2011, 106, 1166-1178.	0.9	31
64	Quantifying and comparing the pattern of thalamic and cortical projections to the posterior auditory field in hearing and deaf cats. Journal of Comparative Neurology, 2016, 524, 3042-3063.	0.9	30
65	Bilateral saccadic deficits following large and reversible inactivation of unilateral frontal eye field. Journal of Neurophysiology, 2014, 111, 415-433.	0.9	29
66	Task-specific reversal of visual hemineglect following bilateral reversible deactivation of posterior parietal cortex: A comparison with deactivation of the superior colliculus. Visual Neuroscience, 2001, 18, 487-499.	0.5	28
67	Review: Plasticity of the Visual Cortex after Injury: Whatâ€™s Different about the Young Brain?. Neuroscientist, 2002, 8, 174-185.	2.6	28
68	Shape Discrimination Deficits During Reversible Deactivation of Area V4 in the Macaque Monkey. Cerebral Cortex, 2002, 12, 1146-1156.	1.6	27
69	Visual cortex damage-induced growth of retinal axons into the lateral posterior nucleus of the cat. Visual Neuroscience, 1993, 10, 747-752.	0.5	26
70	Contributions of Indirect Pathways to Visual Response Properties in Macaque Middle Temporal Area MT. Journal of Neuroscience, 2011, 31, 3894-3903.	1.7	26
71	Chapter 17 Behavioral cartography of visual functions in cat parietal cortex: areal and laminar dissociations. Progress in Brain Research, 2001, 134, 265-284.	0.9	25
72	Cerebral areas mediating visual redirection of gaze: Cooling deactivation of 15 loci in the cat. Journal of Comparative Neurology, 2004, 474, 190-208.	0.9	25

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73	Characterization of the blood-oxygen level-dependent (BOLD) response in cat auditory cortex using high-field fMRI. NeuroImage, 2013, 64, 458-465.	2.1	25
74	There's more than one way to scan a cat: Imaging cat auditory cortex with high-field fMRI using continuous or sparse sampling. Journal of Neuroscience Methods, 2014, 224, 96-106.	1.3	25
75	What and How the Deaf Brain Sees. Journal of Cognitive Neuroscience, 2019, 31, 1091-1109.	1.1	25
76	Neuroplasticity in the cat's visual system. Experimental Brain Research, 1998, 121, 334-349.	0.7	23
77	Reciprocal Modulatory Influences between Tonotopic and Nontonotopic Cortical Fields in the Cat. Journal of Neuroscience, 2010, 30, 1476-1487.	1.7	22
78	Cerebral origins of the auditory projection to the superior colliculus of the cat. Hearing Research, 2013, 300, 33-45.	0.9	22
79	Functional Specialization within Macaque Dorsolateral Prefrontal Cortex for the Maintenance of Task Rules and Cognitive Control. Journal of Cognitive Neuroscience, 2014, 26, 1918-1927.	1.1	22
80	Rewiring of Transcortical Projections to Middle Suprasylvian Cortex Following Early Removal of Cat Areas 17 and 18. Cerebral Cortex, 1996, 6, 362-376.	1.6	21
81	Cancellation of visuoparietal lesion-induced spatial neglect. Experimental Brain Research, 2003, 150, 395-398.	0.7	21
82	Functional impact of primary visual cortex deactivation on subcortical target structures in the thalamus and midbrain. Journal of Comparative Neurology, 2005, 488, 414-426.	0.9	21
83	Contributions of Parietal Cortex to the Working Memory of an Obstacle Acquired Visually or Tactilely in the Locomoting Cat. Cerebral Cortex, 2018, 28, 3143-3158.	1.6	20
84	Deaf white cats. Current Biology, 2015, 25, R351-R353.	1.8	19
85	Expansion of suprasylvian cortex projection in the superficial layers of the superior colliculus following damage of areas 17 and 18 in developing cats. Visual Neuroscience, 1994, 11, 13-22.	0.5	18
86	Contributions of cat posterior parietal cortex to visuospatial discrimination. Visual Neuroscience, 2000, 17, 701-709.	0.5	18
87	Graded sparing of visually-guided orienting following primary visual cortex ablations within the first postnatal month. Behavioural Brain Research, 2000, 117, 1-11.	1.2	18
88	Origin of the thalamic projection to dorsal auditory cortex in hearing and deafness. Hearing Research, 2017, 343, 108-117.	0.9	18
89	Frontal Eye Field Inactivation Reduces Saccade Preparation in the Superior Colliculus but Does Not Alter How Preparatory Activity Relates to Saccades of a Given Latency. ENeuro, 2018, 5, ENEURO.0024-18.2018.	0.9	18
90	Influence of Core Auditory Cortical Areas on Acoustically Evoked Activity in Contralateral Primary Auditory Cortex. Journal of Neuroscience, 2013, 33, 776-789.	1.7	17

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91	Synaptic distribution and plasticity in primary auditory cortex (A1) exhibits laminar and cell-specific changes in the deaf. Hearing Research, 2017, 353, 122-134.	0.9	17
92	Restoration of Acoustic Orienting Into a Cortically Deaf Hemifield by Reversible Deactivation of the Contralesional Superior Colliculus: The Acoustic â€œSprague Effectâ€• Journal of Neurophysiology, 2007, 97, 979-993.	0.9	16
93	Pattern motion representation in primary visual cortex is mediated by transcortical feedback. NeuroImage, 2011, 54, 474-484.	2.1	16
94	Sensory Deprivation and Brain Plasticity. Neural Plasticity, 2012, 2012, 1-2.	1.0	15
95	Effects of unilateral deactivations of dorsolateral prefrontal cortex and anterior cingulate cortex on saccadic eye movements. Journal of Neurophysiology, 2014, 111, 787-803.	0.9	15
96	Effects of neonatal deafness on resting-state functional network connectivity. NeuroImage, 2018, 165, 69-82.	2.1	15
97	Quantitative analyses of principal and secondary compound parieto-occipital feedback pathways in cat. Experimental Brain Research, 2003, -1, 1-1.	0.7	14
98	Unilateral deactivation of macaque dorsolateral prefrontal cortex induces biases in stimulus selection. Journal of Neurophysiology, 2016, 115, 1468-1476.	0.9	14
99	A quantitative comparison of the hemispheric, areal, and laminar origins of sensory and motor cortical projections to the superior colliculus of the cat. Journal of Comparative Neurology, 2016, 524, 2623-2642.	0.9	14
100	Cortical and thalamic connectivity to the second auditory cortex of the cat is resilient to the onset of deafness. Brain Structure and Function, 2018, 223, 819-835.	1.2	14
101	Frontal eye field inactivation alters the readout of superior colliculus activity for saccade generation in a task-dependent manner. Journal of Computational Neuroscience, 2021, 49, 229-249.	0.6	14
102	High-Field Functional Imaging of Pitch Processing in Auditory Cortex of the Cat. PLoS ONE, 2015, 10, e0134362.	1.1	14
103	What is the function of auditory cortex when it develops in the absence of acoustic input?. Cognitive Development, 2017, 42, 49-61.	0.7	13
104	Macaque anterior cingulate cortex deactivation impairs performance and alters lateral prefrontal oscillatory activities in a rule-switching task. PLoS Biology, 2019, 17, e3000045.	2.6	13
105	Impairment but not abolishment of express saccades after unilateral or bilateral inactivation of the frontal eye fields. Journal of Neurophysiology, 2020, 123, 1907-1919.	0.9	12
106	Effects of Core Auditory Cortex Deactivation on Neuronal Response to Simple and Complex Acoustic Signals in the Contralateral Anterior Auditory Field. Cerebral Cortex, 2015, 25, 84-96.	1.6	11
107	Increased oxidative metabolism in middle suprasylvian cortex following removal of areas 17 and 18 from newborn cats. Experimental Brain Research, 1996, 110, 335-46.	0.7	10
108	Stable Delay Period Representations in the Posterior Parietal Cortex Facilitate Working-Memory-Guided Obstacle Negotiation. Current Biology, 2019, 29, 70-80.e3.	1.8	10

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109	Pattern motion selectivity in population responses of areaâ€ƒ18. European Journal of Neuroscience, 2006, 24, 2363-2374.	1.2	9
110	Dorsolateral Prefrontal Cortex Deactivation in Monkeys Reduces Preparatory Beta and Gamma Power in the Superior Colliculus. Cerebral Cortex, 2015, 25, 4704-4714.	1.6	9
111	Neural mechanisms of spatial attention in the cat. Neurocomputing, 2001, 38-40, 1281-1287.	3.5	8
112	Memory-Guided Stumbling Correction in the Hindlimb of Quadrupeds Relies on Parietal Area 5. Cerebral Cortex, 2016, 28, 561-573.	1.6	8
113	Functional impact of cerebral projection systems. Molecular Psychiatry, 1998, 3, 215-219.	4.1	7
114	Dissociation of visual and auditory pattern discrimination functions within the cat's temporal cortex.. Behavioral Neuroscience, 1998, 112, 800-811.	0.6	7
115	Posterior Inferotemporal Cortex Cells Use Multiple Input Pathways for Shape Encoding. Journal of Neuroscience, 2017, 37, 5019-5034.	1.7	7
116	High-field fMRI reveals tonotopically-organized and core auditory cortex in the cat. Hearing Research, 2015, 325, 1-11.	0.9	6
117	Multisensory responses in a belt region of the dorsal auditory cortical pathway. European Journal of Neuroscience, 2022, 55, 589-610.	1.2	6
118	Dissociable influences of primary auditory cortex and the posterior auditory field on neuronal responses in the dorsal zone of auditory cortex. Journal of Neurophysiology, 2015, 113, 475-486.	0.9	4
119	The cat's meow: A high-field fMRI assessment of cortical activity in response to vocalizations and complex auditory stimuli. NeuroImage, 2016, 127, 44-57.	2.1	4
120	Relocation of specific visual functions following damage of mature posterior parietal cortex. Progress in Brain Research, 2006, 157, 157-172.	0.9	3
121	Modified Origins of Cortical Projections to the Superior Colliculus in the Deaf: Dispersion of Auditory Efferents. Journal of Neuroscience, 2018, 38, 4048-4058.	1.7	3
122	Crossmodal neuroplasticity in deafness. , 2020, , 343-370.		3
123	Assessment of anesthesia on physiological stability and BOLD signal reliability during visual or acoustic stimulation in the cat. Journal of Neuroscience Methods, 2020, 334, 108603.	1.3	3
124	Dissociation of visual and auditory pattern discrimination functions within the cat's temporal cortex. Behavioral Neuroscience, 1998, 112, 800-11.	0.6	3
125	Topographic restoration of visual spatial attention in the cortically blind cat. Neurocomputing, 2002, 44-46, 831-835.	3.5	2
126	An examination of linking hypotheses drawn from the perceptual consequences of experimentally induced changes in neural circuitry. Visual Neuroscience, 2013, 30, 271-276.	0.5	2

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127	Functional Imaging of Auditory Cortex in Adult Cats using High-field fMRI. Journal of Visualized Experiments, 2014, , e50872.	0.2	2
128	Editorial introduction: Special issue on plasticity following hearing loss and deafness. Hearing Research, 2017, 343, 1-3.	0.9	2
129	Early hearing loss induces plasticity within extraâ€striate visual cortex. European Journal of Neuroscience, 2021, 53, 1950-1960.	1.2	2
130	Representation of visual salience within the frontal eye field following reversible inactivation of parietal cortex. Journal of Vision, 2016, 16, 13.	0.1	2
131	Influence of inter-field communication on neuronal response synchrony across auditory cortex. Hearing Research, 2013, 304, 57-69.	0.9	1
132	Amplified extrastriate visual cortical projections to the dorsal zone of auditory cortex following early- and late-onset deafness. Multisensory Research, 2013, 26, 157-158.	0.6	1
133	Spectral and Temporal Acoustic Features Modulate Response Irregularities within Primary Auditory Cortex Columns. PLoS ONE, 2014, 9, e114550.	1.1	1
134	Reversible Cooling-induced Deactivations to Study Cortical Contributions to Obstacle Memory in the Walking Cat. Journal of Visualized Experiments, 2017, , .	0.2	1
135	Crossmodal cortical plasticity in the developing brain following sensory loss. Multisensory Research, 2013, 26, 34.	0.6	0
136	Sensory Development: Brief Visual Deprivation Alters Audiovisual Interactions. Current Biology, 2016, 26, R1185-R1187.	1.8	0
137	The limited capacity of visual temporal integration in cats. Journal of Vision, 2020, 20, 28.	0.1	0
138	Redistribution of cerebral functions following primary visual cortex damage during infancy. , 2006, , 73-90.		0
139	Functional Specialization in Primary and Non-primary Auditory Cortex. , 2011, , 389-405.		0
140	The Limited Capacity of Visual Temporal Integration in Cats. Journal of Vision, 2020, 20, 760.	0.1	0