

Suresh D Muthukumaraswamy

List of Publications by Year in descending order

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110
papers

8,005
citations

87723

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127
all docs

127
docs citations

127
times ranked

7700
citing authors

#	ARTICLE	IF	CITATIONS
1	Neural correlates of the LSD experience revealed by multimodal neuroimaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4853-4858.	3.3	586
2	Resting GABA concentration predicts peak gamma frequency and fMRI amplitude in response to visual stimulation in humans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 8356-8361.	3.3	503
3	High-frequency brain activity and muscle artifacts in MEG/EEG: a review and recommendations. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 138.	1.0	485
4	Mu rhythm modulation during observation of an object-directed grasp. <i>Cognitive Brain Research</i> , 2004, 19, 195-201.	3.3	481
5	Increased Global Functional Connectivity Correlates with LSD-Induced Ego Dissolution. <i>Current Biology</i> , 2016, 26, 1043-1050.	1.8	371
6	Broadband Cortical Desynchronization Underlies the Human Psychedelic State. <i>Journal of Neuroscience</i> , 2013, 33, 15171-15183.	1.7	364
7	Orientation Discrimination Performance Is Predicted by GABA Concentration and Gamma Oscillation Frequency in Human Primary Visual Cortex. <i>Journal of Neuroscience</i> , 2009, 29, 15721-15726.	1.7	304
8	Increased spontaneous MEG signal diversity for psychoactive doses of ketamine, LSD and psilocybin. <i>Scientific Reports</i> , 2017, 7, 46421.	1.6	266
9	Functional Properties of Human Primary Motor Cortex Gamma Oscillations. <i>Journal of Neurophysiology</i> , 2010, 104, 2873-2885.	0.9	229
10	Evidence that Subanesthetic Doses of Ketamine Cause Sustained Disruptions of NMDA and AMPA-Mediated Frontoparietal Connectivity in Humans. <i>Journal of Neuroscience</i> , 2015, 35, 11694-11706.	1.7	202
11	Primary motor cortex activation during action observation revealed by wavelet analysis of the EEG. <i>Clinical Neurophysiology</i> , 2004, 115, 1760-1766.	0.7	180
12	Instead of "playing the game" it is time to change the rules: Registered Reports at <i>AIMS Neuroscience</i> and beyond. <i>AIMS Neuroscience</i> , 2014, 1, 4-17.	1.0	170
13	Visual gamma oscillations and evoked responses: Variability, repeatability and structural MRI correlates. <i>NeuroImage</i> , 2010, 49, 3349-3357.	2.1	158
14	Visual gamma oscillations: The effects of stimulus type, visual field coverage and stimulus motion on MEG and EEG recordings. <i>NeuroImage</i> , 2013, 69, 223-230.	2.1	149
15	The effects of elevated endogenous GABA levels on movement-related network oscillations. <i>NeuroImage</i> , 2013, 66, 36-41.	2.1	148
16	Neural correlates of the DMT experience assessed with multivariate EEG. <i>Scientific Reports</i> , 2019, 9, 16324.	1.6	144
17	Blinding and expectancy confounds in psychedelic randomized controlled trials. <i>Expert Review of Clinical Pharmacology</i> , 2021, 14, 1133-1152.	1.3	133
18	Differences in excitatory and inhibitory neurotransmitter levels between depressed patients and healthy controls: A systematic review and meta-analysis. <i>Journal of Psychiatric Research</i> , 2018, 105, 33-44.	1.5	130

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19	Spectral Properties of Induced and Evoked Gamma Oscillations in Human Early Visual Cortex to Moving and Stationary Stimuli. <i>Journal of Neurophysiology</i> , 2009, 102, 1241-1253.	0.9	114
20	Individual variability in the shape and amplitude of the BOLD-HRF correlates with endogenous GABAergic inhibition. <i>Human Brain Mapping</i> , 2012, 33, 455-465.	1.9	109
21	Ketamine amplifies induced gamma frequency oscillations in the human cerebral cortex. <i>European Neuropsychopharmacology</i> , 2015, 25, 1136-1146.	0.3	105
22	1/f electrophysiological spectra in resting and drug-induced states can be explained by the dynamics of multiple oscillatory relaxation processes. <i>NeuroImage</i> , 2018, 179, 582-595.	2.1	99
23	Almost winning: Induced MEG theta power in insula and orbitofrontal cortex increases during gambling near-misses and is associated with BOLD signal and gambling severity. <i>NeuroImage</i> , 2014, 91, 210-219.	2.1	96
24	LSD modulates music-induced imagery via changes in parahippocampal connectivity. <i>European Neuropsychopharmacology</i> , 2016, 26, 1099-1109.	0.3	95
25	Spatiotemporal frequency tuning of BOLD and gamma band MEG responses compared in primary visual cortex. <i>NeuroImage</i> , 2008, 40, 1552-1560.	2.1	84
26	Acute Biphasic Effects of Ayahuasca. <i>PLoS ONE</i> , 2015, 10, e0137202.	1.1	82
27	A cautionary note on the interpretation of phase-locking estimates with concurrent changes in power. <i>Clinical Neurophysiology</i> , 2011, 122, 2324-2325.	0.7	78
28	Cerebral blood flow predicts differential neurotransmitter activity. <i>Scientific Reports</i> , 2018, 8, 4074.	1.6	78
29	Alzheimer's disease disrupts alpha and beta-band resting-state oscillatory network connectivity. <i>Clinical Neurophysiology</i> , 2017, 128, 2347-2357.	0.7	77
30	Functional and structural correlates of the aging brain: Relating visual cortex (V1) gamma band responses to age-related structural change. <i>Human Brain Mapping</i> , 2012, 33, 2035-2046.	1.9	76
31	Modulation of the human mirror neuron system during cognitive activity. <i>Psychophysiology</i> , 2008, 45, 896-905.	1.2	62
32	The properties of induced gamma oscillations in human visual cortex show individual variability in their dependence on stimulus size. <i>NeuroImage</i> , 2013, 68, 83-92.	2.1	58
33	Hyperconnectivity in juvenile myoclonic epilepsy: A network analysis. <i>NeuroImage: Clinical</i> , 2015, 7, 98-104.	1.4	56
34	Consciousness is supported by near-critical slow cortical electrodynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	56
35	Functional decoupling of BOLD and gamma-band amplitudes in human primary visual cortex. <i>Human Brain Mapping</i> , 2009, 30, 2000-2007.	1.9	55
36	Acute Effects of Alcohol on Stimulus-Induced Gamma Oscillations in Human Primary Visual and Motor Cortices. <i>Neuropsychopharmacology</i> , 2014, 39, 2104-2113.	2.8	49

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37	Decreased directed functional connectivity in the psychedelic state. <i>NeuroImage</i> , 2020, 209, 116462.	2.1	49
38	Temporal dynamics of primary motor cortex gamma oscillation amplitude and piper corticomuscular coherence changes during motor control. <i>Experimental Brain Research</i> , 2011, 212, 623-633.	0.7	48
39	Enhanced Stimulus-Induced Gamma Activity in Humans during Propofol-Induced Sedation. <i>PLoS ONE</i> , 2013, 8, e57685.	1.1	47
40	Induced and evoked neural correlates of orientation selectivity in human visual cortex. <i>NeuroImage</i> , 2011, 54, 2983-2993.	2.1	46
41	Neurophysiologically-informed markers of individual variability and pharmacological manipulation of human cortical gamma. <i>NeuroImage</i> , 2017, 161, 19-31.	2.1	43
42	LSD modulates effective connectivity and neural adaptation mechanisms in an auditory oddball paradigm. <i>Neuropharmacology</i> , 2018, 142, 251-262.	2.0	42
43	Neural processing of observed oro-facial movements reflects multiple action encoding strategies in the human brain. <i>Brain Research</i> , 2006, 1071, 105-112.	1.1	40
44	Arterial CO ₂ Fluctuations Modulate Neuronal Rhythmicity: Implications for MEG and fMRI Studies of Resting-State Networks. <i>Journal of Neuroscience</i> , 2016, 36, 8541-8550.	1.7	39
45	Evidence for increased visual gamma responses in photosensitive epilepsy. <i>Epilepsy Research</i> , 2014, 108, 1076-1086.	0.8	37
46	Simultaneous EEG/fMRI recorded during ketamine infusion in patients with major depressive disorder. <i>Progress in Neuro-Psychopharmacology and Biological Psychiatry</i> , 2020, 99, 109838.	2.5	36
47	Elevating Endogenous GABA Levels with GAT-1 Blockade Modulates Evoked but Not Induced Responses in Human Visual Cortex. <i>Neuropsychopharmacology</i> , 2013, 38, 1105-1112.	2.8	35
48	The use of magnetoencephalography in the study of psychopharmacology (pharmaco-MEG). <i>Journal of Psychopharmacology</i> , 2014, 28, 815-829.	2.0	34
49	Differences between magnetoencephalographic (MEG) spectral profiles of drugs acting on GABA at synaptic and extrasynaptic sites: A study in healthy volunteers. <i>Neuropharmacology</i> , 2015, 88, 155-163.	2.0	34
50	BOLD Responses in Human Primary Visual Cortex are Insensitive to Substantial Changes in Neural Activity. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 76.	1.0	33
51	Peak visual gamma frequency is modified across the healthy menstrual cycle. <i>Human Brain Mapping</i> , 2018, 39, 3187-3202.	1.9	33
52	The challenges ahead for psychedelic "medicine". <i>Australian and New Zealand Journal of Psychiatry</i> , 2022, 56, 1378-1383.	1.3	33
53	A high density ERP comparison of mental rotation and mental size transformation. <i>Brain and Cognition</i> , 2003, 52, 271-280.	0.8	32
54	Spatial attention increases high-frequency gamma synchronisation in human medial visual cortex. <i>NeuroImage</i> , 2013, 79, 295-303.	2.1	32

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55	Significant reductions in human visual gamma frequency by the gaba reuptake inhibitor tiagabine revealed by robust peak frequency estimation. <i>Human Brain Mapping</i> , 2016, 37, 3882-3896.	1.9	32
56	A qualitative and quantitative account of patient's experiences of ketamine and its antidepressant properties. <i>Journal of Psychopharmacology</i> , 2021, 35, 946-961.	2.0	32
57	Spectral signatures of serotonergic psychedelics and glutamatergic dissociatives. <i>NeuroImage</i> , 2019, 200, 281-291.	2.1	31
58	Ketamine Enhances Visual Sensory Evoked Potential Long-term Potentiation in Patients With Major Depressive Disorder. <i>Biological Psychiatry: Cognitive Neuroscience and Neuroimaging</i> , 2020, 5, 45-55.	1.1	31
59	Feature integration in visual working memory: parietal gamma activity is related to cognitive coordination. <i>Journal of Neurophysiology</i> , 2011, 106, 3185-3194.	0.9	30
60	Marked Reductions in Visual Evoked Responses But Not $\hat{\gamma}$ -Aminobutyric Acid Concentrations or $\hat{\beta}$ -Band Measures in Remitted Depression. <i>Biological Psychiatry</i> , 2013, 73, 691-698.	0.7	30
61	Indexing sensory plasticity: Evidence for distinct Predictive Coding and Hebbian learning mechanisms in the cerebral cortex. <i>NeuroImage</i> , 2018, 176, 290-300.	2.1	30
62	The role of Hebbian learning in human perception: a methodological and theoretical review of the human Visual Long-Term Potentiation paradigm. <i>Neuroscience and Biobehavioral Reviews</i> , 2020, 115, 220-237.	2.9	29
63	Comparison of local spectral modulation, and temporal correlation, of simultaneously recorded EEG/fMRI signals during ketamine and midazolam sedation. <i>Psychopharmacology</i> , 2018, 235, 3479-3493.	1.5	28
64	Resting-state oscillatory dynamics in sensorimotor cortex in benign epilepsy with centrotemporal spikes and typical brain development. <i>Human Brain Mapping</i> , 2015, 36, 3935-3949.	1.9	27
65	Long-term enhanced desynchronization of the alpha rhythm following tetanic stimulation of human visual cortex. <i>Neuroscience Letters</i> , 2006, 398, 220-223.	1.0	25
66	Neural plasticity is modified over the human menstrual cycle: Combined insight from sensory evoked potential LTP and repetition suppression. <i>Neurobiology of Learning and Memory</i> , 2018, 155, 422-434.	1.0	24
67	The neurophysiology of ketamine: an integrative review. <i>Reviews in the Neurosciences</i> , 2020, 31, 457-503.	1.4	24
68	STIMULUS EQUIVALENCE: TESTING SIDMAN'S (2000) THEORY. <i>Journal of the Experimental Analysis of Behavior</i> , 2006, 85, 371-391.	0.8	23
69	Enhanced Awareness Followed Reversible Inhibition of Human Visual Cortex: A Combined TMS, MRS and MEG Study. <i>PLoS ONE</i> , 2014, 9, e100350.	1.1	23
70	Juvenile myoclonic epilepsy shows increased posterior theta, and reduced sensorimotor beta resting connectivity. <i>Epilepsy Research</i> , 2020, 163, 106324.	0.8	21
71	Effects of ketamine and midazolam on resting state connectivity and comparison with ENIGMA connectivity deficit patterns in schizophrenia. <i>Human Brain Mapping</i> , 2020, 41, 767-778.	1.9	19
72	An open-label feasibility study of repetitive transcranial magnetic stimulation (rTMS) for treatment-resistant depression in the New Zealand healthcare context. <i>New Zealand Medical Journal</i> , 2019, 132, 46-55.	0.5	19

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73	EMERGENT STIMULUS RELATIONS DEPEND ON STIMULUS CORRELATION AND NOT ON REINFORCEMENT CONTINGENCIES. <i>Journal of the Experimental Analysis of Behavior</i> , 2011, 95, 327-342.	0.8	18
74	Using Baclofen to Explore GABA-B Receptor Function in Alcohol Dependence: Insights From Pharmacokinetic and Pharmacodynamic Measures. <i>Frontiers in Psychiatry</i> , 2018, 9, 664.	1.3	18
75	Temporal dynamics of the pharmacological MRI response to subanaesthetic ketamine in healthy volunteers: A simultaneous EEG/fMRI study. <i>Journal of Psychopharmacology</i> , 2019, 33, 219-229.	2.0	18
76	Reduced movement-related beta desynchronisation in juvenile myoclonic epilepsy: A MEG study of task specific cortical modulation. <i>Clinical Neurophysiology</i> , 2011, 122, 2128-2138.	0.7	17
77	Increased visual gamma power in schizoaffective bipolar disorder. <i>Psychological Medicine</i> , 2015, 45, 783-794.	2.7	16
78	Effect of rTMS on GABA and glutamate levels in treatment-resistant depression: An MR spectroscopy study. <i>Psychiatry Research - Neuroimaging</i> , 2021, 317, 111377.	0.9	16
79	Decreased salience network fMRI functional connectivity following a course of rTMS for treatment-resistant depression. <i>Journal of Affective Disorders</i> , 2022, 300, 235-242.	2.0	16
80	Generative modelling of the thalamo-cortical circuit mechanisms underlying the neurophysiological effects of ketamine. <i>NeuroImage</i> , 2020, 221, 117189.	2.1	15
81	Ketamine improves short-term plasticity in depression by enhancing sensitivity to prediction errors. <i>European Neuropsychopharmacology</i> , 2020, 38, 73-85.	0.3	15
82	Extraction of Common Task Features in EEG-fMRI Data Using Coupled Tensor-Tensor Decomposition. <i>Brain Topography</i> , 2020, 33, 636-650.	0.8	15
83	The effects of AMPA blockade on the spectral profile of human early visual cortex recordings studied with non-invasive MEG. <i>Cortex</i> , 2016, 81, 266-275.	1.1	14
84	The effects of AMPA receptor blockade on resting magnetoencephalography recordings. <i>Journal of Psychopharmacology</i> , 2017, 31, 1527-1536.	2.0	14
85	Modulation of simultaneously collected hemodynamic and electrophysiological functional connectivity by ketamine and midazolam. <i>Human Brain Mapping</i> , 2020, 41, 1472-1494.	1.9	14
86	Benign childhood epilepsy with centrottemporal spikes (BECTS) and developmental co-ordination disorder. <i>Epilepsy and Behavior</i> , 2017, 72, 122-126.	0.9	13
87	Source-level Cortical Power Changes for Xenon and Nitrous Oxide-induced Reductions in Consciousness in Healthy Male Volunteers. <i>Anesthesiology</i> , 2020, 132, 1017-1033.	1.3	12
88	Cortical oscillatory changes in human middle temporal cortex underlying smooth pursuit eye movements. <i>Human Brain Mapping</i> , 2013, 34, 837-851.	1.9	10
89	Tiagabine-induced stupor – More evidence for an encephalopathy. <i>Epilepsy and Behavior</i> , 2014, 31, 196-197.	0.9	9
90	Evidence that alpha blocking is due to increases in system-level oscillatory damping not neuronal population desynchronisation. <i>NeuroImage</i> , 2020, 208, 116408.	2.1	9

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91	On the Quality, Statistical Efficiency, and Safety of Simultaneously Recorded Multiband fMRI/EEG. <i>Brain Topography</i> , 2020, 33, 303-316.	0.8	9
92	Constrained temporal parallel decomposition for EEG-fMRI fusion. <i>Journal of Neural Engineering</i> , 2019, 16, 016017.	1.8	8
93	MDLSD: study protocol for a randomised, double-masked, placebo-controlled trial of repeated microdoses of LSD in healthy volunteers. <i>Trials</i> , 2021, 22, 302.	0.7	8
94	A Dual Mechanism Neural Framework for Social Understanding. <i>Philosophical Psychology</i> , 2007, 20, 43-63.	0.5	7
95	The cost of serially chaining two cognitive operations. <i>Psychological Research</i> , 2012, 76, 566-578.	1.0	7
96	Magnetoencephalographic correlates of processes supporting long-term memory judgments. <i>Brain Research</i> , 2009, 1283, 73-83.	1.1	6
97	An MEG investigation of the neural mechanisms subserving complex visuomotor coordination. <i>International Journal of Psychophysiology</i> , 2011, 79, 296-304.	0.5	6
98	Induced and Evoked Properties of Vibrotactile Adaptation in the Primary Somatosensory Cortex. <i>Neural Plasticity</i> , 2019, 2019, 1-9.	1.0	6
99	Cancer Healthcare Workers' Perceptions toward Psychedelic-Assisted Therapy: A Preliminary Investigation. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 8160.	1.2	6
100	Ipsilateral cortical motor desynchronisation is reduced in Benign Epilepsy with Centro-Temporal Spikes. <i>Clinical Neurophysiology</i> , 2016, 127, 1147-1156.	0.7	5
101	The role of sustained posterior brain activity in the serial chaining of two cognitive operations: A MEG study. <i>Psychophysiology</i> , 2012, 49, 1133-1144.	1.2	4
102	Multi-band component analysis for EEG artifact removal and source reconstruction with application to gamma-band activity. <i>Biomedical Physics and Engineering Express</i> , 2018, 4, 035007.	0.6	4
103	Effects of Ketamine and Midazolam on Simultaneous EEG/fMRI Data During Working Memory Processes. <i>Brain Topography</i> , 2021, 34, 863-880.	0.8	3
104	A comparison of GABA-ergic (propofol) and non-GABA-ergic (dexmedetomidine) sedation on visual and motor cortical oscillations, using magnetoencephalography. <i>NeuroImage</i> , 2021, 245, 118659.	2.1	3
105	Tiagabine induced modulation of oscillatory connectivity and activity match PET-derived, canonical GABA-A receptor distributions. <i>European Neuropsychopharmacology</i> , 2021, 50, 34-45.	0.3	2
106	Evidence that smooth pursuit velocity, not eye position, modulates alpha and beta oscillations in human middle temporal cortex. <i>Human Brain Mapping</i> , 2015, 36, 5220-5232.	1.9	1
107	Brain waves. , 2019, , 43-47.		1
108	A randomised, double-blind, active placebo-controlled, parallel groups, dose-response study of scopolamine hydrobromide (4 mg/kg) in patients with major depressive disorder. <i>Trials</i> , 2020, 21, 157.	0.7	1

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109	19th biennial IPEG Meeting. Neuropsychiatric Electrophysiology, 2016, 2, .	4.1	0
110	Introduction to AIMS Special Issue "How do Gamma Frequency Oscillations and NMDA Receptors Contribute to Normal and Dysfunctional Cognitive Performance". AIMS Neuroscience, 2014, 1, 183-184.	1.0	0