Robert Leech

List of Publications by Year in Descending Order

156 papers	11,083 citations	48 h-index	104 g-index
169 ext. papers	13,996 ext. citations	6.6 avg, IF	6.67 L-index

#	Paper	IF	Citations
156	Rapid processing and quantitative evaluation of structural brain scans for adaptive multimodal imaging.. *Human Brain Mapping*, **2021**,	5.9	1
155	The neural correlates of ongoing conscious thought. *IScience*, **2021**, 24, 102132	6.1	17
154	A Bayesian optimization approach for rapidly mapping residual network function in stroke. *Brain*, **2021**, 144, 2120-2134	11.2	2
153	Neural Systems Under Change of Scale. *Frontiers in Computational Neuroscience*, **2021**, 15, 643148	3.5	1
152	The default mode network in cognition: a topographical perspective. *Nature Reviews Neuroscience*, **2021**, 22, 503-513	13.5	38
151	Cognitive control network connectivity differentially disrupted in treatment resistant schizophrenia. *NeuroImage: Clinical*, **2021**, 30, 102631	5.3	4
150	A Complex Systems Perspective on Neuroimaging Studies of Behavior and Its Disorders. *Neuroscientist*, **2021**, 1073858421994784	7.6	8
149	Investigating the interaction between white matter and brain state on tDCS-induced changes in brain network activity. *Brain Stimulation*, **2021**, 14, 1261-1270	5.1	1
148	"It's not rocket science" and "It's not brain surgery"-"It's a walk in the park": prospective comparative study.. *BMJ, The*, **2021**, 375, e067883	5.9	0
147	Conservation laws by virtue of scale symmetries in neural systems. *PLoS Computational Biology*, **2020**, 16, e1007865	5	4
146	An automated machine learning approach to predict brain age from cortical anatomical measures. *Human Brain Mapping*, **2020**, 41, 3555-3566	5.9	10
145	Reductions in task positive neural systems occur with the passage of time and are associated with changes in ongoing thought. *Scientific Reports*, **2020**, 10, 9912	4.9	16
144	Interpretable brain age prediction using linear latent variable models of functional connectivity. *PLoS ONE*, **2020**, 15, e0232296	3.7	4
143	Neural diffusivity and pre-emptive epileptic seizure intervention. *PLoS Computational Biology*, **2020**, 16, e1008448	5	
142	Dynamic causal modelling of phase-amplitude interactions. *NeuroImage*, **2020**, 208, 116452	7.9	3
141	Missing the forest because of the trees: slower alternations during binocular rivalry are associated with lower levels of visual detail during ongoing thought. *Neuroscience of Consciousness*, **2020**, 2020, niaa020	3.3	0
140	A GABA Interneuron Deficit Model of the Art of Vincent van Gogh. *Frontiers in Psychiatry*, **2020**, 11, 685	5	0

139	The psychological correlates of distinct neural states occurring during wakeful rest. *Scientific Reports*, **2020**, 10, 21121	4.9	17
138	Facing up to the wandering mind: Patterns of off-task laboratory thought are associated with stronger neural recruitment of right fusiform cortex while processing facial stimuli. *NeuroImage*, **2020**, 214, 116765	7.9	11
137	Left dorsolateral prefrontal cortex supports context-dependent prioritisation of off-task thought. *Nature Communications*, **2019**, 10, 3816	17.4	61
136	Conflicting emergences. Weak vs. strong emergence for the modelling of brain function. *Neuroscience and Biobehavioral Reviews*, **2019**, 99, 3-10	9	11
135	Efficiently searching through large tACS parameter spaces using closed-loop Bayesian optimization. *Brain Stimulation*, **2019**, 12, 1484-1489	5.1	22
134	Dynamic network coding of working-memory domains and working-memory processes. *Nature Communications*, **2019**, 10, 936	17.4	21
133	Neural correlates of the DMT experience assessed with multivariate EEG. *Scientific Reports*, **2019**, 9, 16324	4.9	63
132	The posterior cingulate cortex: Insights from structure and function. *Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn*, **2019**, 166, 73-85	3	17
131	Brain state and polarity dependent modulation of brain networks by transcranial direct current stimulation. *Human Brain Mapping*, **2019**, 40, 904-915	5.9	54
130	Cognitive enhancement with Salience Network electrical stimulation is influenced by network structural connectivity. *NeuroImage*, **2019**, 185, 425-433	7.9	17
129	Financial gain- and loss-related BOLD signals in the human ventral tegmental area and substantia nigra pars compacta. *European Journal of Neuroscience*, **2019**, 49, 1196-1209	3.5	2
128	No Evidence for Accelerated Aging-Related Brain Pathology in Treated Human Immunodeficiency Virus: Longitudinal Neuroimaging Results From the Comorbidity in Relation to AIDS (COBRA) Project. *Clinical Infectious Diseases*, **2018**, 66, 1899-1909	11.6	58
127	Multivariate Pattern Analysis of Volumetric Neuroimaging Data and Its Relationship With Cognitive Function in Treated HIV Disease. *Journal of Acquired Immune Deficiency Syndromes (1999)*, **2018**, 78, 429-436	3.1	10
126	Motor dexterity and strength depend upon integrity of the attention-control system. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E536-E545	11.5	40
125	Altered caudate connectivity is associated with executive dysfunction after traumatic brain injury. *Brain*, **2018**, 141, 148-164	11.2	26
124	Dissociating frontoparietal brain networks with neuroadaptive Bayesian optimization. *Nature Communications*, **2018**, 9, 1227	17.4	23
123	Psilocybin with psychological support improves emotional face recognition in treatment-resistant depression. *Psychopharmacology*, **2018**, 235, 459-466	4.7	35
122	Bayesian Optimization for Neuroimaging Pre-processing in Brain Age Classification and Prediction. *Frontiers in Aging Neuroscience*, **2018**, 10, 28	5.3	40

121	Medicalising normality? Using a simulated dataset to assess the performance of different diagnostic criteria of HIV-associated cognitive impairment. *PLoS ONE*, **2018**, 13, e0194760	3.7	25
120	The characteristic patterns of neuronal avalanches in mice under anesthesia and at rest: An investigation using constrained artificial neural networks. *PLoS ONE*, **2018**, 13, e0197893	3.7	6
119	Active Acquisition for multimodal neuroimaging. *Wellcome Open Research*, **2018**, 3, 145	4.8	2
118	Active Acquisition for multimodal neuroimaging. *Wellcome Open Research*, **2018**, 3, 145	4.8	1
117	LSD modulates effective connectivity and neural adaptation mechanisms in an auditory oddball paradigm. *Neuropharmacology*, **2018**, 142, 251-262	5.5	22
116	Speech Registration in Symptomatic Memory Impairment. *Frontiers in Aging Neuroscience*, **2018**, 10, 201	5.3	1
115	An fMRI study of visuo-vestibular interactions following vestibular neuritis. *NeuroImage: Clinical*, **2018**, 20, 1010-1017	5.3	14
114	Neuroadaptive Bayesian Optimization and Hypothesis Testing. *Trends in Cognitive Sciences*, **2017**, 21, 155-167	14	33
113	Increased brain-predicted aging in treated HIV disease. *Neurology*, **2017**, 88, 1349-1357	6.5	133
112	Functional neuroimaging of visuo-vestibular interaction. *Brain Structure and Function*, **2017**, 222, 2329-2343	4	26
111	Gray and White Matter Abnormalities in Treated Human Immunodeficiency Virus Disease and Their Relationship to Cognitive Function. *Clinical Infectious Diseases*, **2017**, 65, 422-432	11.6	47
110	Psilocybin for treatment-resistant depression: fMRI-measured brain mechanisms. *Scientific Reports*, **2017**, 7, 13187	4.9	192
109	Capsaicin 8% patch treatment for amputation stump and phantom limb pain: a clinical and functional MRI study. *Journal of Pain Research*, **2017**, 10, 1623-1634	2.9	10
108	Po267 Exploring the targeted application of TDCS after TBI. *Journal of Neurology, Neurosurgery and Psychiatry*, **2017**, 88, A82.3-A82	5.5	
107	Stimulating Multiple-Demand Cortex Enhances Vocabulary Learning. *Journal of Neuroscience*, **2017**, 37, 7606-7618	6.6	23
106	Auditory and visual connectivity gradients in frontoparietal cortex. *Human Brain Mapping*, **2017**, 38, 255-270	3.7	22
105	Real-time estimation of dynamic functional connectivity networks. *Human Brain Mapping*, **2017**, 38, 202-220	3.7	20
104	Domain-general subregions of the medial prefrontal cortex contribute to recovery of language after stroke. *Brain*, **2017**, 140, 1947-1958	11.2	66

103	Externally induced frontoparietal synchronization modulates network dynamics and enhances working memory performance. *ELife*, **2017**, 6,	8.9	87
102	Decoding Time-Varying Functional Connectivity Networks via Linear Graph Embedding Methods. *Frontiers in Computational Neuroscience*, **2017**, 11, 14	3.5	5
101	Modeling Uncertainties in EEG Microstates: Analysis of Real and Imagined Motor Movements Using Probabilistic Clustering-Driven Training of Probabilistic Neural Networks. *Frontiers in Human Neuroscience*, **2017**, 11, 534	3.3	8
100	From homeostasis to behavior: Balanced activity in an exploration of embodied dynamic environmental-neural interaction. *PLoS Computational Biology*, **2017**, 13, e1005721	5	12
99	Local inhibitory plasticity tunes macroscopic brain dynamics and allows the emergence of functional brain networks. *NeuroImage*, **2016**, 124, 85-95	7.9	46
98	Text-mining the neurosynth corpus using deep boltzmann machines **2016**,		3
97	Seeds of neuroendocrine doubt. *Nature*, **2016**, 535, E1-2	50.4	6
96	The Automatic Neuroscientist: A framework for optimizing experimental design with closed-loop real-time fMRI. *NeuroImage*, **2016**, 129, 320-334	7.9	49
95	Amyloid pathology and axonal injury after brain trauma. *Neurology*, **2016**, 86, 821-8	6.5	86
94	Network dysfunction predicts speech production after left hemisphere stroke. *Neurology*, **2016**, 86, 1296-1305	6.3	51
93	Vascular autorescaling of fMRI (VasA fMRI) improves sensitivity of population studies: A pilot study. *NeuroImage*, **2016**, 124, 794-805	7.9	23
92	Language Development **2016**, 373-388		0
91	Novel Modeling of Task vs. Rest Brain State Predictability Using a Dynamic Time Warping Spectrum: Comparisons and Contrasts with Other Standard Measures of Brain Dynamics. *Frontiers in Computational Neuroscience*, **2016**, 10, 46	3.5	9
90	Eye Movements during Auditory Attention Predict Individual Differences in Dorsal Attention Network Activity. *Frontiers in Human Neuroscience*, **2016**, 10, 164	3.3	24
89	Environmental Sounds **2016**, 1121-1138		3
88	Cortical Entropy, Mutual Information and Scale-Free Dynamics in Waking Mice. *Cerebral Cortex*, **2016**, 26, 3945-52	5.1	36
87	LSD alters eyes-closed functional connectivity within the early visual cortex in a retinotopic fashion. *Human Brain Mapping*, **2016**, 37, 3031-40	5.9	29
86	Increased Global Functional Connectivity Correlates with LSD-Induced Ego Dissolution. *Current Biology*, **2016**, 26, 1043-50	6.3	237

85	Network mechanisms of intentional learning. *NeuroImage*, **2016**, 127, 123-134	7.9	31
84	Neural correlates of the LSD experience revealed by multimodal neuroimaging. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 4853-8	11.5	401
83	Towards tailoring non-invasive brain stimulation using real-time fMRI and Bayesian optimization **2016**,		6
82	Measuring vascular reactivity with breath-holds after stroke: a method to aid interpretation of group-level BOLD signal changes in longitudinal fMRI studies. *Human Brain Mapping*, **2015**, 36, 1755-71	5.9	45
81	Disconnection of network hubs and cognitive impairment after traumatic brain injury. *Brain*, **2015**, 138, 1696-709	11.2	113
80	Dynamic network mechanisms of relational integration. *Journal of Neuroscience*, **2015**, 35, 7660-73	6.6	33
79	Cognitive Flexibility through Metastable Neural Dynamics Is Disrupted by Damage to the Structural Connectome. *Journal of Neuroscience*, **2015**, 35, 9050-63	6.6	76
78	Echoes of the Brain: Local-Scale Representation of Whole-Brain Functional Networks within Transmodal Cortex. *Neuroscientist*, **2015**, 21, 540-551	7.6	22
77	Semantic retrieval during overt picture description: Left anterior temporal or the parietal lobe?. *Neuropsychologia*, **2015**, 76, 125-35	3.2	19
76	The brain's code and its canonical computational motifs. From sensory cortex to the default mode network: A multi-scale model of brain function in health and disease. *Neuroscience and Biobehavioral Reviews*, **2015**, 55, 211-22	9	35
75	The Effects of Acutely Administered 3,4-Methylenedioxymethamphetamine on Spontaneous Brain Function in Healthy Volunteers Measured with Arterial Spin Labeling and Blood Oxygen Level-Dependent Resting State Functional Connectivity. *Biological Psychiatry*, **2015**, 78, 554-62	7.9	96
74	A SENSE OF DIRECTION: BRAIN STIMULATION IN LATERALISED BRAIN FUNCTION. *Journal of Neurology, Neurosurgery and Psychiatry*, **2015**, 86, e4.109-e4	5.5	
73	Convergent and Divergent fMRI Responses in Children and Adults to Increasing Language Production Demands. *Cerebral Cortex*, **2015**, 25, 3261-77	5.1	16
72	Effects of lesions on synchrony and metastability in cortical networks. *NeuroImage*, **2015**, 118, 456-67	7.9	70
71	Graph Embeddings of Dynamic Functional Connectivity Reveal Discriminative Patterns of Task Engagement in HCP Data **2015**,		3
70	The effect of oppositional parietal transcranial direct current stimulation on lateralized brain functions. *European Journal of Neuroscience*, **2015**, 42, 2904-14	3.5	19
69	Cascades and cognitive state: focused attention incurs subcritical dynamics. *Journal of Neuroscience* , **2015**, 35, 4626-34	6.6	48
68	Neural Systems Involved When Attending to a Speaker. *Cerebral Cortex*, **2015**, 25, 4284-98	5.1	11

67	Exploring spatiotemporal network transitions in task functional MRI. *Human Brain Mapping*, **2015**, 36, 1348-64	5.9	14
66	Prediction of brain age suggests accelerated atrophy after traumatic brain injury. *Annals of Neurology*, **2015**, 77, 571-81	9.4	221
65	Network dysfunction after traumatic brain injury. *Nature Reviews Neurology*, **2014**, 10, 156-66	15	389
64	The role of the posterior cingulate cortex in cognition and disease. *Brain*, **2014**, 137, 12-32	11.2	1233
63	Damage to the Salience Network and interactions with the Default Mode Network. *Journal of Neuroscience*, **2014**, 34, 10798-807	6.6	144
62	Estimating time-varying brain connectivity networks from functional MRI time series. *NeuroImage*, **2014**, 103, 427-443	7.9	84
61	The neural basis of impaired self-awareness after traumatic brain injury. *Brain*, **2014**, 137, 586-97	11.2	84
60	Parallel systems in the control of speech. *Human Brain Mapping*, **2014**, 35, 1930-43	5.9	19
59	Enhanced repertoire of brain dynamical states during the psychedelic experience. *Human Brain Mapping*, **2014**, 35, 5442-56	5.9	211
58	The response of the anterior striatum during adult human vocal learning. *Journal of Neurophysiology*, **2014**, 112, 792-801	3.2	17
57	The effects of psilocybin and MDMA on between-network resting state functional connectivity in healthy volunteers. *Frontiers in Human Neuroscience*, **2014**, 8, 204	3.3	128
56	Spatial dependencies between large-scale brain networks. *PLoS ONE*, **2014**, 9, e98500	3.7	15
55	The entropic brain: a theory of conscious states informed by neuroimaging research with psychedelic drugs. *Frontiers in Human Neuroscience*, **2014**, 8, 20	3.3	409
54	The control of global brain dynamics: opposing actions of frontoparietal control and default mode networks on attention. *Journal of Neuroscience*, **2014**, 34, 451-61	6.6	136
53	Sensory-motor integration during speech production localizes to both left and right plana temporale. *Journal of Neuroscience*, **2014**, 34, 12963-72	6.6	21
52	Cognitive control and its impact on recovery from aphasic stroke. *Brain*, **2014**, 137, 242-54	11.2	162
51	Voltage imaging of waking mouse cortex reveals emergence of critical neuronal dynamics. *Journal of Neuroscience*, **2014**, 34, 16611-20	6.6	94
50	A functional network perspective on response inhibition and attentional control. *Nature Communications*, **2014**, 5, 4073	17.4	157

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49	Overlapping networks engaged during spoken language production and its cognitive control. *Journal of Neuroscience*, **2014**, 34, 8728-40	6.6	89
48	Echoes of the brain within default mode, association, and heteromodal cortices. *Journal of Neuroscience*, **2013**, 33, 14031-9	6.6	82
47	A Framework for Inter-Subject Prediction of Functional Connectivity From Structural Networks. *IEEE Transactions on Medical Imaging*, **2013**, 32, 2200-14	11.7	19
46	Distinct frontal networks are involved in adapting to internally and externally signaled errors. *Cerebral Cortex*, **2013**, 23, 703-13	5.1	20
45	School-age children's environmental object identification in natural auditory scenes: effects of masking and contextual congruence. *Hearing Research*, **2013**, 300, 46-55	3.9	8
44	Separable networks for top-down attention to auditory non-spatial and visuospatial modalities. *NeuroImage*, **2013**, 74, 77-86	7.9	48
43	Functional connectivity measures after psilocybin inform a novel hypothesis of early psychosis. *Schizophrenia Bulletin*, **2013**, 39, 1343-51	1.3	148
42	Articulating novel words: children's oromotor skills predict nonword repetition abilities. *Journal of Speech, Language, and Hearing Research*, **2013**, 56, 1800-12	2.8	33
41	Traumatic brain injury impairs small-world topology. *Neurology*, **2013**, 80, 1826-33	6.5	138
40	Modulation of neural activation following treatment of hepatic encephalopathy. *Neurology*, **2013**, 80, 1041-7	6.5	20
39	Individual prediction of white matter injury following traumatic brain injury. *Annals of Neurology*, **2013**, 73, 489-99	9.4	58
38	A New Analysis of a Priori Voting Power in the IMF: Recent Quota Reforms Give Little Cause for Celebration **2013**, 389-410		6
37	The contribution of the inferior parietal cortex to spoken language production. *Brain and Language*, **2012**, 121, 47-57	2.9	42
36	Sentence comprehension in competing speech: Dichotic sentence-word priming reveals hemispheric differences in auditory semantic processing. *Language and Cognitive Processes*, **2012**, 27, 1108-1144		14
35	Echoes of the brain within the posterior cingulate cortex. *Journal of Neuroscience*, **2012**, 32, 215-22	6.6	390
34	Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 2138-43	11.5	555
33	Implications for psychedelic-assisted psychotherapy: functional magnetic resonance imaging study with psilocybin. *British Journal of Psychiatry*, **2012**, 200, 238-44	5.4	122
32	Salience network integrity predicts default mode network function after traumatic brain injury. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 4690-5	11.5	418

#	Reference		
31	A bilingual advantage in controlling language interference during sentence comprehension*. *Bilingualism*, **2012**, 15, 858-872	3.2	28
30	Dissociating object directed and non-object directed action in the human mirror system; implications for theories of motor simulation. *PLoS ONE*, **2012**, 7, e32517	3.7	29
29	White matter damage and cognitive impairment after traumatic brain injury. *Brain*, **2011**, 134, 449-63	11.2	448
28	Fractionating the default mode network: distinct contributions of the ventral and dorsal posterior cingulate cortex to cognitive control. *Journal of Neuroscience*, **2011**, 31, 3217-24	6.6	539
27	Two tongues, one brain: imaging bilingual speech production. *Frontiers in Psychology*, **2011**, 2, 166	3.4	30
26	Testing for spatial heterogeneity in functional MRI using the multivariate general linear model. *IEEE Transactions on Medical Imaging*, **2011**, 30, 1293-302	11.7	4
25	Distributed processing and cortical specialization for speech and environmental sounds in human temporal cortex. *Brain and Language*, **2011**, 116, 83-90	2.9	20
24	The right posterior paravermis and the control of language interference. *Journal of Neuroscience*, **2011**, 31, 10732-40	6.6	39
23	Dissociation of sensitivity to spatial frequency in word and face preferential areas of the fusiform gyrus. *Cerebral Cortex*, **2011**, 21, 2307-12	5.1	63
22	An investigation of twenty/20 vision in reading. *Journal of Neuroscience*, **2011**, 31, 14631-8	6.6	12
21	Default mode network connectivity predicts sustained attention deficits after traumatic brain injury. *Journal of Neuroscience*, **2011**, 31, 13442-51	6.6	326
20	Default mode network functional and structural connectivity after traumatic brain injury. *Brain*, **2011**, 134, 2233-47	11.2	320
19	A comparison of sensory-motor activity during speech in first and second languages. *Journal of Neurophysiology*, **2011**, 106, 470-8	3.2	42
18	Normal adult aging and the contextual influences affecting speech and meaningful sound perception. *Trends in Amplification*, **2010**, 14, 218-32		34
17	Nonverbal auditory agnosia with lesion to Wernicke's area. *Neuropsychologia*, **2010**, 48, 107-13	3.2	34
16	Informational factors in identifying environmental sounds in natural auditory scenes. *Journal of the Acoustical Society of America*, **2009**, 126, 3147-55	2.2	30
15	Expertise with artificial nonspeech sounds recruits speech-sensitive cortical regions. *Journal of Neuroscience*, **2009**, 29, 5234-9	6.6	66
14	Analogy as relational priming: a developmental and computational perspective on the origins of a complex cognitive skill. *Behavioral and Brain Sciences*, **2008**, 31, 357-78; discussion 378-414	0.9	118

13	Growing cognition from recycled parts. *Behavioral and Brain Sciences*, **2008**, 31, 401-414	0.9	
12	Relations as transformations: implications for analogical reasoning. *Quarterly Journal of Experimental Psychology*, **2007**, 60, 897-908	1.8	30
11	The development of sentence interpretation: effects of perceptual, attentional and semantic interference. *Developmental Science*, **2007**, 10, 794-813	4.5	22
10	The interplay of learning and development in shaping neural organization. *Developmental Science*, **2006**, 9, 14-7	4.5	31
9	Voting power and voting blocs. *Public Choice*, **2006**, 127, 285-303	1.4	9
8	Estimating required lockdown cycles before immunity to SARS-CoV-2: model-based analyses of susceptible population sizes, 'S0', in seven European countries, including the UK and Ireland. *Wellcome Open Research*, 5, 85	4.8	5
7	Optimisation of functional network resources when learning behavioural strategies for performing complex tasks		1
6	Effects of LSD on music-evoked brain activity		3
5	Neuroimaging: into the Multiverse		3
4	Neural correlates of the DMT experience as assessed via multivariate EEG		1
3	Dissociating frontoparietal brain networks with neuroadaptive Bayesian optimization		3
2	Assessing tACS-induced phosphene perception using closed-loop Bayesian optimization		2
1	Rapid processing and quantitative evaluation of multicontrast EPImix scans for adaptive multimodal imaging		1