Matthew F S Rushworth

List of Publications by Citations

145 papers	21,864 citations	74 h-index	147 g-index
158 ext. papers	25,248 ext. citations	11 avg, IF	7.06 L-index

#	Paper	IF	Citations
145	Learning the value of information in an uncertain world. *Nature Neuroscience*, **2007**, 10, 1214-21	25.5	1218
144	Action sets and decisions in the medial frontal cortex. *Trends in Cognitive Sciences*, **2004**, 8, 410-7	14	821
143	Frontal cortex and reward-guided learning and decision-making. *Neuron*, **2011**, 70, 1054-69	13.9	741
142	Associative learning of social value. *Nature*, **2008**, 456, 245-9	50.4	676
141	Optimal decision making and the anterior cingulate cortex. *Nature Neuroscience*, **2006**, 9, 940-7	25.5	658
140	Connectivity-based parcellation of human cingulate cortex and its relation to functional specialization. *Journal of Neuroscience*, **2009**, 29, 1175-90	6.6	635
139	The role of ipsilateral premotor cortex in hand movement after stroke. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 14518-23	11.5	628
138	Choice, uncertainty and value in prefrontal and cingulate cortex. *Nature Neuroscience*, **2008**, 11, 389-97	25.5	610
137	How green is the grass on the other side? Frontopolar cortex and the evidence in favor of alternative courses of action. *Neuron*, **2009**, 62, 733-43	13.9	471
136	Separate neural pathways process different decision costs. *Nature Neuroscience*, **2006**, 9, 1161-8	25.5	443
135	Semantic processing in the left inferior prefrontal cortex: a combined functional magnetic resonance imaging and transcranial magnetic stimulation study. *Journal of Cognitive Neuroscience*, **2003**, 15, 71-84	3.1	425
134	On the relationship between the "default mode network" and the "social brain". *Frontiers in Human Neuroscience*, **2012**, 6, 189	3.3	418
133	Neural mechanisms of foraging. *Science*, **2012**, 336, 95-8	33.3	399
132	Diffusion-weighted imaging tractography-based parcellation of the human parietal cortex and comparison with human and macaque resting-state functional connectivity. *Journal of Neuroscience* , **2011**, 31, 4087-100	6.6	394
131	Contrasting roles for cingulate and orbitofrontal cortex in decisions and social behaviour. *Trends in Cognitive Sciences*, **2007**, 11, 168-76	14	392
130	Effort-based cost-benefit valuation and the human brain. *Journal of Neuroscience*, **2009**, 29, 4531-41	6.6	385
129	Connectivity-based subdivisions of the human right "temporoparietal junction area": evidence for different areas participating in different cortical networks. *Cerebral Cortex*, **2012**, 22, 1894-903	5.1	383

128	Functional specialization within medial frontal cortex of the anterior cingulate for evaluating effort-related decisions. *Journal of Neuroscience*, **2003**, 23, 6475-9	6.6	383
127	Interactions between decision making and performance monitoring within prefrontal cortex. *Nature Neuroscience*, **2004**, 7, 1259-65	25.5	355
126	The computation of social behavior. *Science*, **2009**, 324, 1160-4	33.3	342
125	Functional organization of the medial frontal cortex. *Current Opinion in Neurobiology*, **2007**, 17, 220-7	7.6	340
124	Quantitative investigation of connections of the prefrontal cortex in the human and macaque using probabilistic diffusion tractography. *Journal of Neuroscience*, **2005**, 25, 8854-66	6.6	340
123	Complementary localization and lateralization of orienting and motor attention. *Nature Neuroscience*, **2001**, 4, 656-61	25.5	334
122	The attentional role of the left parietal cortex: the distinct lateralization and localization of motor attention in the human brain. *Journal of Cognitive Neuroscience*, **2001**, 13, 698-710	3.1	306
121	Attention systems and the organization of the human parietal cortex. *Journal of Neuroscience*, **2001**, 21, 5262-71	6.6	291
120	Mechanisms underlying cortical activity during value-guided choice. *Nature Neuroscience*, **2012**, 15, 470-6, S1-3	25.5	290
119	Separable learning systems in the macaque brain and the role of orbitofrontal cortex in contingent learning. *Neuron*, **2010**, 65, 927-39	13.9	285
118	Comparison of human ventral frontal cortex areas for cognitive control and language with areas in monkey frontal cortex. *Neuron*, **2014**, 81, 700-13	13.9	275
117	Diffusion-weighted imaging tractography-based parcellation of the human lateral premotor cortex identifies dorsal and ventral subregions with anatomical and functional specializations. *Journal of Neuroscience*, **2007**, 27, 10259-69	6.6	275
116	The role of rat medial frontal cortex in effort-based decision making. *Journal of Neuroscience*, **2002**, 22, 10996-1003	6.6	274
115	Using diffusion imaging to study human connectional anatomy. *Annual Review of Neuroscience*, **2009**, 32, 75-94	17	248
114	Frontal cortex subregions play distinct roles in choices between actions and stimuli. *Journal of Neuroscience*, **2008**, 28, 13775-85	6.6	247
113	Functionally specific reorganization in human premotor cortex. *Neuron*, **2007**, 54, 479-90	13.9	242
112	Value, search, persistence and model updating in anterior cingulate cortex. *Nature Neuroscience*, **2016**, 19, 1280-5	25.5	237
111	The Anterior Cingulate Gyrus and Social Cognition: Tracking the Motivation of Others. *Neuron*, **2016**, 90, 692-707	13.9	235

110	Connectivity reveals relationship of brain areas for reward-guided learning and decision making in human and monkey frontal cortex. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E2695-704	11.5	229
109	The left parietal cortex and motor attention. *Neuropsychologia*, **1997**, 35, 1261-73	3.2	222
108	Dissociable effects of surprise and model update in parietal and anterior cingulate cortex. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E3660-9	11.5	204
107	Valuation and decision-making in frontal cortex: one or many serial or parallel systems?. *Current Opinion in Neurobiology*, **2012**, 22, 946-55	7.6	203
106	Response-selection-related parietal activation during number comparison. *Journal of Cognitive Neuroscience*, **2004**, 16, 1536-51	3.1	203
105	Components of switching intentional set. *Journal of Cognitive Neuroscience*, **2002**, 14, 1139-50	3.1	203
104	Cortical and subcortical interactions during action reprogramming and their related white matter pathways. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 13240-5	11.5	193
103	Ventral prefrontal cortex is not essential for working memory. *Journal of Neuroscience*, **1997**, 17, 4829-38	8.6	167
102	Parietal cortex and movement. I. Movement selection and reaching. *Experimental Brain Research*, **1997**, 117, 292-310	2.3	156
101	FEF TMS affects visual cortical activity. *Cerebral Cortex*, **2007**, 17, 391-9	5.1	154
100	Causal effect of disconnection lesions on interhemispheric functional connectivity in rhesus monkeys. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 13982-7	11.5	152
99	Neural correlates of visuomotor associations. Spatial rules compared with arbitrary rules. *Experimental Brain Research*, **2001**, 141, 359-69	2.3	152
98	Topography of connections between human prefrontal cortex and mediodorsal thalamus studied with diffusion tractography. *NeuroImage*, **2010**, 51, 555-64	7.9	144
97	Subsecond changes in top down control exerted by human medial frontal cortex during conflict and action selection: a combined transcranial magnetic stimulation electroencephalography study. *Journal of Neuroscience*, **2007**, 27, 11343-53	6.6	130
96	Short-latency influence of medial frontal cortex on primary motor cortex during action selection under conflict. *Journal of Neuroscience*, **2009**, 29, 6926-31	6.6	129
95	Connectivity profiles reveal the relationship between brain areas for social cognition in human and monkey temporoparietal cortex. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10806-11	11.5	125
94	Adaptive decision making and value in the anterior cingulate cortex. *NeuroImage*, **2007**, 36 Suppl 2, T142-54	7.9	119
93	Are there specialized circuits for social cognition and are they unique to humans?. *Current Opinion in Neurobiology*, **2013**, 23, 436-42	7.6	117

92	Manipulation of Subcortical and Deep Cortical Activity in the Primate Brain Using Transcranial Focused Ultrasound Stimulation. *Neuron*, **2019**, 101, 1109-1116.e5	13.9	115
91	Individual differences in white-matter microstructure reflect variation in functional connectivity during choice. *Current Biology*, **2007**, 17, 1426-31	6.3	115
90	A network centered on ventral premotor cortex exerts both facilitatory and inhibitory control over primary motor cortex during action reprogramming. *Journal of Neuroscience*, **2010**, 30, 1395-401	6.6	113
89	Functional specificity of human premotor-motor cortical interactions during action selection. *European Journal of Neuroscience*, **2007**, 26, 2085-95	3.5	112
88	Multiple neural mechanisms of decision making and their competition under changing risk pressure. *Neuron*, **2014**, 81, 1190-1202	13.9	109
87	A neural circuit covarying with social hierarchy in macaques. *PLoS Biology*, **2014**, 12, e1001940	9.7	106
86	The effect of cingulate cortex lesions on task switching and working memory. *Journal of Cognitive Neuroscience*, **2003**, 15, 338-53	3.1	104
85	An Open Resource for Non-human Primate Imaging. *Neuron*, **2018**, 100, 61-74.e2	13.9	103
84	Distributed and causal influence of frontal operculum in task control. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4230-5	11.5	101
83	TMS in the parietal cortex: updating representations for attention and action. *Neuropsychologia*, **2006**, 44, 2700-16	3.2	101
82	Intention, choice, and the medial frontal cortex. *Annals of the New York Academy of Sciences*, **2008**, 1124, 181-207	6.5	100
81	Functional specialization of the primate frontal cortex during decision making. *Journal of Neuroscience*, **2007**, 27, 8170-3	6.6	99
80	Comparing the role of the anterior cingulate cortex and 6-hydroxydopamine nucleus accumbens lesions on operant effort-based decision making. *European Journal of Neuroscience*, **2009**, 29, 1678-91	3.5	98
79	Distinct contributions of frontal areas to emotion and social behaviour in the rat. *European Journal of Neuroscience*, **2007**, 26, 2315-26	3.5	95
78	Contrasting Roles for Orbitofrontal Cortex and Amygdala in Credit Assignment and Learning in Macaques. *Neuron*, **2015**, 87, 1106-18	13.9	93
77	General mechanisms for making decisions?. *Current Opinion in Neurobiology*, **2009**, 19, 75-83	7.6	92
76	The left hemisphere and the selection of learned actions. *Neuropsychologia*, **1998**, 36, 11-24	3.2	91
75	Parietal rTMS disrupts the initiation but not the execution of on-line adjustments to a perturbation of object size. *Journal of Cognitive Neuroscience*, **2005**, 17, 124-36	3.1	88

74	Self-Other Mergence in the Frontal Cortex during Cooperation and Competition. *Neuron*, **2016**, 91, 482-93	13.9	87
73	Contrasting Effects of Medial and Lateral Orbitofrontal Cortex Lesions on Credit Assignment and Decision-Making in Humans. *Journal of Neuroscience*, **2017**, 37, 7023-7035	6.6	79
72	A neural mechanism underlying failure of optimal choice with multiple alternatives. *Nature Neuroscience*, **2014**, 17, 463-70	25.5	79
71	Noninvasive associative plasticity induction in a corticocortical pathway of the human brain. *Journal of Neuroscience*, **2011**, 31, 17669-79	6.6	73
70	The extreme capsule fiber complex in humans and macaque monkeys: a comparative diffusion MRI tractography study. *Brain Structure and Function*, **2016**, 221, 4059-4071	4	71
69	Comparing brains by matching connectivity profiles. *Neuroscience and Biobehavioral Reviews*, **2016**, 60, 90-7	9	71
68	Calculating the cost of acting in frontal cortex. *Annals of the New York Academy of Sciences*, **2007**, 1104, 340-56	6.5	70
67	Giving credit where credit is due: orbitofrontal cortex and valuation in an uncertain world. *Annals of the New York Academy of Sciences*, **2011**, 1239, 14-24	6.5	69
66	Attentional selection and action selection in the ventral and orbital prefrontal cortex. *Journal of Neuroscience*, **2005**, 25, 11628-36	6.6	68
65	Predictive decision making driven by multiple time-linked reward representations in the anterior cingulate cortex. *Nature Communications*, **2016**, 7, 12327	17.4	68
64	The macaque anterior cingulate cortex translates counterfactual choice value into actual behavioral change. *Nature Neuroscience*, **2019**, 22, 797-808	25.5	66
63	The Good, the Bad, and the Irrelevant: Neural Mechanisms of Learning Real and Hypothetical Rewards and Effort. *Journal of Neuroscience*, **2015**, 35, 11233-51	6.6	58
62	Neural Mechanisms of Social Cognition in Primates. *Annual Review of Neuroscience*, **2018**, 41, 99-118	17	58
61	Cognitive neuroscience: resolving conflict in and over the medial frontal cortex. *Current Biology*, **2005**, 15, R54-6	6.3	56
60	Effects of decision variables and intraparietal stimulation on sensorimotor oscillatory activity in the human brain. *Journal of Neuroscience*, **2012**, 32, 13805-18	6.6	54
59	Controlling human striatal cognitive function via the frontal cortex. *Journal of Neuroscience*, **2012**, 32, 5631-7	6.6	50
58	Frontal and parietal cortical interactions with distributed visual representations during selective attention and action selection. *Journal of Neuroscience*, **2013**, 33, 16443-58	6.6	50
57	Top-down inhibitory control exerted by the medial frontal cortex during action selection under conflict. *Journal of Cognitive Neuroscience*, **2013**, 25, 1634-48	3.1	48

56	Parietal cortex and movement. II. Spatial representation. *Experimental Brain Research*, **1997**, 117, 311-232.3		48
55	Reward-Guided Learning with and without Causal Attribution. *Neuron*, **2016**, 90, 177-90	13.9	43
54	Simultaneous representation of a spectrum of dynamically changing value estimates during decision making. *Nature Communications*, **2017**, 8, 1942	17.4	42
53	Category-related activation for written words in the posterior fusiform is task specific. *Neuropsychologia*, **2005**, 43, 69-74	3.2	42
52	Neural mechanisms for learning self and other ownership. *Nature Communications*, **2018**, 9, 4747	17.4	38
51	The parietal cortex in visual search: a visuomotor hypothesis. *Supplements To Clinical Neurophysiology*, **2003**, 56, 321-30		36
50	Foraging under competition: the neural basis of input-matching in humans. *Journal of Neuroscience*, **2013**, 33, 9866-72	6.6	35
49	Trial-type dependent frames of reference for value comparison. *PLoS Computational Biology*, **2013**, 9, e1003225	5	35
48	Neural Mechanisms of Credit Assignment in a Multicue Environment. *Journal of Neuroscience*, **2016**, 36, 1096-112	6.6	35
47	Model-based analyses: Promises, pitfalls, and example applications to the study of cognitive control. *Quarterly Journal of Experimental Psychology*, **2012**, 65, 252-67	1.8	32
46	Inverted activity patterns in ventromedial prefrontal cortex during value-guided decision-making in a less-is-more task. *Nature Communications*, **2017**, 8, 1886	17.4	31
45	Causal manipulation of functional connectivity in a specific neural pathway during behaviour and at rest. *ELife*, **2015**, 4,	8.9	28
44	Brain systems for probabilistic and dynamic prediction: computational specificity and integration. *PLoS Biology*, **2013**, 11, e1001662	9.7	27
43	A Basal Forebrain-Cingulate Circuit in Macaques Decides It Is Time to Act. *Neuron*, **2020**, 105, 370-384.e8	13.9	26
42	Beyond negative valence: 2-week administration of a serotonergic antidepressant enhances both reward and effort learning signals. *PLoS Biology*, **2017**, 15, e2000756	9.7	22
41	Choosing where to attend and the medial frontal cortex: an FMRI study. *Journal of Neurophysiology*, **2008**, 100, 1397-406	3.2	22
40	Imaging causal interactions during sensorimotor processing. *Cortex*, **2008**, 44, 598-608	3.8	21
39	Prospection, Perseverance, and Insight in Sequential Behavior. *Neuron*, **2018**, 99, 1069-1082.e7	13.9	21

38	Modulation of short intra-cortical inhibition during action reprogramming. *Experimental Brain Research*, **2011**, 211, 265-76	2.3	20
37	Global reward state affects learning and activity in raphe nucleus and anterior insula in monkeys. *Nature Communications*, **2020**, 11, 3771	17.4	20
36	Cognitive neuroscience: acting on numbers. *Current Biology*, **2004**, 14, R517-9	6.3	18
35	Combining brain perturbation and neuroimaging in non-human primates. *NeuroImage*, **2021**, 235, 118017	7.9	15
34	Effects of an orientation illusion on motor performance and motor imagery. *Experimental Brain Research*, **2005**, 166, 17-22	2.3	14
33	A Common Space Approach to Comparative Neuroscience. *Annual Review of Neuroscience*, **2021**, 44, 69-86	17	14
32	Multiple associative structures created by reinforcement and incidental statistical learning mechanisms. *Nature Communications*, **2019**, 10, 4835	17.4	13
31	Previously Reward-Associated Stimuli Capture Spatial Attention in the Absence of Changes in the Corresponding Sensory Representations as Measured with MEG. *Journal of Neuroscience*, **2020**, 40, 5033-5050	6.6	12
30	The timing of neural activity during shifts of spatial attention. *Journal of Cognitive Neuroscience*, **2009**, 21, 2369-83	3.1	12
29	Polarity of uncertainty representation during exploration and exploitation in ventromedial prefrontal cortex. *Nature Human Behaviour*, **2021**, 5, 83-98	12.8	12
28	Activation and disruption of a neural mechanism for novel choice in monkeys. *Nature*, **2021**, 591, 270-274	50.4	12
27	Anatomical and functional subdivision within the primate lateral prefrontal cortex. *Cognitive, Affective and Behavioral Neuroscience*, **2000**, 28, 187-196		11
26	Behavioral flexibility is associated with changes in structure and function distributed across a frontal cortical network in macaques. *PLoS Biology*, **2020**, 18, e3000605	9.7	10
25	Conceptual representation and the making of new decisions. *Neuron*, **2009**, 63, 721-3	13.9	9
24	A paradoxical role for inhibition in initiation. *Neuron*, **2007**, 54, 669-70	13.9	9
23	Differential functional connectivity underlying asymmetric reward-related activity in human and nonhuman primates. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 28452-28462	11.5	9
22	Identification and disruption of a neural mechanism for accumulating prospective metacognitive information prior to decision-making. *Neuron*, **2021**, 109, 1396-1408.e7	13.9	9
21	Unilateral medial frontal cortex lesions cause a cognitive decision-making deficit in rats. *European Journal of Neuroscience*, **2014**, 40, 3757-65	3.5	7

20	Interactions between ventrolateral prefrontal and anterior cingulate cortex during learning and behavioural change. *Neuropsychopharmacology*, **2022**, 47, 196-210	8.7	5
19	Social prediction modulates activity of macaque superior temporal cortex. *Science Advances*, **2021**, 7, eabh2392	14.3	5
18	Human decisions about when to act originate within a basal forebrain-nigral circuit. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 11799-11810	11.5	4
17	What's Worth the Risk? A Neural Circuit for Trade-Offs. *Cell*, **2015**, 161, 1243-4	56.2	3
16	Combining correlation and interference methods in the human brain. Focus on "Cortico-cortical interactions in spatial attention: A combined ERP/TMS study". *Journal of Neurophysiology*, **2006**, 95, 2731-2	3.3	3
15	Causal manipulation of self-other mergence in the dorsomedial prefrontal cortex. *Neuron*, **2021**, 109, 2353-2361.e11	13.9	3
14	Multiple systems in macaques for tracking prediction errors and other types of surprise. *PLoS Biology*, **2020**, 18, e3000899	9.7	2
13	Impact of internal and external factors on prosocial choices in rhesus macaques. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2021**, 376, 20190678	5.8	2
12	Obsessing about Uncertainty?. *Neuron*, **2017**, 96, 250-252	13.9	1
11	A habenula-insular circuit encodes the willingness to act. *Nature Communications*, **2021**, 12, 6329	17.4	1
10	Introducing the PLOS ONE Collection on the neuroscience of reward and decision making. *PLoS ONE*, **2020**, 15, e0240505	3.7	1
9	Increasing and decreasing interregional brain coupling increases and decreases oscillatory activity in the human brain. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	1
8	The effect of apathy and compulsivity on planning and stopping in sequential decision-making.. *PLoS Biology*, **2022**, 20, e3001566	9.7	1
7	Ultrasound modulation of macaque prefrontal cortex selectively alters credit assignment-related activity and behavior.. *Science Advances*, **2021**, 7, eabg7700	14.3	0
6	Multiple systems in macaques for tracking prediction errors and other types of surprise **2020**, 18, e3000899		
5	Multiple systems in macaques for tracking prediction errors and other types of surprise **2020**, 18, e3000899		
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1 Multiple systems in macaques for tracking prediction errors and other types of surprise **2020**, 18, e3000899