

Stefan J Kiebel

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135
papers

12,410
citations

63
h-index

111
g-index

155
ext. papers

14,523
ext. citations

5.9
avg, IF

6.39
L-index

#	Paper	IF	Citations
135	Predictive coding under the free-energy principle. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2009 , 364, 1211-21	5.8	694
134	Classical and Bayesian inference in neuroimaging: applications. <i>NeuroImage</i> , 2002 , 16, 484-512	7.9	576
133	Action and behavior: a free-energy formulation. <i>Biological Cybernetics</i> , 2010 , 102, 227-60	2.8	517
132	Dynamic causal modeling of evoked responses in EEG and MEG. <i>NeuroImage</i> , 2006 , 30, 1255-72	7.9	456
131	Classical and Bayesian inference in neuroimaging: theory. <i>NeuroImage</i> , 2002 , 16, 465-83	7.9	456
130	Multiple sparse priors for the M/EEG inverse problem. <i>NeuroImage</i> , 2008 , 39, 1104-20	7.9	451
129	A hierarchy of time-scales and the brain. <i>PLoS Computational Biology</i> , 2008 , 4, e1000209	5	411
128	EEG and MEG data analysis in SPM8. <i>Computational Intelligence and Neuroscience</i> , 2011 , 2011, 852961	3	398
127	Training-induced brain plasticity in aphasia. <i>Brain</i> , 1999 , 122 (Pt 9), 1781-90	11.2	352
126	Brain responses to the acquired moral status of faces. <i>Neuron</i> , 2004 , 41, 653-62	13.9	318
125	Brain representation of active and passive movements. <i>NeuroImage</i> , 1996 , 4, 105-10	7.9	300
124	The functional anatomy of the MMN: a DCM study of the roving paradigm. <i>NeuroImage</i> , 2008 , 42, 936-44	7.9	277
123	Re-visiting the echo state property. <i>Neural Networks</i> , 2012 , 35, 1-9	9.1	217
122	Reinforcement learning or active inference?. <i>PLoS ONE</i> , 2009 , 4, e6421	3.7	210
121	Evoked brain responses are generated by feedback loops. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 20961-6	11.5	198
120	Detecting structural changes in whole brain based on nonlinear deformations-application to schizophrenia research. <i>NeuroImage</i> , 1999 , 10, 107-13	7.9	197
119	A blueprint for movement: functional and anatomical representations in the human motor system. <i>Journal of Neuroscience</i> , 1999 , 19, 8043-8	6.6	194

118	Robust smoothness estimation in statistical parametric maps using standardized residuals from the general linear model. <i>NeuroImage</i> , 1999 , 10, 756-66	7.9	193
117	Dynamic causal modelling of evoked responses in EEG/MEG with lead field parameterization. <i>NeuroImage</i> , 2006 , 30, 1273-84	7.9	175
116	Dynamic causal models of neural system dynamics: current state and future extensions. <i>Journal of Biosciences</i> , 2007 , 32, 129-44	2.3	169
115	Mixed-effects and fMRI studies. <i>NeuroImage</i> , 2005 , 24, 244-52	7.9	164
114	Dynamic causal modelling of evoked potentials: a reproducibility study. <i>NeuroImage</i> , 2007 , 36, 571-80	7.9	162
113	Dynamic causal modeling for EEG and MEG. <i>Human Brain Mapping</i> , 2009 , 30, 1866-76	5.9	158
112	Variational Bayesian inference for fMRI time series. <i>NeuroImage</i> , 2003 , 19, 727-41	7.9	158
111	How humans integrate the prospects of pain and reward during choice. <i>Journal of Neuroscience</i> , 2009 , 29, 14617-26	6.6	147
110	A neural mass model of spectral responses in electrophysiology. <i>NeuroImage</i> , 2007 , 37, 706-20	7.9	147
109	Cortical circuits for perceptual inference. <i>Neural Networks</i> , 2009 , 22, 1093-104	9.1	144
108	Variational Bayesian identification and prediction of stochastic nonlinear dynamic causal models. <i>Physica D: Nonlinear Phenomena</i> , 2009 , 238, 2089-2118	3.3	144
107	Dynamic causal modelling for fMRI: a two-state model. <i>NeuroImage</i> , 2008 , 39, 269-78	7.9	137
106	Repetition suppression and plasticity in the human brain. <i>NeuroImage</i> , 2009 , 48, 269-79	7.9	135
105	Dynamic causal modeling of the response to frequency deviants. <i>Journal of Neurophysiology</i> , 2009 , 101, 2620-31	3.2	128
104	Dynamic causal modelling for EEG and MEG. <i>Cognitive Neurodynamics</i> , 2008 , 2, 121-36	4.2	127
103	Causal hierarchy within the thalamo-cortical network in spike and wave discharges. <i>PLoS ONE</i> , 2009 , 4, e6475	3.7	116
102	Applications of random field theory to electrophysiology. <i>Neuroscience Letters</i> , 2005 , 374, 174-8	3.3	110
101	Parametric analysis of oscillatory activity as measured with EEG/MEG. <i>Human Brain Mapping</i> , 2005 , 26, 170-7	5.9	110

100	Bayesian estimation of synaptic physiology from the spectral responses of neural masses. <i>NeuroImage</i> , 2008 , 42, 272-84	7.9	108
99	Simulation of talking faces in the human brain improves auditory speech recognition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 6747-52	11.5	108
98	Observing the observer (I): meta-bayesian models of learning and decision-making. <i>PLoS ONE</i> , 2010 , 5, e15554	3.7	104
97	Cortical reorganization in patients with facial palsy. <i>Annals of Neurology</i> , 1997 , 41, 621-30	9.4	102
96	Dynamic causal modelling of induced responses. <i>NeuroImage</i> , 2008 , 41, 1293-312	7.9	102
95	Amygdala damage affects event-related potentials for fearful faces at specific time windows. <i>Human Brain Mapping</i> , 2010 , 31, 1089-105	5.9	101
94	MRI and PET coregistration--a cross validation of statistical parametric mapping and automated image registration. <i>NeuroImage</i> , 1997 , 5, 271-9	7.9	100
93	Bifurcation analysis of neural mass models: Impact of extrinsic inputs and dendritic time constants. <i>NeuroImage</i> , 2010 , 52, 1041-58	7.9	98
92	Dynamic causal modelling of evoked responses: the role of intrinsic connections. <i>NeuroImage</i> , 2007 , 36, 332-45	7.9	96
91	Population dynamics: variance and the sigmoid activation function. <i>NeuroImage</i> , 2008 , 42, 147-57	7.9	94
90	Multiple somatotopic representations in the human cerebellum. <i>NeuroReport</i> , 1999 , 10, 3653-8	1.7	92
89	Statistical parametric mapping for event-related potentials: I. Generic considerations. <i>NeuroImage</i> , 2004 , 22, 492-502	7.9	91
88	Bayesian estimation of cerebral perfusion using a physiological model of microvasculature. <i>NeuroImage</i> , 2006 , 33, 570-9	7.9	89
87	Action selectivity in parietal and temporal cortex. <i>Cognitive Brain Research</i> , 2005 , 25, 641-9		88
86	Recognizing sequences of sequences. <i>PLoS Computational Biology</i> , 2009 , 5, e1000464	5	85
85	Dynamic causal modelling of distributed electromagnetic responses. <i>NeuroImage</i> , 2009 , 47, 590-601	7.9	80
84	Anatomically informed basis functions. <i>NeuroImage</i> , 2000 , 11, 656-67	7.9	79
83	Learning speech recognition from songbirds. <i>BMC Neuroscience</i> , 2013 , 14,	3.2	78

82	Variational Bayesian inversion of the equivalent current dipole model in EEG/MEG. <i>NeuroImage</i> , 2008 , 39, 728-41	7.9	78
81	Dynamic causal modeling: a generative model of slice timing in fMRI. <i>NeuroImage</i> , 2007 , 34, 1487-96	7.9	75
80	Perceptual decision making: drift-diffusion model is equivalent to a Bayesian model. <i>Frontiers in Human Neuroscience</i> , 2014 , 8, 102	3.3	70
79	How the human brain recognizes speech in the context of changing speakers. <i>Journal of Neuroscience</i> , 2010 , 30, 629-38	6.6	70
78	Event-related brain dynamics. <i>Trends in Neurosciences</i> , 2002 , 25, 387-9	13.3	70
77	Addiction Research Consortium: Losing and regaining control over drug intake (ReCoDe)-From trajectories to mechanisms and interventions. <i>Addiction Biology</i> , 2020 , 25, e12866	4.6	70
76	Evidence for neural encoding of Bayesian surprise in human somatosensation. <i>NeuroImage</i> , 2012 , 62, 177-88	7.9	68
75	Dysfunction of the auditory thalamus in developmental dyslexia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 13841-6	11.5	67
74	Perception and hierarchical dynamics. <i>Frontiers in Neuroinformatics</i> , 2009 , 3, 20	3.9	67
73	Statistical parametric mapping for event-related potentials (II): a hierarchical temporal model. <i>NeuroImage</i> , 2004 , 22, 503-20	7.9	67
72	Functional optical signal analysis: a software tool for near-infrared spectroscopy data processing incorporating statistical parametric mapping. <i>Journal of Biomedical Optics</i> , 2007 , 12, 064010	3.5	63
71	Population dynamics under the Laplace assumption. <i>NeuroImage</i> , 2009 , 44, 701-14	7.9	62
70	Neuronal message passing using Mean-field, Bethe, and Marginal approximations. <i>Scientific Reports</i> , 2019 , 9, 1889	4.9	60
69	Visuomotor control within a distributed parieto-frontal network. <i>Experimental Brain Research</i> , 2002 , 146, 273-81	2.3	51
68	Dynamic network participation of functional connectivity hubs assessed by resting-state fMRI. <i>Frontiers in Human Neuroscience</i> , 2014 , 8, 195	3.3	50
67	A dynamic causal model study of neuronal population dynamics. <i>NeuroImage</i> , 2010 , 51, 91-101	7.9	45
66	Nonlinear coupling in the human motor system. <i>Journal of Neuroscience</i> , 2010 , 30, 8393-9	6.6	43
65	A dynamic causal model for evoked and induced responses. <i>NeuroImage</i> , 2012 , 59, 340-8	7.9	37

64	The MR detection of neuronal depolarization during 3-Hz spike-and-wave complexes in generalized epilepsy. <i>Magnetic Resonance Imaging</i> , 2004 , 22, 1441-4	3.3	36
63	Structural and functional cortical abnormalities after upper limb amputation during childhood. <i>NeuroReport</i> , 2001 , 12, 957-62	1.7	36
62	From birdsong to human speech recognition: bayesian inference on a hierarchy of nonlinear dynamical systems. <i>PLoS Computational Biology</i> , 2013 , 9, e1003219	5	34
61	Observing the observer (II): deciding when to decide. <i>PLoS ONE</i> , 2010 , 5, e15555	3.7	34
60	Voice identity recognition: functional division of the right STS and its behavioral relevance. <i>Journal of Cognitive Neuroscience</i> , 2015 , 27, 280-91	3.1	33
59	A Metropolis-Hastings algorithm for dynamic causal models. <i>NeuroImage</i> , 2007 , 38, 478-87	7.9	33
58	Early auditory sensory processing of voices is facilitated by visual mechanisms. <i>NeuroImage</i> , 2013 , 77, 237-45	7.9	32
57	Free energy and dendritic self-organization. <i>Frontiers in Systems Neuroscience</i> , 2011 , 5, 80	3.5	32
56	A hierarchical neuronal model for generation and online recognition of birdsongs. <i>PLoS Computational Biology</i> , 2011 , 7, e1002303	5	31
55	Altered Medial Frontal Feedback Learning Signals in Anorexia Nervosa. <i>Biological Psychiatry</i> , 2018 , 83, 235-243	7.9	28
54	Modulation of perception and brain activity by predictable trajectories of facial expressions. <i>Cerebral Cortex</i> , 2010 , 20, 694-703	5.1	26
53	A heuristic for the degrees of freedom of statistics based on multiple variance parameters. <i>NeuroImage</i> , 2003 , 20, 591-600	7.9	25
52	Somatostatin Interneurons Promote Neuronal Synchrony in the Neonatal Hippocampus. <i>Cell Reports</i> , 2019 , 26, 3173-3182.e5	10.6	24
51	Visual face-movement sensitive cortex is relevant for auditory-only speech recognition. <i>Cortex</i> , 2015 , 68, 86-99	3.8	24
50	Dynamical causal modelling for M/EEG: spatial and temporal symmetry constraints. <i>NeuroImage</i> , 2009 , 44, 154-63	7.9	21
49	Inferring Neuronal Dynamics from Calcium Imaging Data Using Biophysical Models and Bayesian Inference. <i>PLoS Computational Biology</i> , 2016 , 12, e1004736	5	21
48	How the human brain exchanges information across sensory modalities to recognize other people. <i>Human Brain Mapping</i> , 2015 , 36, 324-39	5.9	20
47	A Bayesian Attractor Model for Perceptual Decision Making. <i>PLoS Computational Biology</i> , 2015 , 11, e1004442	19	

46	Changing meaning causes coupling changes within higher levels of the cortical hierarchy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 11765-70	11.5	19
45	Anatomically informed basis functions in multisubject studies. <i>Human Brain Mapping</i> , 2002 , 16, 36-46	5.9	16
44	Modulation of tonotopic ventral medial geniculate body is behaviorally relevant for speech recognition. <i>ELife</i> , 2019 , 8,	8.9	16
43	Active Inference, Belief Propagation, and the Bethe Approximation. <i>Neural Computation</i> , 2018 , 30, 2530-2567	16	
42	Spatiotemporal dynamics of argument retrieval and reordering: an fMRI and EEG study on sentence processing. <i>Frontiers in Psychology</i> , 2012 , 3, 523	3.4	15
41	The General Linear Model 2007 , 101-125		15
40	Recognizing recurrent neural networks (rRNN): Bayesian inference for recurrent neural networks. <i>Biological Cybernetics</i> , 2012 , 106, 201-17	2.8	14
39	A Bayesian Reformulation of the Extended Drift-Diffusion Model in Perceptual Decision Making. <i>Frontiers in Computational Neuroscience</i> , 2017 , 11, 29	3.5	13
38	Developmental Emergence of Sparse Coding: A Dynamic Systems Approach. <i>Scientific Reports</i> , 2017 , 7, 13015	4.9	9
37	Spatiotemporal dynamics of random stimuli account for trial-to-trial variability in perceptual decision making. <i>Scientific Reports</i> , 2016 , 6, 18832	4.9	9
36	Investigating Neuroanatomical Features in Top Athletes at the Single Subject Level. <i>PLoS ONE</i> , 2015 , 10, e0129508	3.7	9
35	Ultra-fast accurate reconstruction of spiking activity from calcium imaging data. <i>Journal of Neurophysiology</i> , 2018 , 119, 1863-1878	3.2	8
34	ATTRACTORS IN SONG. <i>New Mathematics and Natural Computation</i> , 2009 , 05, 83-114	0.6	8
33	Modeling the Evolution of Beliefs Using an Attentional Focus Mechanism. <i>PLoS Computational Biology</i> , 2015 , 11, e1004558	5	7
32	A limited role of NKCC1 in telencephalic glutamatergic neurons for developing hippocampal network dynamics and behavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	7
31	Abstract rules drive adaptation in the subcortical sensory pathway. <i>ELife</i> , 2020 , 9,	8.9	6
30	An empirical evaluation of active inference in multi-armed bandits. <i>Neural Networks</i> , 2021 , 144, 229-246	9.1	6
29	Predicting change: Approximate inference under explicit representation of temporal structure in changing environments. <i>PLoS Computational Biology</i> , 2019 , 15, e1006707	5	5

28	Variational Bayes 2007 , 303-312		5
27	Comparative Analysis of Behavioral Models for Adaptive Learning in Changing Environments. <i>Frontiers in Computational Neuroscience</i> , 2016 , 10, 33	3.5	5
26	Hierarchical models for EEG and MEG 2007 , 211-220		4
25	Modelling Odor Decoding in the Antennal Lobe by Combining Sequential Firing Rate Models with Bayesian Inference. <i>PLoS Computational Biology</i> , 2015 , 11, e1004528	5	4
24	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. <i>PLoS ONE</i> , 2020 , 15, e0239817	3.7	4
23	Meta-control of the exploration-exploitation dilemma emerges from probabilistic inference over a hierarchy of time scales. <i>Cognitive, Affective and Behavioral Neuroscience</i> , 2021 , 21, 509-533	3.5	4
22	Dynamic integration of forward planning and heuristic preferences during multiple goal pursuit. <i>PLoS Computational Biology</i> , 2020 , 16, e1007685	5	3
21	Balancing control: A Bayesian interpretation of habitual and goal-directed behavior. <i>Journal of Mathematical Psychology</i> , 2021 , 100, 102472	1.2	3
20	Context-Dependent Risk Aversion: A Model-Based Approach. <i>Frontiers in Psychology</i> , 2018 , 9, 2053	3.4	3
19	Representation of Perceptual Evidence in the Human Brain Assessed by Fast, Within-Trial Dynamic Stimuli. <i>Frontiers in Human Neuroscience</i> , 2020 , 14, 9	3.3	2
18	Dispositional Cognitive Effort Investment and Behavioral Demand Avoidance: Are They Related?		2
17	Dynamic causal models for EEG 2007 , 561-576		2
16	Dispositional individual differences in cognitive effort investment: establishing the core construct. <i>BMC Psychology</i> , 2021 , 9, 10	2.8	2
15	Parametric procedures 2007 , 223-231		1
14	Meta-control of the exploration-exploitation dilemma emerges from probabilistic inference over a hierarchy of time scales		1
13	Neuronal Sequence Models for Bayesian Online Inference. <i>Frontiers in Artificial Intelligence</i> , 2021 , 4, 530937		1
12	Early auditory sensory processing is facilitated by visual mechanisms. <i>Seeing and Perceiving</i> , 2012 , 25, 184-185		
11	Methodik und Applikation der deformationsbasierten Morphometrie. <i>Informatik Aktuell</i> , 1999 , 392-396	0.3	

- 10 Modeling Dynamic Allocation of Effort in a Sequential Task Using Discounting Models. *Frontiers in Neuroscience*, **2020**, 14, 242 5.1
- 9 Human-inspired models for tactile computing **2021**, 169-195
- 8 Stochastic Motion Stimuli Influence Perceptual Choices in Human Participants.. *Frontiers in Neuroscience*, **2021**, 15, 749728 5.1
- 7 Forward planning driven by context-dependent conflict processing in anterior cingulate cortex.. *NeuroImage*, **2022**, 119222 7.9
- 6 Dispositional cognitive effort investment and behavioral demand avoidance: Are they related? **2020**, 15, e0239817
- 5 Dispositional cognitive effort investment and behavioral demand avoidance: Are they related? **2020**, 15, e0239817
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- 3 Dispositional cognitive effort investment and behavioral demand avoidance: Are they related? **2020**, 15, e0239817
- 2 Dispositional cognitive effort investment and behavioral demand avoidance: Are they related? **2020**, 15, e0239817
- 1 Dispositional cognitive effort investment and behavioral demand avoidance: Are they related? **2020**, 15, e0239817