

Stefan J Kiebel

List of Publications by Year in descending order

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136
papers

15,698
citations

15466

65
h-index

20307

116
g-index

155
all docs

155
docs citations

155
times ranked

12344
citing authors

#	ARTICLE	IF	CITATIONS
1	Predictive coding under the free-energy principle. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2009, 364, 1211-1221.	1.8	1,045
2	Action and behavior: a free-energy formulation. <i>Biological Cybernetics</i> , 2010, 102, 227-260.	0.6	686
3	Classical and Bayesian Inference in Neuroimaging: Applications. <i>NeuroImage</i> , 2002, 16, 484-512.	2.1	658
4	Dynamic causal modeling of evoked responses in EEG and MEG. <i>NeuroImage</i> , 2006, 30, 1255-1272.	2.1	563
5	A Hierarchy of Time-Scales and the Brain. <i>PLoS Computational Biology</i> , 2008, 4, e1000209.	1.5	557
6	Multiple sparse priors for the M/EEG inverse problem. <i>NeuroImage</i> , 2008, 39, 1104-1120.	2.1	548
7	Classical and Bayesian Inference in Neuroimaging: Theory. <i>NeuroImage</i> , 2002, 16, 465-483.	2.1	537
8	EEG and MEG Data Analysis in SPM8. <i>Computational Intelligence and Neuroscience</i> , 2011, 2011, 1-32.	1.1	500
9	Training-induced brain plasticity in aphasia. <i>Brain</i> , 1999, 122, 1781-1790.	3.7	418
10	The functional anatomy of the MMN: A DCM study of the roving paradigm. <i>NeuroImage</i> , 2008, 42, 936-944.	2.1	392
11	Brain Responses to the Acquired Moral Status of Faces. <i>Neuron</i> , 2004, 41, 653-662.	3.8	365
12	Re-visiting the echo state property. <i>Neural Networks</i> , 2012, 35, 1-9.	3.3	350
13	Brain Representation of Active and Passive Movements. <i>NeuroImage</i> , 1996, 4, 105-110.	2.1	334
14	Reinforcement Learning or Active Inference?. <i>PLoS ONE</i> , 2009, 4, e6421.	1.1	281
15	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, 20961-20966.	3.3	241
16	Detecting Structural Changes in Whole Brain Based on Nonlinear Deformations—Application to Schizophrenia Research. <i>NeuroImage</i> , 1999, 10, 107-113.	2.1	229
17	A Blueprint for Movement: Functional and Anatomical Representations in the Human Motor System. <i>Journal of Neuroscience</i> , 1999, 19, 8043-8048.	1.7	217
18	Robust Smoothness Estimation in Statistical Parametric Maps Using Standardized Residuals from the General Linear Model. <i>NeuroImage</i> , 1999, 10, 756-766.	2.1	216

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19	Dynamic causal modelling of evoked responses in EEG/MEG with lead field parameterization. <i>NeuroImage</i> , 2006, 30, 1273-1284.	2.1	209
20	Dynamic causal modelling of evoked potentials: A reproducibility study. <i>NeuroImage</i> , 2007, 36, 571-580.	2.1	205
21	Dynamic causal models of neural system dynamics: current state and future extensions. <i>Journal of Biosciences</i> , 2007, 32, 129-144.	0.5	201
22	Mixed-effects and fMRI studies. <i>NeuroImage</i> , 2005, 24, 244-252.	2.1	200
23	Variational Bayesian inference for fMRI time series. <i>NeuroImage</i> , 2003, 19, 727-741.	2.1	192
24	Repetition suppression and plasticity in the human brain. <i>NeuroImage</i> , 2009, 48, 269-279.	2.1	192
25	Dynamic causal modeling for EEG and MEG. <i>Human Brain Mapping</i> , 2009, 30, 1866-1876.	1.9	186
26	A neural mass model of spectral responses in electrophysiology. <i>NeuroImage</i> , 2007, 37, 706-720.	2.1	185
27	How Humans Integrate the Prospects of Pain and Reward during Choice. <i>Journal of Neuroscience</i> , 2009, 29, 14617-14626.	1.7	184
28	Dynamic causal modelling for EEG and MEG. <i>Cognitive Neurodynamics</i> , 2008, 2, 121-136.	2.3	183
29	Cortical circuits for perceptual inference. <i>Neural Networks</i> , 2009, 22, 1093-1104.	3.3	177
30	Dynamic causal modelling for fMRI: A two-state model. <i>NeuroImage</i> , 2008, 39, 269-278.	2.1	174
31	Dynamic Causal Modeling of the Response to Frequency Deviants. <i>Journal of Neurophysiology</i> , 2009, 101, 2620-2631.	0.9	173
32	Variational Bayesian identification and prediction of stochastic nonlinear dynamic causal models. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 2089-2118.	1.3	165
33	Causal Hierarchy within the Thalamo-Cortical Network in Spike and Wave Discharges. <i>PLoS ONE</i> , 2009, 4, e6475.	1.1	141
34	Cortical reorganization in patients with facial palsy. <i>Annals of Neurology</i> , 1997, 41, 621-630.	2.8	139
35	Addiction Research Consortium: Losing and regaining control over drug intake (ReCoDe) – From trajectories to mechanisms and interventions. <i>Addiction Biology</i> , 2020, 25, e12866.	1.4	135
36	Applications of random field theory to electrophysiology. <i>Neuroscience Letters</i> , 2005, 374, 174-178.	1.0	134

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37	Simulation of talking faces in the human brain improves auditory speech recognition. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6747-6752.	3.3	131
38	Population dynamics: Variance and the sigmoid activation function. NeuroImage, 2008, 42, 147-157.	2.1	130
39	Observing the Observer (I): Meta-Bayesian Models of Learning and Decision-Making. PLoS ONE, 2010, 5, e15554.	1.1	130
40	Parametric analysis of oscillatory activity as measured with EEG/MEG. Human Brain Mapping, 2005, 26, 170-177.	1.9	128
41	Bifurcation analysis of neural mass models: Impact of extrinsic inputs and dendritic time constants. NeuroImage, 2010, 52, 1041-1058.	2.1	125
42	Bayesian estimation of synaptic physiology from the spectral responses of neural masses. NeuroImage, 2008, 42, 272-284.	2.1	122
43	Dynamic causal modelling of evoked responses: The role of intrinsic connections. NeuroImage, 2007, 36, 332-345.	2.1	120
44	Dynamic causal modelling of induced responses. NeuroImage, 2008, 41, 1293-1312.	2.1	120
45	Amygdala damage affects event-related potentials for fearful faces at specific time windows. Human Brain Mapping, 2010, 31, 1089-1105.	1.9	118
46	Perceptual decision making: drift-diffusion model is equivalent to a Bayesian model. Frontiers in Human Neuroscience, 2014, 8, 102.	1.0	117
47	MRI and PET Coregistration – A Cross Validation of Statistical Parametric Mapping and Automated Image Registration. NeuroImage, 1997, 5, 271-279.	2.1	115
48	Bayesian estimation of cerebral perfusion using a physiological model of microvasculature. NeuroImage, 2006, 33, 570-579.	2.1	111
49	Multiple somatotopic representations in the human cerebellum. NeuroReport, 1999, 10, 3653-3658.	0.6	109
50	Evidence for neural encoding of Bayesian surprise in human somatosensation. NeuroImage, 2012, 62, 177-188.	2.1	106
51	Statistical parametric mapping for event-related potentials: I. Generic considerations. NeuroImage, 2004, 22, 492-502.	2.1	105
52	Recognizing Sequences of Sequences. PLoS Computational Biology, 2009, 5, e1000464.	1.5	105
53	Action selectivity in parietal and temporal cortex. Cognitive Brain Research, 2005, 25, 641-649.	3.3	98
54	Dynamic causal modelling of distributed electromagnetic responses. NeuroImage, 2009, 47, 590-601.	2.1	95

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55	Variational Bayesian inversion of the equivalent current dipole model in EEG/MEG. <i>NeuroImage</i> , 2008, 39, 728-741.	2.1	94
56	Anatomically Informed Basis Functions. <i>NeuroImage</i> , 2000, 11, 656-667.	2.1	93
57	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, 13841-13846.	3.3	90
58	Neuronal message passing using Mean-field, Bethe, and Marginal approximations. <i>Scientific Reports</i> , 2019, 9, 1889.	1.6	88
59	Event-related brain dynamics. <i>Trends in Neurosciences</i> , 2002, 25, 387-389.	4.2	86
60	How the Human Brain Recognizes Speech in the Context of Changing Speakers. <i>Journal of Neuroscience</i> , 2010, 30, 629-638.	1.7	86
61	Perception and hierarchical dynamics. <i>Frontiers in Neuroinformatics</i> , 2009, 3, 20.	1.3	85
62	Dynamic causal modeling: A generative model of slice timing in fMRI. <i>NeuroImage</i> , 2007, 34, 1487-1496.	2.1	84
63	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.	1.4	80
64	Statistical parametric mapping for event-related potentials (II): a hierarchical temporal model. <i>NeuroImage</i> , 2004, 22, 503-520.	2.1	78
65	Population dynamics under the Laplace assumption. <i>NeuroImage</i> , 2009, 44, 701-714.	2.1	76
66	Dynamic network participation of functional connectivity hubs assessed by resting-state fMRI. <i>Frontiers in Human Neuroscience</i> , 2014, 8, 195.	1.0	67
67	A dynamic causal model for evoked and induced responses. <i>NeuroImage</i> , 2012, 59, 340-348.	2.1	56
68	Visuomotor control within a distributed parieto-frontal network. <i>Experimental Brain Research</i> , 2002, 146, 273-281.	0.7	54
69	Structural and functional cortical abnormalities after upper limb amputation during childhood. <i>NeuroReport</i> , 2001, 12, 957-962.	0.6	50
70	Nonlinear Coupling in the Human Motor System. <i>Journal of Neuroscience</i> , 2010, 30, 8393-8399.	1.7	50
71	A dynamic causal model study of neuronal population dynamics. <i>NeuroImage</i> , 2010, 51, 91-101.	2.1	48
72	Altered Medial Frontal Feedback Learning Signals in Anorexia Nervosa. <i>Biological Psychiatry</i> , 2018, 83, 235-243.	0.7	46

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73	From Birdsong to Human Speech Recognition: Bayesian Inference on a Hierarchy of Nonlinear Dynamical Systems. <i>PLoS Computational Biology</i> , 2013, 9, e1003219.	1.5	43
74	Observing the Observer (II): Deciding When to Decide. <i>PLoS ONE</i> , 2010, 5, e15555.	1.1	43
75	Free Energy and Dendritic Self-Organization. <i>Frontiers in Systems Neuroscience</i> , 2011, 5, 80.	1.2	42
76	Early auditory sensory processing of voices is facilitated by visual mechanisms. <i>NeuroImage</i> , 2013, 77, 237-245.	2.1	41
77	Inferring Neuronal Dynamics from Calcium Imaging Data Using Biophysical Models and Bayesian Inference. <i>PLoS Computational Biology</i> , 2016, 12, e1004736.	1.5	41
78	The MR detection of neuronal depolarization during 3-Hz spike-and-wave complexes in generalized epilepsy. <i>Magnetic Resonance Imaging</i> , 2004, 22, 1441-1444.	1.0	40
79	A Metropolis-Hastings algorithm for dynamic causal models. <i>NeuroImage</i> , 2007, 38, 478-487.	2.1	40
80	Voice Identity Recognition: Functional Division of the Right STS and Its Behavioral Relevance. <i>Journal of Cognitive Neuroscience</i> , 2015, 27, 280-291.	1.1	39
81	Somatostatin Interneurons Promote Neuronal Synchrony in the Neonatal Hippocampus. <i>Cell Reports</i> , 2019, 26, 3173-3182.e5.	2.9	39
82	A Hierarchical Neuronal Model for Generation and Online Recognition of Birdsongs. <i>PLoS Computational Biology</i> , 2011, 7, e1002303.	1.5	36
83	Modulation of Perception and Brain Activity by Predictable Trajectories of Facial Expressions. <i>Cerebral Cortex</i> , 2010, 20, 694-703.	1.6	33
84	A Bayesian Attractor Model for Perceptual Decision Making. <i>PLoS Computational Biology</i> , 2015, 11, e1004442.	1.5	32
85	How the human brain exchanges information across sensory modalities to recognize other people. <i>Human Brain Mapping</i> , 2015, 36, 324-339.	1.9	31
86	A heuristic for the degrees of freedom of statistics based on multiple variance parameters. <i>NeuroImage</i> , 2003, 20, 591-600.	2.1	28
87	Visual face-movement sensitive cortex is relevant for auditory-only speech recognition. <i>Cortex</i> , 2015, 68, 86-99.	1.1	28
88	The General Linear Model. , 2007, , 101-125.		26
89	Dynamical causal modelling for M/EEG: Spatial and temporal symmetry constraints. <i>NeuroImage</i> , 2009, 44, 154-163.	2.1	26
90	Modulation of tonotopic ventral medial geniculate body is behaviorally relevant for speech recognition. <i>ELife</i> , 2019, 8, .	2.8	25

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91	An empirical evaluation of active inference in multi-armed bandits. <i>Neural Networks</i> , 2021, 144, 229-246.	3.3	21
92	A Bayesian Reformulation of the Extended Drift-Diffusion Model in Perceptual Decision Making. <i>Frontiers in Computational Neuroscience</i> , 2017, 11, 29.	1.2	20
93	Active Inference, Belief Propagation, and the Bethe Approximation. <i>Neural Computation</i> , 2018, 30, 2530-2567.	1.3	20
94	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, 11765-11770.	3.3	19
95	Spatiotemporal Dynamics of Argument Retrieval and Reordering: An fMRI and EEG Study on Sentence Processing. <i>Frontiers in Psychology</i> , 2012, 3, 523.	1.1	19
96	Anatomically informed basis functions in multisubject studies. <i>Human Brain Mapping</i> , 2002, 16, 36-46.	1.9	18
97	Recognizing recurrent neural networks (rRNN): Bayesian inference for recurrent neural networks. <i>Biological Cybernetics</i> , 2012, 106, 201-217.	0.6	17
98	Developmental Emergence of Sparse Coding: A Dynamic Systems Approach. <i>Scientific Reports</i> , 2017, 7, 13015.	1.6	17
99	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, .	3.3	16
100	Investigating Neuroanatomical Features in Top Athletes at the Single Subject Level. <i>PLoS ONE</i> , 2015, 10, e0129508.	1.1	15
101	Spatiotemporal dynamics of random stimuli account for trial-to-trial variability in perceptual decision making. <i>Scientific Reports</i> , 2016, 6, 18832.	1.6	14
102	Ultra-fast accurate reconstruction of spiking activity from calcium imaging data. <i>Journal of Neurophysiology</i> , 2018, 119, 1863-1878.	0.9	14
103	Abstract rules drive adaptation in the subcortical sensory pathway. <i>ELife</i> , 2020, 9, .	2.8	14
104	Balancing control: A Bayesian interpretation of habitual and goal-directed behavior. <i>Journal of Mathematical Psychology</i> , 2021, 100, 102472.	1.0	12
105	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. <i>PLoS ONE</i> , 2020, 15, e0239817.	1.1	12
106	Predicting change: Approximate inference under explicit representation of temporal structure in changing environments. <i>PLoS Computational Biology</i> , 2019, 15, e1006707.	1.5	11
107	Modeling the Evolution of Beliefs Using an Attentional Focus Mechanism. <i>PLoS Computational Biology</i> , 2015, 11, e1004558.	1.5	10
108	ATTRACTORS IN SONG. <i>New Mathematics and Natural Computation</i> , 2009, 05, 83-114.	0.4	9

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109	Comparative Analysis of Behavioral Models for Adaptive Learning in Changing Environments. <i>Frontiers in Computational Neuroscience</i> , 2016, 10, 33.	1.2	9
110	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.	1.0	9
111	Variational Bayes. , 2007, , 303-312.		7
112	Representation of Perceptual Evidence in the Human Brain Assessed by Fast, Within-Trial Dynamic Stimuli. <i>Frontiers in Human Neuroscience</i> , 2020, 14, 9.	1.0	7
113	Hierarchical models for EEG and MEG. , 2007, , 211-220.		6
114	Context-Dependent Risk Aversion: A Model-Based Approach. <i>Frontiers in Psychology</i> , 2018, 9, 2053.	1.1	5
115	Dispositional individual differences in cognitive effort investment: establishing the core construct. <i>BMC Psychology</i> , 2021, 9, 10.	0.9	5
116	Modelling Odor Decoding in the Antennal Lobe by Combining Sequential Firing Rate Models with Bayesian Inference. <i>PLoS Computational Biology</i> , 2015, 11, e1004528.	1.5	5
117	Dynamic integration of forward planning and heuristic preferences during multiple goal pursuit. <i>PLoS Computational Biology</i> , 2020, 16, e1007685.	1.5	4
118	Neuronal Sequence Models for Bayesian Online Inference. <i>Frontiers in Artificial Intelligence</i> , 2021, 4, 530937.	2.0	4
119	Dynamic causal models for EEG. , 2007, , 561-576.		3
120	Human-inspired models for tactile computing. , 2021, , 169-195.		2
121	Predictive Coding: A Free-Energy Formulation. , 2011, , 231-246.		2
122	Parametric procedures. , 2007, , 223-231.		1
123	<title>Statistical analysis of structural changes in a whole brain based on nonlinear image registration</title>. , 1999, , .		0
124	Early auditory sensory processing is facilitated by visual mechanisms. <i>Seeing and Perceiving</i> , 2012, 25, 184-185.	0.4	0
125	Learning speech recognition from songbirds. <i>BMC Neuroscience</i> , 2013, 14, .	0.8	0
126	Modeling Dynamic Allocation of Effort in a Sequential Task Using Discounting Models. <i>Frontiers in Neuroscience</i> , 2020, 14, 242.	1.4	0

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127	3.8 Analyzing Effective Connectivity with EEG and MEG. , 2010, , 235-250.		0
128	Methodik und Applikation der deformationsbasierten Morphometrie. Informatik Aktuell, 1999, , 392-396.	0.4	0
129	Stochastic Motion Stimuli Influence Perceptual Choices in Human Participants. Frontiers in Neuroscience, 2021, 15, 749728.	1.4	0
130	Forward planning driven by context-dependant conflict processing in anterior cingulate cortex. NeuroImage, 2022, 256, 119222.	2.1	0
131	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
132	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
133	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
134	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
135	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
136	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0