Stefan J Kiebel

List of Publications by Year
in descending order

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136	15,698	15495 65	20343 116
papers	citations	h-index	g-index

155	155	155	12344
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Predictive coding under the free-energy principle. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 1211-1221.	1.8	1,045
2	Action and behavior: a free-energy formulation. Biological Cybernetics, 2010, 102, 227-260.	0.6	686
3	Classical and Bayesian Inference in Neuroimaging: Applications. NeuroImage, 2002, 16, 484-512.	2.1	658
4	Dynamic causal modeling of evoked responses in EEG and MEG. NeuroImage, 2006, 30, 1255-1272.	2.1	563
5	A Hierarchy of Time-Scales and the Brain. PLoS Computational Biology, 2008, 4, e1000209.	1.5	557
6	Multiple sparse priors for the M/EEG inverse problem. NeuroImage, 2008, 39, 1104-1120.	2.1	548
7	Classical and Bayesian Inference in Neuroimaging: Theory. NeuroImage, 2002, 16, 465-483.	2.1	537
8	EEG and MEG Data Analysis in SPM8. Computational Intelligence and Neuroscience, 2011, 2011, 1-32.	1.1	500
9	Training-induced brain plasticity in aphasia. Brain, 1999, 122, 1781-1790.	3.7	418
10	The functional anatomy of the MMN: A DCM study of the roving paradigm. NeuroImage, 2008, 42, 936-944.	2.1	392
11	Brain Responses to the Acquired Moral Status of Faces. Neuron, 2004, 41, 653-662.	3.8	365
12	Re-visiting the echo state property. Neural Networks, 2012, 35, 1-9.	3.3	350
13	Brain Representation of Active and Passive Movements. NeuroImage, 1996, 4, 105-110.	2.1	334
14	Reinforcement Learning or Active Inference?. PLoS ONE, 2009, 4, e6421.	1.1	281
15	Evoked brain responses are generated by feedback loops. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20961-20966.	3.3	241
16	Detecting Structural Changes in Whole Brain Based on Nonlinear Deformationsâ€"Application to Schizophrenia Research. NeuroImage, 1999, 10, 107-113.	2.1	229
17	A Blueprint for Movement: Functional and Anatomical Representations in the Human Motor System. Journal of Neuroscience, 1999, 19, 8043-8048.	1.7	217
18	Robust Smoothness Estimation in Statistical Parametric Maps Using Standardized Residuals from the General Linear Model. NeuroImage, 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. NeuroImage, 2006, 30, 1273-1284.	2.1	209
20	Dynamic causal modelling of evoked potentials: A reproducibility study. NeuroImage, 2007, 36, 571-580.	2.1	205
21	Dynamic causal models of neural system dynamics: current state and future extensions. Journal of Biosciences, 2007, 32, 129-144.	0.5	201
22	Mixed-effects and fMRI studies. NeuroImage, 2005, 24, 244-252.	2.1	200
23	Variational Bayesian inference for fMRI time series. NeuroImage, 2003, 19, 727-741.	2.1	192
24	Repetition suppression and plasticity in the human brain. NeuroImage, 2009, 48, 269-279.	2.1	192
25	Dynamic causal modeling for EEG and MEG. Human Brain Mapping, 2009, 30, 1866-1876.	1.9	186
26	A neural mass model of spectral responses in electrophysiology. NeuroImage, 2007, 37, 706-720.	2.1	185
27	How Humans Integrate the Prospects of Pain and Reward during Choice. Journal of Neuroscience, 2009, 29, 14617-14626.	1.7	184
28	Dynamic causal modelling for EEG and MEG. Cognitive Neurodynamics, 2008, 2, 121-136.	2.3	183
29	Cortical circuits for perceptual inference. Neural Networks, 2009, 22, 1093-1104.	3.3	177
30	Dynamic causal modelling for fMRI: A two-state model. NeuroImage, 2008, 39, 269-278.	2.1	174
31	Dynamic Causal Modeling of the Response to Frequency Deviants. Journal of Neurophysiology, 2009, 101, 2620-2631.	0.9	173
32	Variational Bayesian identification and prediction of stochastic nonlinear dynamic causal models. Physica D: Nonlinear Phenomena, 2009, 238, 2089-2118.	1.3	165
33	Causal Hierarchy within the Thalamo-Cortical Network in Spike and Wave Discharges. PLoS ONE, 2009, 4, e6475.	1.1	141
34	Cortical reorganization in patients with facial palsy. Annals of Neurology, 1997, 41, 621-630.	2.8	139
35	Addiction Research Consortium: Losing and regaining control over drug intake (ReCoDe)â€"From trajectories to mechanisms and interventions. Addiction Biology, 2020, 25, e12866.	1.4	135
36	Applications of random field theory to electrophysiology. Neuroscience Letters, 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 eventâ€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 Coregistrationâ€"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. NeuroImage, 2008, 39, 728-741.	2.1	94
56	Anatomically Informed Basis Functions. NeuroImage, 2000, 11, 656-667.	2.1	93
57	Dysfunction of the auditory thalamus in developmental dyslexia. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13841-13846.	3.3	90
58	Neuronal message passing using Mean-field, Bethe, and Marginal approximations. Scientific Reports, 2019, 9, 1889.	1.6	88
59	Event-related brain dynamics. Trends in Neurosciences, 2002, 25, 387-389.	4.2	86
60	How the Human Brain Recognizes Speech in the Context of Changing Speakers. Journal of Neuroscience, 2010, 30, 629-638.	1.7	86
61	Perception and hierarchical dynamics. Frontiers in Neuroinformatics, 2009, 3, 20.	1.3	85
62	Dynamic causal modeling: A generative model of slice timing in fMRI. NeuroImage, 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. Journal of Biomedical Optics, 2007, 12, 064010.	1.4	80
64	Statistical parametric mapping for event-related potentials (II): a hierarchical temporal model. NeuroImage, 2004, 22, 503-520.	2.1	78
65	Population dynamics under the Laplace assumption. NeuroImage, 2009, 44, 701-714.	2.1	76
66	Dynamic network participation of functional connectivity hubs assessed by resting-state fMRI. Frontiers in Human Neuroscience, 2014, 8, 195.	1.0	67
67	A dynamic causal model for evoked and induced responses. NeuroImage, 2012, 59, 340-348.	2.1	56
68	Visuomotor control within a distributed parieto-frontal network. Experimental Brain Research, 2002, 146, 273-281.	0.7	54
69	Structural and functional cortical abnormalities after upper limb amputation during childhood. NeuroReport, 2001, 12, 957-962.	0.6	50
70	Nonlinear Coupling in the Human Motor System. Journal of Neuroscience, 2010, 30, 8393-8399.	1.7	50
71	A dynamic causal model study of neuronal population dynamics. NeuroImage, 2010, 51, 91-101.	2.1	48
72	Altered Medial Frontal Feedback Learning Signals in Anorexia Nervosa. Biological Psychiatry, 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. PLoS Computational Biology, 2013, 9, e1003219.	1.5	43
74	Observing the Observer (II): Deciding When to Decide. PLoS ONE, 2010, 5, e15555.	1.1	43
75	Free Energy and Dendritic Self-Organization. Frontiers in Systems Neuroscience, 2011, 5, 80.	1.2	42
76	Early auditory sensory processing of voices is facilitated by visual mechanisms. NeuroImage, 2013, 77, 237-245.	2.1	41
77	Inferring Neuronal Dynamics from Calcium Imaging Data Using Biophysical Models and Bayesian Inference. PLoS Computational Biology, 2016, 12, e1004736.	1.5	41
78	The MR detection of neuronal depolarization during 3-Hz spike-and-wave complexes in generalized epilepsy. Magnetic Resonance Imaging, 2004, 22, 1441-1444.	1.0	40
79	A Metropolisâ€“Hastings algorithm for dynamic causal models. NeuroImage, 2007, 38, 478-487.	2.1	40
80	Voice Identity Recognition: Functional Division of the Right STS and Its Behavioral Relevance. Journal of Cognitive Neuroscience, 2015, 27, 280-291.	1.1	39
81	Somatostatin Interneurons Promote Neuronal Synchrony in the Neonatal Hippocampus. Cell Reports, 2019, 26, 3173-3182.e5.	2.9	39
82	A Hierarchical Neuronal Model for Generation and Online Recognition of Birdsongs. PLoS Computational Biology, 2011, 7, e1002303.	1.5	36
83	Modulation of Perception and Brain Activity by Predictable Trajectories of Facial Expressions. Cerebral Cortex, 2010, 20, 694-703.	1.6	33
84	A Bayesian Attractor Model for Perceptual Decision Making. PLoS Computational Biology, 2015, 11, e1004442.	1.5	32
85	How the human brain exchanges information across sensory modalities to recognize other people. Human Brain Mapping, 2015, 36, 324-339.	1.9	31
86	A heuristic for the degrees of freedom of statistics based on multiple variance parameters. NeuroImage, 2003, 20, 591-600.	2.1	28
87	Visual face-movement sensitive cortex is relevant for auditory-only speech recognition. Cortex, 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. NeuroImage, 2009, 44, 154-163.	2.1	26
90	Modulation of tonotopic ventral medial geniculate body is behaviorally relevant for speech recognition. ELife, 2019, 8, .	2.8	25

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91	An empirical evaluation of active inference in multi-armed bandits. Neural Networks, 2021, 144, 229-246.	3.3	21
92	A Bayesian Reformulation of the Extended Drift-Diffusion Model in Perceptual Decision Making. Frontiers in Computational Neuroscience, 2017, 11, 29.	1.2	20
93	Active Inference, Belief Propagation, and the Bethe Approximation. Neural Computation, 2018, 30, 2530-2567.	1.3	20
94	Changing meaning causes coupling changes within higher levels of the cortical hierarchy. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11765-11770.	3.3	19
95	Spatiotemporal Dynamics of Argument Retrieval and Reordering: An fMRI and EEG Study on Sentence Processing. Frontiers in Psychology, 2012, 3, 523.	1.1	19
96	Anatomically informed basis functions in multisubject studies. Human Brain Mapping, 2002, 16, 36-46.	1.9	18
97	Recognizing recurrent neural networks (rRNN): Bayesian inference for recurrent neural networks. Biological Cybernetics, 2012, 106, 201-217.	0.6	17
98	Developmental Emergence of Sparse Coding: A Dynamic Systems Approach. Scientific Reports, 2017, 7, 13015.	1.6	17
99	A limited role of NKCC1 in telencephalic glutamatergic neurons for developing hippocampal network dynamics and behavior. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	16
100	Investigating Neuroanatomical Features in Top Athletes at the Single Subject Level. PLoS ONE, 2015, 10, e0129508.	1.1	15
101	Spatiotemporal dynamics of random stimuli account for trial-to-trial variability in perceptual decision making. Scientific Reports, 2016, 6, 18832.	1.6	14
102	Ultra-fast accurate reconstruction of spiking activity from calcium imaging data. Journal of Neurophysiology, 2018, 119, 1863-1878.	0.9	14
103	Abstract rules drive adaptation in the subcortical sensory pathway. ELife, 2020, 9, .	2.8	14
104	Balancing control: A Bayesian interpretation of habitual and goal-directed behavior. Journal of Mathematical Psychology, 2021, 100, 102472.	1.0	12
105	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. PLoS ONE, 2020, 15, e0239817.	1.1	12
106	Predicting change: Approximate inference under explicit representation of temporal structure in changing environments. PLoS Computational Biology, 2019, 15, e1006707.	1.5	11
107	Modeling the Evolution of Beliefs Using an Attentional Focus Mechanism. PLoS Computational Biology, 2015, 11, e1004558.	1.5	10
108	ATTRACTORS IN SONG. New Mathematics and Natural Computation, 2009, 05, 83-114.	0.4	9

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109	Comparative Analysis of Behavioral Models for Adaptive Learning in Changing Environments. Frontiers in Computational Neuroscience, 2016, 10, 33.	1.2	9
110	Meta-control of the exploration-exploitation dilemma emerges from probabilistic inference over a hierarchy of time scales. Cognitive, Affective and Behavioral Neuroscience, 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. Frontiers in Human Neuroscience, 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. Frontiers in Psychology, 2018, 9, 2053.	1.1	5
115	Dispositional individual differences in cognitive effort investment: establishing the core construct. BMC Psychology, 2021, 9, 10.	0.9	5
116	Modelling Odor Decoding in the Antennal Lobe by Combining Sequential Firing Rate Models with Bayesian Inference. PLoS Computational Biology, 2015, 11, e1004528.	1.5	5
117	Dynamic integration of forward planning and heuristic preferences during multiple goal pursuit. PLoS Computational Biology, 2020, 16, e1007685.	1.5	4
118	Neuronal Sequence Models for Bayesian Online Inference. Frontiers in Artificial Intelligence, 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 visualÂmechanisms. Seeing and Perceiving, 2012, 25, 184-185.	0.4	0
125	Learning speech recognition from songbirds. BMC Neuroscience, 2013, 14, .	0.8	0
126	Modeling Dynamic Allocation of Effort in a Sequential Task Using Discounting Models. Frontiers in Neuroscience, 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