Stefan J Kiebel

List of Publications by Year
in descending order

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	Forward planning driven by context-dependant conflict processing in anterior cingulate cortex. NeuroImage, 2022, 256, 119222.	2.1	0
2	Balancing control: A Bayesian interpretation of habitual and goal-directed behavior. Journal of Mathematical Psychology, 2021, 100, 102472.	1.0	12
3	Dispositional individual differences in cognitive effort investment: establishing the core construct. BMC Psychology, 2021, 9, 10.	0.9	5
4	Human-inspired models for tactile computing. , 2021, , 169-195.		2
5	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
6	Neuronal Sequence Models for Bayesian Online Inference. Frontiers in Artificial Intelligence, 2021, 4, 530937.	2.0	4
7	An empirical evaluation of active inference in multi-armed bandits. Neural Networks, 2021, 144, 229-246.	3.3	21
8	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
9	Stochastic Motion Stimuli Influence Perceptual Choices in Human Participants. Frontiers in Neuroscience, 2021, 15, 749728.	1.4	0
10	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
11	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
12	Dynamic integration of forward planning and heuristic preferences during multiple goal pursuit. PLoS Computational Biology, 2020, 16, e1007685.	1.5	4
13	Modeling Dynamic Allocation of Effort in a Sequential Task Using Discounting Models. Frontiers in Neuroscience, 2020, 14, 242.	1.4	0
14	Abstract rules drive adaptation in the subcortical sensory pathway. ELife, 2020, 9, .	2.8	14
15	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. PLoS ONE, 2020, 15, e0239817.	1.1	12
16	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
17	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
18	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0

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19	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
20	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
21	Dispositional cognitive effort investment and behavioral demand avoidance: Are they related?. , 2020, 15, e0239817.		0
22	Somatostatin Interneurons Promote Neuronal Synchrony in the Neonatal Hippocampus. Cell Reports, 2019, 26, 3173-3182.e5.	2.9	39
23	Neuronal message passing using Mean-field, Bethe, and Marginal approximations. Scientific Reports, 2019, 9, 1889.	1.6	88
24	Predicting change: Approximate inference under explicit representation of temporal structure in changing environments. PLoS Computational Biology, 2019, 15, e1006707.	1.5	11
25	Modulation of tonotopic ventral medial geniculate body is behaviorally relevant for speech recognition. ELife, 2019, 8, .	2.8	25
26	Altered Medial Frontal Feedback Learning Signals in Anorexia Nervosa. Biological Psychiatry, 2018, 83, 235-243.	0.7	46
27	Context-Dependent Risk Aversion: A Model-Based Approach. Frontiers in Psychology, 2018, 9, 2053.	1.1	5
28	Active Inference, Belief Propagation, and the Bethe Approximation. Neural Computation, 2018, 30, 2530-2567.	1.3	20
29	Ultra-fast accurate reconstruction of spiking activity from calcium imaging data. Journal of Neurophysiology, 2018, 119, 1863-1878.	0.9	14
30	Developmental Emergence of Sparse Coding: A Dynamic Systems Approach. Scientific Reports, 2017, 7, 13015.	1.6	17
31	A Bayesian Reformulation of the Extended Drift-Diffusion Model in Perceptual Decision Making. Frontiers in Computational Neuroscience, 2017, 11, 29.	1.2	20
32	Comparative Analysis of Behavioral Models for Adaptive Learning in Changing Environments. Frontiers in Computational Neuroscience, 2016, 10, 33.	1.2	9
33	Spatiotemporal dynamics of random stimuli account for trial-to-trial variability in perceptual decision making. Scientific Reports, 2016, 6, 18832.	1.6	14
34	Inferring Neuronal Dynamics from Calcium Imaging Data Using Biophysical Models and Bayesian Inference. PLoS Computational Biology, 2016, 12, e1004736.	1.5	41
35	A Bayesian Attractor Model for Perceptual Decision Making. PLoS Computational Biology, 2015, 11, e1004442.	1.5	32
36	Investigating Neuroanatomical Features in Top Athletes at the Single Subject Level. PLoS ONE, 2015, 10, e0129508.	1.1	15

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37	Voice Identity Recognition: Functional Division of the Right STS and Its Behavioral Relevance. Journal of Cognitive Neuroscience, 2015, 27, 280-291.	1.1	39
38	Visual face-movement sensitive cortex is relevant for auditory-only speech recognition. Cortex, 2015, 68, 86-99.	1.1	28
39	How the human brain exchanges information across sensory modalities to recognize other people. Human Brain Mapping, 2015, 36, 324-339.	1.9	31
40	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
41	Modeling the Evolution of Beliefs Using an Attentional Focus Mechanism. PLoS Computational Biology, 2015, 11, e1004558.	1.5	10
42	Dynamic network participation of functional connectivity hubs assessed by resting-state fMRI. Frontiers in Human Neuroscience, 2014, 8, 195.	1.0	67
43	Perceptual decision making: drift-diffusion model is equivalent to a Bayesian model. Frontiers in Human Neuroscience, 2014, 8, 102.	1.0	117
44	Learning speech recognition from songbirds. BMC Neuroscience, 2013, 14, .	0.8	0
45	Early auditory sensory processing of voices is facilitated by visual mechanisms. NeuroImage, 2013, 77, 237-245.	2.1	41
46	From Birdsong to Human Speech Recognition: Bayesian Inference on a Hierarchy of Nonlinear Dynamical Systems. PLoS Computational Biology, 2013, 9, e1003219.	1.5	43
47	Spatiotemporal Dynamics of Argument Retrieval and Reordering: An fMRI and EEG Study on Sentence Processing. Frontiers in Psychology, 2012, 3, 523.	1.1	19
48	Early auditory sensory processing is facilitated by visualÂmechanisms. Seeing and Perceiving, 2012, 25, 184-185.	0.4	0
49	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
50	Re-visiting the echo state property. Neural Networks, 2012, 35, 1-9.	3.3	350
51	A dynamic causal model for evoked and induced responses. NeuroImage, 2012, 59, 340-348.	2.1	56
52	Evidence for neural encoding of Bayesian surprise in human somatosensation. NeuroImage, 2012, 62, 177-188.	2.1	106
53	Recognizing recurrent neural networks (rRNN): Bayesian inference for recurrent neural networks. Biological Cybernetics, 2012, 106, 201-217.	0.6	17
54	Free Energy and Dendritic Self-Organization. Frontiers in Systems Neuroscience, 2011, 5, 80.	1.2	42

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55	EEG and MEG Data Analysis in SPM8. Computational Intelligence and Neuroscience, 2011, 2011, 1-32.	1.1	500
56	A Hierarchical Neuronal Model for Generation and Online Recognition of Birdsongs. PLoS Computational Biology, 2011, 7, e1002303.	1.5	36
57	Predictive Coding: A Free-Energy Formulation. , 2011, , 231-246.		2
58	Amygdala damage affects eventâ€related potentials for fearful faces at specific time windows. Human Brain Mapping, 2010, 31, 1089-1105.	1.9	118
59	Action and behavior: a free-energy formulation. Biological Cybernetics, 2010, 102, 227-260.	0.6	686
60	Observing the Observer (I): Meta-Bayesian Models of Learning and Decision-Making. PLoS ONE, 2010, 5, e15554.	1.1	130
61	Nonlinear Coupling in the Human Motor System. Journal of Neuroscience, 2010, 30, 8393-8399.	1.7	50
62	How the Human Brain Recognizes Speech in the Context of Changing Speakers. Journal of Neuroscience, 2010, 30, 629-638.	1.7	86
63	Modulation of Perception and Brain Activity by Predictable Trajectories of Facial Expressions. Cerebral Cortex, 2010, 20, 694-703.	1.6	33
64	A dynamic causal model study of neuronal population dynamics. NeuroImage, 2010, 51, 91-101.	2.1	48
65	Bifurcation analysis of neural mass models: Impact of extrinsic inputs and dendritic time constants. NeuroImage, 2010, 52, 1041-1058.	2.1	125
66	Observing the Observer (II): Deciding When to Decide. PLoS ONE, 2010, 5, e15555.	1.1	43
67	3.8 Analyzing Effective Connectivity with EEG and MEG. , 2010, , 235-250.		0
68	Reinforcement Learning or Active Inference?. PLoS ONE, 2009, 4, e6421.	1.1	281
69	Causal Hierarchy within the Thalamo-Cortical Network in Spike and Wave Discharges. PLoS ONE, 2009, 4, e6475.	1.1	141
70	Perception and hierarchical dynamics. Frontiers in Neuroinformatics, 2009, 3, 20.	1.3	85
71	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
72	How Humans Integrate the Prospects of Pain and Reward during Choice. Journal of Neuroscience, 2009, 29, 14617-14626.	1.7	184

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73	Predictive coding under the free-energy principle. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 1211-1221.	1.8	1,045
74	Recognizing Sequences of Sequences. PLoS Computational Biology, 2009, 5, e1000464.	1.5	105
75	ATTRACTORS IN SONG. New Mathematics and Natural Computation, 2009, 05, 83-114.	0.4	9
76	Dynamic causal modeling for EEG and MEG. Human Brain Mapping, 2009, 30, 1866-1876.	1.9	186
77	Cortical circuits for perceptual inference. Neural Networks, 2009, 22, 1093-1104.	3.3	177
78	Variational Bayesian identification and prediction of stochastic nonlinear dynamic causal models. Physica D: Nonlinear Phenomena, 2009, 238, 2089-2118.	1.3	165
79	Dynamical causal modelling for M/EEG: Spatial and temporal symmetry constraints. NeuroImage, 2009, 44, 154-163.	2.1	26
80	Population dynamics under the Laplace assumption. NeuroImage, 2009, 44, 701-714.	2.1	76
81	Dynamic causal modelling of distributed electromagnetic responses. NeuroImage, 2009, 47, 590-601.	2.1	95
82	Repetition suppression and plasticity in the human brain. NeuroImage, 2009, 48, 269-279.	2.1	192
83	Dynamic Causal Modeling of the Response to Frequency Deviants. Journal of Neurophysiology, 2009, 101, 2620-2631.	0.9	173
84	Dynamic causal modelling for EEG and MEG. Cognitive Neurodynamics, 2008, 2, 121-136.	2.3	183
85	Dynamic causal modelling for fMRI: A two-state model. NeuroImage, 2008, 39, 269-278.	2.1	174
86	Variational Bayesian inversion of the equivalent current dipole model in EEG/MEG. NeuroImage, 2008, 39, 728-741.	2.1	94
87	Multiple sparse priors for the M/EEG inverse problem. NeuroImage, 2008, 39, 1104-1120.	2.1	548
88	Bayesian estimation of synaptic physiology from the spectral responses of neural masses. NeuroImage, 2008, 42, 272-284.	2.1	122
89	Dynamic causal modelling of induced responses. NeuroImage, 2008, 41, 1293-1312.	2.1	120
90	Population dynamics: Variance and the sigmoid activation function. NeuroImage, 2008, 42, 147-157.	2.1	130

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91	The functional anatomy of the MMN: A DCM study of the roving paradigm. NeuroImage, 2008, 42, 936-944.	2.1	392
92	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
93	A Hierarchy of Time-Scales and the Brain. PLoS Computational Biology, 2008, 4, e1000209.	1.5	557
94	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
95	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
96	Variational Bayes. , 2007, , 303-312.		7
97	Dynamic causal modeling: A generative model of slice timing in fMRI. NeuroImage, 2007, 34, 1487-1496.	2.1	84
98	Dynamic causal modelling of evoked responses: The role of intrinsic connections. NeuroImage, 2007, 36, 332-345.	2.1	120
99	Dynamic causal modelling of evoked potentials: A reproducibility study. NeuroImage, 2007, 36, 571-580.	2.1	205
100	A neural mass model of spectral responses in electrophysiology. NeuroImage, 2007, 37, 706-720.	2.1	185
101	A Metropolis–Hastings algorithm for dynamic causal models. NeuroImage, 2007, 38, 478-487.	2.1	40
102	Hierarchical models for EEG and MEG. , 2007, , 211-220.		6
103	Parametric procedures. , 2007, , 223-231.		1
104	The General Linear Model. , 2007, , 101-125.		26
105	Dynamic causal models of neural system dynamics: current state and future extensions. Journal of Biosciences, 2007, 32, 129-144.	0.5	201
106	Dynamic causal models for EEG. , 2007, , 561-576.		3
107	Dynamic causal modeling of evoked responses in EEG and MEG. NeuroImage, 2006, 30, 1255-1272.	2.1	563
108	Dynamic causal modelling of evoked responses in EEG/MEG with lead field parameterization. NeuroImage, 2006, 30, 1273-1284.	2.1	209

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109	Bayesian estimation of cerebral perfusion using a physiological model of microvasculature. NeuroImage, 2006, 33, 570-579.	2.1	111
110	Parametric analysis of oscillatory activity as measured with EEG/MEG. Human Brain Mapping, 2005, 26, 170-177.	1.9	128
111	Mixed-effects and fMRI studies. NeuroImage, 2005, 24, 244-252.	2.1	200
112	Applications of random field theory to electrophysiology. Neuroscience Letters, 2005, 374, 174-178.	1.0	134
113	Action selectivity in parietal and temporal cortex. Cognitive Brain Research, 2005, 25, 641-649.	3.3	98
114	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
115	Brain Responses to the Acquired Moral Status of Faces. Neuron, 2004, 41, 653-662.	3.8	365
116	Statistical parametric mapping for event-related potentials: I. Generic considerations. NeuroImage, 2004, 22, 492-502.	2.1	105
117	Statistical parametric mapping for event-related potentials (II): a hierarchical temporal model. NeuroImage, 2004, 22, 503-520.	2.1	78
118	Variational Bayesian inference for fMRI time series. NeuroImage, 2003, 19, 727-741.	2.1	192
119	A heuristic for the degrees of freedom of statistics based on multiple variance parameters. NeuroImage, 2003, 20, 591-600.	2.1	28
120	Classical and Bayesian Inference in Neuroimaging: Theory. NeuroImage, 2002, 16, 465-483.	2.1	537
121	Classical and Bayesian Inference in Neuroimaging: Applications. NeuroImage, 2002, 16, 484-512.	2.1	658
122	Event-related brain dynamics. Trends in Neurosciences, 2002, 25, 387-389.	4.2	86
123	Anatomically informed basis functions in multisubject studies. Human Brain Mapping, 2002, 16, 36-46.	1.9	18
124	Visuomotor control within a distributed parieto-frontal network. Experimental Brain Research, 2002, 146, 273-281.	0.7	54
125	Structural and functional cortical abnormalities after upper limb amputation during childhood. NeuroReport, 2001, 12, 957-962.	0.6	50
126	Anatomically Informed Basis Functions. NeuroImage, 2000, 11, 656-667.	2.1	93

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127	Detecting Structural Changes in Whole Brain Based on Nonlinear Deformations—Application to Schizophrenia Research. NeuroImage, 1999, 10, 107-113.	2.1	229
128	Robust Smoothness Estimation in Statistical Parametric Maps Using Standardized Residuals from the General Linear Model. NeuroImage, 1999, 10, 756-766.	2.1	216
129	Training-induced brain plasticity in aphasia. Brain, 1999, 122, 1781-1790.	3.7	418
130	A Blueprint for Movement: Functional and Anatomical Representations in the Human Motor System. Journal of Neuroscience, 1999, 19, 8043-8048.	1.7	217
131	<title>Statistical analysis of structural changes in a whole brain based on nonlinear image registration</title>. , 1999, , .		0
132	Multiple somatotopic representations in the human cerebellum. NeuroReport, 1999, 10, 3653-3658.	0.6	109
133	Methodik und Applikation der deformationsbasierten Morphometrie. Informatik Aktuell, 1999, , 392-396.	0.4	0
134	MRI and PET Coregistration—A Cross Validation of Statistical Parametric Mapping and Automated Image Registration. NeuroImage, 1997, 5, 271-279.	2.1	115
135	Cortical reorganization in patients with facial palsy. Annals of Neurology, 1997, 41, 621-630.	2.8	139
136	Brain Representation of Active and Passive Movements. NeuroImage, 1996, 4, 105-110.	2.1	334