

# Christoph D Mathys

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

62 papers	3,691 citations	28 h-index	60 g-index
79 ext. papers	4,895 ext. citations	6.3 avg, IF	5.91 L-index

#	Paper	IF	Citations
62	Active inference and epistemic value. <i>Cognitive Neuroscience</i> , <b>2015</b> , 6, 187-214	1.7	350
61	Pavlovian conditioning-induced hallucinations result from overweighting of perceptual priors. <i>Science</i> , <b>2017</b> , 357, 596-600	33.3	333
60	A bayesian foundation for individual learning under uncertainty. <i>Frontiers in Human Neuroscience</i> , <b>2011</b> , 5, 39	3.3	311
59	Hierarchical prediction errors in midbrain and basal forebrain during sensory learning. <i>Neuron</i> , <b>2013</b> , 80, 519-30	13.9	200
58	Adults with autism overestimate the volatility of the sensory environment. <i>Nature Neuroscience</i> , <b>2017</b> , 20, 1293-1299	25.5	186
57	Allostatic Self-efficacy: A Metacognitive Theory of Dyshomeostasis-Induced Fatigue and Depression. <i>Frontiers in Human Neuroscience</i> , <b>2016</b> , 10, 550	3.3	169
56	Uncertainty in perception and the Hierarchical Gaussian Filter. <i>Frontiers in Human Neuroscience</i> , <b>2014</b> , 8, 825	3.3	165
55	Computational approaches to psychiatry. <i>Current Opinion in Neurobiology</i> , <b>2014</b> , 25, 85-92	7.6	159
54	Action-perception mismatch in tone-deafness. <i>Current Biology</i> , <b>2008</b> , 18, R331-2	6.3	140
53	Computations of uncertainty mediate acute stress responses in humans. <i>Nature Communications</i> , <b>2016</b> , 7, 10996	17.4	139
52	Spatial attention, precision, and Bayesian inference: a study of saccadic response speed. <i>Cerebral Cortex</i> , <b>2014</b> , 24, 1436-50	5.1	127
51	The Dopaminergic Midbrain Encodes the Expected Certainty about Desired Outcomes. <i>Cerebral Cortex</i> , <b>2015</b> , 25, 3434-45	5.1	114
50	Scene Construction, Visual Foraging, and Active Inference. <i>Frontiers in Computational Neuroscience</i> , <b>2016</b> , 10, 56	3.5	102
49	Inferring on the intentions of others by hierarchical Bayesian learning. <i>PLoS Computational Biology</i> , <b>2014</b> , 10, e1003810	5	97
48	Dynamic causal modelling revisited. <i>NeuroImage</i> , <b>2019</b> , 199, 730-744	7.9	97
47	Role of the medial prefrontal cortex in impaired decision making in juvenile attention-deficit/hyperactivity disorder. <i>JAMA Psychiatry</i> , <b>2014</b> , 71, 1165-73	14.5	88
46	29.1 COMPUTATIONAL MODELING OF PERCEPTION AND BEHAVIOR REVEALS HIDDEN INSIGHTS INTO MECHANISMS OF PSYCHOTIC SYMPTOMS. <i>Schizophrenia Bulletin</i> , <b>2019</b> , 45, S136-S136	1.3	78

45	T64. LINKING SUBCLINICAL PERSECUTORY IDEATION TO INFLEXIBLE SOCIAL INFERENCE UNDER UNCERTAINTY. <i>Schizophrenia Bulletin</i> , <b>2020</b> , 46, S255-S256	1.3	78
44	Cortical Coupling Reflects Bayesian Belief Updating in the Deployment of Spatial Attention. <i>Journal of Neuroscience</i> , <b>2015</b> , 35, 11532-42	6.6	68
43	Optimal inference with suboptimal models: addiction and active Bayesian inference. <i>Medical Hypotheses</i> , <b>2015</b> , 84, 109-17	3.8	60
42	Hierarchical prediction errors in midbrain and septum during social learning. <i>Social Cognitive and Affective Neuroscience</i> , <b>2017</b> , 12, 618-634	4	58
41	Pharmacological Fingerprints of Contextual Uncertainty. <i>PLoS Biology</i> , <b>2016</b> , 14, e1002575	9.7	55
40	Non-invasive brain stimulation applied to Heschl's gyrus modulates pitch discrimination. <i>Frontiers in Psychology</i> , <b>2010</b> , 1, 193	3.4	52
39	Human visual exploration reduces uncertainty about the sensed world. <i>PLoS ONE</i> , <b>2018</b> , 13, e0190429	3.7	50
38	Beliefs about bad people are volatile. <i>Nature Human Behaviour</i> , <b>2018</b> , 2, 750-756	12.8	49
37	Evidence for surprise minimization over value maximization in choice behavior. <i>Scientific Reports</i> , <b>2015</b> , 5, 16575	4.9	40
36	Cholinergic stimulation enhances Bayesian belief updating in the deployment of spatial attention. <i>Journal of Neuroscience</i> , <b>2014</b> , 34, 15735-42	6.6	36
35	Variational Bayesian mixed-effects inference for classification studies. <i>NeuroImage</i> , <b>2013</b> , 76, 345-61	7.9	28
34	Attractor-like Dynamics in Belief Updating in Schizophrenia. <i>Journal of Neuroscience</i> , <b>2018</b> , 38, 9471-9485	5.6	28
33	Paranoia as a deficit in non-social belief updating. <i>ELife</i> , <b>2020</b> , 9,	8.9	18
32	Paranoia and belief updating during the COVID-19 crisis. <i>Nature Human Behaviour</i> , <b>2021</b> , 5, 1190-1202	12.8	16
31	Representational Uncertainty in the Brain During Threat Conditioning and the Link With Psychopathic Traits. <i>Biological Psychiatry: Cognitive Neuroscience and Neuroimaging</i> , <b>2017</b> , 2, 689-695	3.4	15
30	Ketamine Affects Prediction Errors about Statistical Regularities: A Computational Single-Trial Analysis of the Mismatch Negativity. <i>Journal of Neuroscience</i> , <b>2020</b> , 40, 5658-5668	6.6	15
29	Volatility Estimates Increase Choice Switching and Relate to Prefrontal Activity in Schizophrenia. <i>Biological Psychiatry: Cognitive Neuroscience and Neuroimaging</i> , <b>2020</b> , 5, 173-183	3.4	15
28	Atypical processing of uncertainty in individuals at risk for psychosis. <i>NeuroImage: Clinical</i> , <b>2020</b> , 26, 102239	3.3	14

27	A unifying Bayesian account of contextual effects in value-based choice. <i>PLoS Computational Biology</i> , <b>2017</b> , 13, e1005769	5	14
26	Modeling subjective relevance in schizophrenia and its relation to aberrant salience. <i>PLoS Computational Biology</i> , <b>2018</b> , 14, e1006319	5	13
25	Aberrant computational mechanisms of social learning and decision-making in schizophrenia and borderline personality disorder. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1008162	5	13
24	TAPAS: An Open-Source Software Package for Translational Neuromodeling and Computational Psychiatry. <i>Frontiers in Psychiatry</i> , <b>2021</b> , 12, 680811	5	13
23	Subjective estimates of uncertainty during gambling and impulsivity after subthalamic deep brain stimulation for Parkinson's disease. <i>Scientific Reports</i> , <b>2019</b> , 9, 14795	4.9	12
22	Moral dilemmas and trust in leaders during a global health crisis. <i>Nature Human Behaviour</i> , <b>2021</b> , 5, 1074-1088	11	11
21	Variability in Action Selection Relates to Striatal Dopamine 2/3 Receptor Availability in Humans: A PET Neuroimaging Study Using Reinforcement Learning and Active Inference Models. <i>Cerebral Cortex</i> , <b>2020</b> , 30, 3573-3589	5.1	10
20	Hierarchical Bayesian models of social inference for probing persecutory delusional ideation. <i>Journal of Abnormal Psychology</i> , <b>2020</b> , 129, 556-569	7	8
19	Bayesian modelling captures inter-individual differences in social belief computations in the putamen and insula. <i>Cortex</i> , <b>2020</b> , 131, 221-236	3.8	7
18	Computational modeling of perceptual inference: A hierarchical Bayesian approach that allows for individual and contextual differences in weighting of input. <i>International Journal of Psychophysiology</i> , <b>2012</b> , 85, 317-318	2.9	5
17	Ketamine Affects Prediction Errors about Statistical Regularities: A Computational Single-Trial Analysis of the Mismatch Negativity		5
16	Funktionelle und effektive Konnektivität. <i>Klinische Neurophysiologie</i> , <b>2009</b> , 40, 222-232	0.2	4
15	Cholinergic and dopaminergic effects on prediction error and uncertainty responses during sensory associative learning. <i>NeuroImage</i> , <b>2021</b> , 226, 117590	7.9	3
14	A generative framework for the study of delusions. <i>Schizophrenia Research</i> , <b>2021</b> ,	3.6	3
13	How Could We Get Nosology from Computation? <b>2016</b> ,		2
12	Neural arbitration between social and individual learning systems. <i>ELife</i> , <b>2020</b> , 9,	8.9	2
11	Updating beliefs beyond the here-and-now: the counter-factual self in anosognosia for hemiplegia. <i>Brain Communications</i> , <b>2021</b> , 3, fcab098	4.5	2
10	F157. HIERARCHICAL PREDICTION ERRORS DURING AUDITORY MISMATCH UNDER PHARMACOLOGICAL MANIPULATIONS: A COMPUTATIONAL SINGLE-TRIAL EEG ANALYSIS. <i>Schizophrenia Bulletin</i> , <b>2018</b> , 44, S281-S282	1.3	1

9	Hierarchical Gaussian Filtering of Sufficient Statistic Time Series for Active Inference. <i>Communications in Computer and Information Science</i> , <b>2020</b> , 52-58	0.3	1
8	Playing with free energy. <i>Neuropsychanalysis</i> , <b>2020</b> , 22, 81-82	0.8	1
7	Volatility estimates increase choice switching and relate to prefrontal activity in schizophrenia		1
6	F150. OVERESTIMATING ENVIRONMENTAL VOLATILITY INCREASES SWITCHING BEHAVIOR AND IS LINKED TO ACTIVATION OF DORSOLATERAL PREFRONTAL CORTEX IN SCHIZOPHRENIA. <i>Schizophrenia Bulletin</i> , <b>2018</b> , 44, S278-S278	1.3	0
5	Inferring in Circles: Active Inference in Continuous State Space Using Hierarchical Gaussian Filtering of Sufficient Statistics. <i>Communications in Computer and Information Science</i> , <b>2021</b> , 810-818	0.3	
4	Aberrant computational mechanisms of social learning and decision-making in schizophrenia and borderline personality disorder <b>2020</b> , 16, e1008162		
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