

# Jrmie Mattout

## List of Publications by Citations

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73  
papers

4,752  
citations

30  
h-index

68  
g-index

81  
ext. papers

5,586  
ext. citations

4.7  
avg, IF

5.36  
L-index

#	Paper	IF	Citations
73	Variational free energy and the Laplace approximation. <i>NeuroImage</i> , <b>2007</b> , 34, 220-34	7.9	557
72	Dynamic causal modeling of evoked responses in EEG and MEG. <i>NeuroImage</i> , <b>2006</b> , 30, 1255-72	7.9	456
71	Multiple sparse priors for the M/EEG inverse problem. <i>NeuroImage</i> , <b>2008</b> , 39, 1104-20	7.9	451
70	Action understanding and active inference. <i>Biological Cybernetics</i> , <b>2011</b> , 104, 137-60	2.8	427
69	EEG and MEG data analysis in SPM8. <i>Computational Intelligence and Neuroscience</i> , <b>2011</b> , 2011, 852961	3	398
68	Automatic analysis of single-channel sleep EEG: validation in healthy individuals. <i>Sleep</i> , <b>2007</b> , 30, 1587-95	1.1	177
67	Hemodynamic correlates of EEG: a heuristic. <i>NeuroImage</i> , <b>2005</b> , 28, 280-6	7.9	170
66	Impaired pitch perception and memory in congenital amusia: the deficit starts in the auditory cortex. <i>Brain</i> , <b>2013</b> , 136, 1639-61	11.2	163
65	An empirical Bayesian solution to the source reconstruction problem in EEG. <i>NeuroImage</i> , <b>2005</b> , 24, 997-1011	7.9	158
64	MEG source localization under multiple constraints: an extended Bayesian framework. <i>NeuroImage</i> , <b>2006</b> , 30, 753-67	7.9	155
63	Symmetrical event-related EEG/fMRI information fusion in a variational Bayesian framework. <i>NeuroImage</i> , <b>2007</b> , 36, 69-87	7.9	143
62	Canonical source reconstruction for MEG. <i>Computational Intelligence and Neuroscience</i> , <b>2007</b> , 2007, 67613	3	105
61	Hearing faces: how the infant brain matches the face it sees with the speech it hears. <i>Journal of Cognitive Neuroscience</i> , <b>2009</b> , 21, 905-21	3.1	102
60	Disentangling motor execution from motor imagery with the phantom limb. <i>Brain</i> , <b>2012</b> , 135, 582-95	11.2	88
59	A parametric empirical Bayesian framework for fMRI-constrained MEG/EEG source reconstruction. <i>Human Brain Mapping</i> , <b>2010</b> , 31, 1512-31	5.9	83
58	Selecting forward models for MEG source-reconstruction using model-evidence. <i>NeuroImage</i> , <b>2009</b> , 46, 168-76	7.9	82
57	Bayesian estimation of evoked and induced responses. <i>Human Brain Mapping</i> , <b>2006</b> , 27, 722-35	5.9	76

56	A robust sensor-selection method for P300 brain-computer interfaces. <i>Journal of Neural Engineering</i> , <b>2011</b> , 8, 016001	5	74
55	Bayesian spatio-temporal approach for EEG source reconstruction: conciliating ECD and distributed models. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2006</b> , 53, 503-16	5	57
54	Inferring hand movement kinematics from MEG, EEG and intracranial EEG: From brain-machine interfaces to motor rehabilitation. <i>Irbm</i> , <b>2011</b> , 32, 8-18	4.8	51
53	Population-level inferences for distributed MEG source localization under multiple constraints: application to face-evoked fields. <i>NeuroImage</i> , <b>2007</b> , 38, 422-38	7.9	50
52	Decision-making in a changing world: a study in autism spectrum disorders. <i>Journal of Autism and Developmental Disorders</i> , <b>2015</b> , 45, 1603-13	4.6	45
51	Objective and Subjective Evaluation of Online Error Correction during P300-Based Spelling. <i>Advances in Human-Computer Interaction</i> , <b>2012</b> , 2012, 1-13	2.8	45
50	Assessing the relevance of fMRI-based prior in the EEG inverse problem: a bayesian model comparison approach. <i>IEEE Transactions on Signal Processing</i> , <b>2005</b> , 53, 3461-3472	4.8	44
49	The impact of MEG source reconstruction method on source-space connectivity estimation: A comparison between minimum-norm solution and beamforming. <i>NeuroImage</i> , <b>2017</b> , 156, 29-42	7.9	41
48	Altered retrieval of melodic information in congenital amusia: insights from dynamic causal modeling of MEG data. <i>Frontiers in Human Neuroscience</i> , <b>2015</b> , 9, 20	3.3	40
47	First results on the GEM operated at low gas pressures. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1998</b> , 419, 423-428 <sup>1,2</sup>		38
46	Multivariate source prelocalization (MSP): use of functionally informed basis functions for better conditioning the MEG inverse problem. <i>NeuroImage</i> , <b>2005</b> , 26, 356-73	7.9	38
45	Tactile hypersensitivity and GABA concentration in the sensorimotor cortex of adults with autism. <i>Autism Research</i> , <b>2019</b> , 12, 562-575	5.1	35
44	Implicit learning of predictable sound sequences modulates human brain responses at different levels of the auditory hierarchy. <i>Frontiers in Human Neuroscience</i> , <b>2015</b> , 9, 505	3.3	31
43	Brain-computer interfaces: a neuroscience paradigm of social interaction? A matter of perspective. <i>Frontiers in Human Neuroscience</i> , <b>2012</b> , 6, 114	3.3	24
42	Data-driven parceling and entropic inference in MEG. <i>NeuroImage</i> , <b>2006</b> , 30, 160-71	7.9	23
41	Improving BCI performance through co-adaptation: applications to the P300-speller. <i>Annals of Physical and Rehabilitation Medicine</i> , <b>2015</b> , 58, 23-28	3.8	21
40	On assessing neurofeedback effects: should double-blind replace neurophysiological mechanisms?. <i>Brain</i> , <b>2017</b> , 140, e63	11.2	20
39	BCI Could Make Old Two-Player Games Even More Fun: A Proof of Concept with [Connect Four]	2.8	20

38	Impact of spatial filters during sensor selection in a visual P300 brain-computer interface. <i>Brain Topography</i> , <b>2012</b> , 25, 55-63	4.3	19
37	The epistemic and pragmatic value of non-action: a predictive coding perspective on meditation. <i>Current Opinion in Psychology</i> , <b>2019</b> , 28, 166-171	6.2	19
36	BCI in patients with disorders of consciousness: clinical perspectives. <i>Annals of Physical and Rehabilitation Medicine</i> , <b>2015</b> , 58, 29-34	3.8	18
35	EEG neurofeedback research: A fertile ground for psychiatry?. <i>L'Encephale</i> , <b>2019</b> , 45, 245-255	2.9	17
34	Adaptive training session for a P300 speller brain-computer interface. <i>Journal of Physiology (Paris)</i> , <b>2011</b> , 105, 123-9		16
33	Models of functional neuroimaging data. <i>Current Medical Imaging</i> , <b>2006</b> , 2, 15-34	1.2	13
32	Toward a new application of real-time electrophysiology: online optimization of cognitive neurosciences hypothesis testing. <i>Brain Sciences</i> , <b>2014</b> , 4, 49-72	3.4	12
31	MEG Connectivity and Power Detections with Minimum Norm Estimates Require Different Regularization Parameters. <i>Computational Intelligence and Neuroscience</i> , <b>2016</b> , 2016, 3979547	3	12
30	EEG sensor selection by sparse spatial filtering in P300 speller brain-computer interface. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2010</b> , 2010, 5379-82	0.9	11
29	Mind the Traps! Design Guidelines for Rigorous BCI Experiments <b>2018</b> , 613-634		11
28	Exploring scoring methods for research studies: Accuracy and variability of visual and automated sleep scoring. <i>Journal of Sleep Research</i> , <b>2020</b> , 29, e12994	5.8	10
27	Does function fit structure? A ground truth for non-invasive neuroimaging. <i>NeuroImage</i> , <b>2014</b> , 94, 89-95	7.9	8
26	Estimates of cortical column orientation improve MEG source inversion. <i>NeuroImage</i> , <b>2020</b> , 216, 116862	7.9	7
25	A multi-thermogram-based Bayesian model for the determination of the thermal diffusivity of a material. <i>Metrologia</i> , <b>2016</b> , 53, S1-S9	2.1	7
24	A Generic Framework for Adaptive EEG-Based BCI Training and Operation <b>2018</b> , 595-612		7
23	Modelling lockdown-induced 2ndCOVID waves in France		7
22	Active inference as a unifying, generic and adaptive framework for a P300-based BCI. <i>Journal of Neural Engineering</i> , <b>2020</b> , 17, 016054	5	7
21	Automatic analysis of single-channel sleep EEG in a large spectrum of sleep disorders. <i>Journal of Clinical Sleep Medicine</i> , <b>2021</b> , 17, 393-402	3.1	7

20	Adults with Autism Tend to Underestimate the Hidden Environmental Structure: Evidence from a Visual Associative Learning Task. <i>Journal of Autism and Developmental Disorders</i> , <b>2018</b> , 48, 3061-3074	4.6	6
19	Neuromagnetic correlates of adaptive plasticity across the hand-face border in human primary somatosensory cortex. <i>Journal of Neurophysiology</i> , <b>2016</b> , 115, 2095-104	3.2	6
18	Active SAMpling Protocol (ASAP) to Optimize Individual Neurocognitive Hypothesis Testing: A BCI-Inspired Dynamic Experimental Design. <i>Frontiers in Human Neuroscience</i> , <b>2016</b> , 10, 347	3.3	6
17	Empirical Bayes evaluation of fused EEG-MEG source reconstruction: Application to auditory mismatch evoked responses. <i>NeuroImage</i> , <b>2021</b> , 226, 117468	7.9	6
16	Towards a computational phenomenology of mental action: modelling meta-awareness and attentional control with deep parametric active inference. <i>Neuroscience of Consciousness</i> , <b>2021</b> , 2021, niab018	3.3	5
15	On the reliability of model-based predictions in the context of the current COVID epidemic event: impact of outbreak peak phase and data paucity		4
14	Localization Estimation Algorithm (LEA): a supervised prior-based approach for solving the EEG/MEG inverse problem. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 18, 536-47	0.9	3
13	Neurocomputational underpinnings of expected surprise		3
12	Brain-Computer Interfaces in Disorders of Consciousness <b>2016</b> , 1-28		2
11	Adaptive Methods in Machine Learning <b>2016</b> , 207-232		2
10	Estimates of cortical column orientation improve MEG source inversion		2
9	Retrospective study of the acute period of locked-in syndrome: Consciousness recovery and communication restoration. <i>Annals of Physical and Rehabilitation Medicine</i> , <b>2016</b> , 59, e151-e152	3.8	2
8	Les trois cultures de la psychiatrie computationnelle. <i>Annales Medico-Psychologiques</i> , <b>2021</b> , 179, 63-71	0.2	2
7	Towards identifying optimal biased feedback for various user states and traits in motor imagery BCI. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2021</b> , PP,	5	2
6	Neurocomputational underpinnings of expected surprise. <i>Journal of Neuroscience</i> , <b>2021</b> ,	6.6	1
5	Multivariate group effect analysis in functional Magnetic Resonance Imaging. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 18, 548-59	0.9	1
4	EEG artifact correction strategies for online trial-by-trial analysis. <i>Journal of Neural Engineering</i> , <b>2020</b> , 17, 016035	5	1
3	An Impending Paradigm Shift in Motor Imagery Based Brain-Computer Interfaces.. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 824759	5.1	0

- 2 Dynamics of Oddball Sound Processing: Trial-by-Trial Modeling of ECoG Signals.. *Frontiers in Human Neuroscience*, **2021**, 15, 794654 33 ○
- 1 MEG Source Localization under Multiple Constraints: An Extended Bayesian Framework **2007**, 383-395 ○