

# Sylvain Baillet

## List of Publications by Year in descending order

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143  
papers

12,842  
citations

71102

41  
h-index

29157

104  
g-index

167  
all docs

167  
docs citations

167  
times ranked

11285  
citing authors

#	ARTICLE	IF	CITATIONS
1	Brainstorm: A User-Friendly Application for MEG/EEG Analysis. Computational Intelligence and Neuroscience, 2011, 2011, 1-13.	1.7	2,564
2	Electromagnetic brain mapping. IEEE Signal Processing Magazine, 2001, 18, 14-30.	5.6	1,373
3	Timing of the brain events underlying access to consciousness during the attentional blink. Nature Neuroscience, 2005, 8, 1391-1400.	14.8	777
4	Good practice for conducting and reporting MEG research. NeuroImage, 2013, 65, 349-363.	4.2	604
5	Brain Dynamics Underlying the Nonlinear Threshold for Access to Consciousness. PLoS Biology, 2007, 5, e260.	5.6	583
6	Magnetoencephalography for brain electrophysiology and imaging. Nature Neuroscience, 2017, 20, 327-339.	14.8	580
7	Brain templates and atlases. NeuroImage, 2012, 62, 911-922.	4.2	461
8	Cortical contributions to the auditory frequency-following response revealed by MEG. Nature Communications, 2016, 7, 11070.	12.8	310
9	A Bayesian approach to introducing anatomo-functional priors in the EEG/MEG inverse problem. IEEE Transactions on Biomedical Engineering, 1997, 44, 374-385.	4.2	274
10	Coherent neural representation of hand speed in humans revealed by MEG imaging. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7676-7681.	7.1	252
11	Motor origin of temporal predictions in auditory attention. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8913-E8921.	7.1	229
12	A phonological representation in the infant brain. NeuroReport, 1998, 9, 1885-1888.	1.2	227
13	A comparison of random field theory and permutation methods for the statistical analysis of MEG data. NeuroImage, 2005, 25, 383-394.	4.2	191
14	The brain's resting-state activity is shaped by synchronized cross-frequency coupling of neural oscillations. NeuroImage, 2015, 111, 26-35.	4.2	174
15	Selective Entrainment of Theta Oscillations in the Dorsal Stream Causally Enhances Auditory Working Memory Performance. Neuron, 2017, 94, 193-206.e5.	8.1	167
16	Anatomically constrained region deformation for the automated segmentation of the hippocampus and the amygdala: Method and validation on controls and patients with Alzheimer's disease. NeuroImage, 2007, 34, 996-1019.	4.2	145
17	Influence of skull anisotropy for the forward and inverse problem in EEG: Simulation studies using FEM on realistic head models. , 1998, 6, 250-269.		139
18	MEG/EEG Group Analysis With Brainstorm. Frontiers in Neuroscience, 2019, 13, 76.	2.8	135

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19	Two Distinct Neural Timescales for Predictive Speech Processing. <i>Neuron</i> , 2020, 105, 385-393.e9.	8.1	134
20	EEG Source Localization and Imaging Using Multiple Signal Classification Approaches. <i>Journal of Clinical Neurophysiology</i> , 1999, 16, 225-238.	1.7	126
21	Hearing Faces: How the Infant Brain Matches the Face It Sees with the Speech It Hears. <i>Journal of Cognitive Neuroscience</i> , 2008, 21, 905-921.	2.3	125
22	Simultaneous MEG and intracranial EEG recordings during attentive reading. <i>NeuroImage</i> , 2009, 45, 1289-1304.	4.2	122
23	IFCN-endorsed practical guidelines for clinical magnetoencephalography (MEG). <i>Clinical Neurophysiology</i> , 2018, 129, 1720-1747.	1.5	111
24	MEG-BIDS, the brain imaging data structure extended to magnetoencephalography. <i>Scientific Data</i> , 2018, 5, 180110.	5.3	101
25	Combined MEG and EEG source imaging by minimization of mutual information. <i>IEEE Transactions on Biomedical Engineering</i> , 1999, 46, 522-534.	4.2	96
26	Automated interictal spike detection and source localization in magnetoencephalography using independent components analysis and spatio-temporal clustering. <i>Clinical Neurophysiology</i> , 2004, 115, 508-522.	1.5	96
27	OMEGA: The Open MEG Archive. <i>NeuroImage</i> , 2016, 124, 1182-1187.	4.2	96
28	Cortical local and long-range synchronization interplay in human absence seizure initiation. <i>NeuroImage</i> , 2009, 45, 950-962.	4.2	94
29	Academic Software Applications for Electromagnetic Brain Mapping Using MEG and EEG. <i>Computational Intelligence and Neuroscience</i> , 2011, 2011, 1-4.	1.7	79
30	Localization of realistic cortical activity in MEG using current multipoles. <i>NeuroImage</i> , 2004, 22, 779-793.	4.2	76
31	Rapidly recomputable EEG forward models for realistic head shapes. <i>Physics in Medicine and Biology</i> , 2001, 46, 1265-1281.	3.0	74
32	Vascular contributions to 16p11.2 deletion autism syndrome modeled in mice. <i>Nature Neuroscience</i> , 2020, 23, 1090-1101.	14.8	70
33	Connectomics of human electrophysiology. <i>NeuroImage</i> , 2022, 247, 118788.	4.2	69
34	Neural Correlates of Early Sound Encoding and their Relationship to Speech-in-Noise Perception. <i>Frontiers in Neuroscience</i> , 2017, 11, 479.	2.8	67
35	Classification methods for ongoing EEG and MEG signals. <i>Biological Research</i> , 2007, 40, .	3.4	64
36	Inferring hand movement kinematics from MEG, EEG and intracranial EEG: From brain-machine interfaces to motor rehabilitation. <i>Irbm</i> , 2011, 32, 8-18.	5.6	64

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37	Diffeomorphic Brain Registration Under Exhaustive Sulcal Constraints. <i>IEEE Transactions on Medical Imaging</i> , 2011, 30, 1214-1227.	8.9	62
38	Enter feelings: Somatosensory responses following early stages of visual induction of emotion. <i>International Journal of Psychophysiology</i> , 2009, 72, 13-23.	1.0	59
39	Time-resolved phase-amplitude coupling in neural oscillations. <i>NeuroImage</i> , 2017, 159, 270-279.	4.2	57
40	Modeling and Detecting Deep Brain Activity with MEG & EEG. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4937-40.	0.5	56
41	Longitudinal Changes in Depressive Circuitry in Response to Neuromodulation Therapy. <i>Frontiers in Neural Circuits</i> , 2016, 10, 50.	2.8	55
42	Investigations of dipole localization accuracy in MEG using the bootstrap. <i>NeuroImage</i> , 2005, 25, 355-368.	4.2	54
43	Prediction of Infarct Growth Based on Apparent Diffusion Coefficients: Penumbra Assessment without Intravenous Contrast Material. <i>Radiology</i> , 2009, 250, 184-192.	7.3	52
44	Brainstorm Pipeline Analysis of Resting-State Data From the Open MEG Archive. <i>Frontiers in Neuroscience</i> , 2019, 13, 284.	2.8	50
45	Modelling and detecting deep brain activity with MEG and EEG. <i>Irbm</i> , 2009, 30, 133-138.	5.6	45
46	Spectral signal space projection algorithm for frequency domain MEG and EEG denoising, whitening, and source imaging. <i>NeuroImage</i> , 2011, 56, 78-92.	4.2	43
47	rtMEG: A Real-Time Software Interface for Magnetoencephalography. <i>Computational Intelligence and Neuroscience</i> , 2011, 2011, 1-7.	1.7	42
48	Phase-amplitude coupling and epileptogenesis in an animal model of mesial temporal lobe epilepsy. <i>Neurobiology of Disease</i> , 2018, 114, 111-119.	4.4	42
49	Brief segments of neurophysiological activity enable individual differentiation. <i>Nature Communications</i> , 2021, 12, 5713.	12.8	42
50	A multiresolution framework to MEG/EEG source imaging. <i>IEEE Transactions on Biomedical Engineering</i> , 2001, 48, 1080-1087.	4.2	39
51	Electromagnetic brain imaging. <i>Human Brain Mapping</i> , 2009, 30, 1753-1757.	3.6	39
52	Age-Related Reduced Somatosensory Gating Is Associated with Altered Alpha Frequency Desynchronization. <i>Neural Plasticity</i> , 2015, 2015, 1-9.	2.2	37
53	Musicians at the Cocktail Party: Neural Substrates of Musical Training During Selective Listening in Multispeaker Situations. <i>Cerebral Cortex</i> , 2019, 29, 3253-3265.	2.9	37
54	Targeted reinforcement of neural oscillatory activity with real-time neuroimaging feedback. <i>NeuroImage</i> , 2014, 88, 54-60.	4.2	35

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55	A thalamocortical pathway for fast rerouting of tactile information to occipital cortex in congenital blindness. <i>Nature Communications</i> , 2019, 10, 5154.	12.8	33
56	Phase delays within visual cortex shape the response to steady-state visual stimulation. <i>NeuroImage</i> , 2011, 54, 1919-1929.	4.2	30
57	High-resolution retinotopic maps estimated with magnetoencephalography. <i>NeuroImage</i> , 2017, 145, 107-117.	4.2	30
58	Effects of aging on neuromagnetic mismatch responses to pitch changes. <i>Neuroscience Letters</i> , 2013, 544, 20-24.	2.1	29
59	Older adults exhibit a more pronounced modulation of beta oscillations when performing sustained and dynamic handgrips. <i>NeuroImage</i> , 2019, 201, 116037.	4.2	29
60	Multiresolution imaging of MEG cortical sources using an explicit piecewise model. <i>NeuroImage</i> , 2007, 38, 439-451.	4.2	28
61	Cortical Dynamics of Anticipatory Mechanisms in Interception: A Neuromagnetic Study. <i>Journal of Cognitive Neuroscience</i> , 2008, 20, 1827-1838.	2.3	28
62	Cyberinfrastructure for Open Science at the Montreal Neurological Institute. <i>Frontiers in Neuroinformatics</i> , 2016, 10, 53.	2.5	28
63	Spatiotemporal Localization of Significant Activation in MEG Using Permutation Tests. <i>Lecture Notes in Computer Science</i> , 2003, 18, 512-523.	1.3	26
64	Rapid Amygdala Responses during Trace Fear Conditioning without Awareness. <i>PLoS ONE</i> , 2014, 9, e96803.	2.5	26
65	Region-specific reduction of auditory sensory gating in older adults. <i>Brain and Cognition</i> , 2015, 101, 64-72.	1.8	26
66	Hyperglycemia and the Fate of Apparent Diffusion Coefficientâ€Defined Ischemic Penumbra. <i>American Journal of Neuroradiology</i> , 2011, 32, 852-856.	2.4	25
67	Stability of spectral estimates in resting-state magnetoencephalography: Recommendations for minimal data duration with neuroanatomical specificity. <i>NeuroImage</i> , 2022, 247, 118823.	4.2	25
68	Reversing the Standard Neural Signature of the Wordâ€Nonword Distinction. <i>Journal of Cognitive Neuroscience</i> , 2017, 29, 79-94.	2.3	23
69	Driving working memory with frequencyâ€tuned noninvasive brain stimulation. <i>Annals of the New York Academy of Sciences</i> , 2018, 1423, 126-137.	3.8	23
70	Automatic Prediction of Infarct Growth in Acute Ischemic Stroke from MR Apparent Diffusion Coefficient Maps. <i>Academic Radiology</i> , 2008, 15, 77-83.	2.5	22
71	Early ADC changes in motor structures predict outcome of acute stroke better than lesion volume. <i>Journal of Neuroradiology</i> , 2011, 38, 105-112.	1.1	21
72	Individual-patient prediction of meningioma malignancy and survival using the Surveillance, Epidemiology, and End Results database. <i>Npj Digital Medicine</i> , 2020, 3, 12.	10.9	21

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73	Identification of Growth Seeds in the Neonate Brain through Surfacic Helmholtz Decomposition. Lecture Notes in Computer Science, 2009, 21, 252-263.	1.3	21
74	Optical Flow and Advection on 2-Riemannian Manifolds: A Common Framework. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 1081-1092.	13.9	20
75	Functional dissociation of anterior cingulate cortex and intraparietal sulcus in visual working memory. Cortex, 2019, 121, 277-291.	2.4	20
76	Oscillatory Entrainment of the Frequency-following Response in Auditory Cortical and Subcortical Structures. Journal of Neuroscience, 2021, 41, 4073-4087.	3.6	20
77	Supramodality of neural entrainment: Rhythmic visual stimulation causally enhances auditory working memory performance. Science Advances, 2022, 8, eabj9782.	10.3	20
78	Classification methods for ongoing EEG and MEG signals. Biological Research, 2007, 40, 415-37.	3.4	20
79	Robust Nonparametric Segmentation of Infarct Lesion from Diffusion-Weighted MR Images. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2102-5.	0.5	19
80	How to Detect Amygdala Activity with Magnetoencephalography using Source Imaging. Journal of Visualized Experiments, 2013, , .	0.3	19
81	Effects of aging on the neuromagnetic mismatch detection to speech sounds. Biological Psychology, 2015, 104, 48-55.	2.2	18
82	Integrated open-source software for multiscale electrophysiology. Scientific Data, 2019, 6, 231.	5.3	18
83	A multivariate method for estimating cross-frequency neuronal interactions and correcting linear mixing in MEG data, using canonical correlations. Journal of Neuroscience Methods, 2016, 271, 169-181.	2.5	17
84	Functional and effective reorganization of the aging brain during unimanual and bimanual hand movements. Human Brain Mapping, 2019, 40, 3027-3040.	3.6	17
85	Spontaneous network activity <math>\leq 35\text{ Hz}</math> accounts for variability in stimulus-induced gamma responses. NeuroImage, 2020, 207, 116374.	4.2	17
86	Pre-target neural oscillations predict variability in the detection of small pitch changes. PLoS ONE, 2017, 12, e0177836.	2.5	16
87	MEG Source Imaging Using Multipolar Expansions. Lecture Notes in Computer Science, 1999, , 15-28.	1.3	16
88	Optical flow approaches to the identification of brain dynamics. Human Brain Mapping, 2009, 30, 1887-1897.	3.6	15
89	Case Report: Aperiodic Fluctuations of Neural Activity in the Ictal MEG of a Child With Drug-Resistant Fronto-Temporal Epilepsy. Frontiers in Human Neuroscience, 2021, 15, 646426.	2.0	15
90	The Sources of Sequential Modulations of Control Processes in Arithmetic Strategies: A Magnetoencephalography Study. Journal of Cognitive Neuroscience, 2017, 29, 1033-1043.	2.3	14

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91	Interocular interaction of contrast and luminance signals in human primary visual cortex. <i>NeuroImage</i> , 2018, 167, 23-30.	4.2	14
92	The utility of arterial spin labeling in the presurgical evaluation of poorly defined focal epilepsy in children. <i>Journal of Neurosurgery: Pediatrics</i> , 2021, 27, 243-252.	1.3	13
93	Magnetoencephalography reveals increased slow-to-fast alpha power ratios in patients with chronic pain. <i>Pain Reports</i> , 2021, 6, e928.	2.7	13
94	Inhibitory effect of tDCS on auditory evoked response: Simultaneous MEG-tDCS reveals causal role of right auditory cortex in pitch learning. <i>NeuroImage</i> , 2021, 233, 117915.	4.2	13
95	What MEG can reveal about inference making: The case of if...then sentences. <i>Human Brain Mapping</i> , 2013, 34, 684-697.	3.6	12
96	Neuromagnetic source imaging of abnormal spontaneous activity in tinnitus patient modulated by electrical cortical stimulation. , 2009, 2009, 1940-4.		11
97	MEG Intersubject Phase Locking of Stimulus-Driven Activity during Naturalistic Speech Listening Correlates with Musical Training. <i>Journal of Neuroscience</i> , 2021, 41, 2713-2722.	3.6	11
98	Neuroelectromagnetic Source Imaging of Brain Dynamics. <i>Springer Optimization and Its Applications</i> , 2010, , 127-155.	0.9	10
99	Imaging Brain Activation Streams from Optical Flow Computation on 2-Riemannian Manifolds. <i>Lecture Notes in Computer Science</i> , 2007, 20, 470-481.	1.3	10
100	Neurophysiological Effects Associated With Subliminal Conditioning of Appetite Motivations. <i>Frontiers in Psychology</i> , 2019, 10, 457.	2.1	8
101	Induced oscillatory signaling in the beta frequency of top-down pain modulation. <i>Pain Reports</i> , 2020, 5, e806.	2.7	8
102	DISCO: A Coherent Diffeomorphic Framework for Brain Registration under Exhaustive Sulcal Constraints. <i>Lecture Notes in Computer Science</i> , 2009, 12, 730-738.	1.3	8
103	Imaging of neural oscillations with embedded inferential and group prevalence statistics. <i>PLoS Computational Biology</i> , 2018, 14, e1005990.	3.2	8
104	Encoding Cortical Dynamics in Sparse Features. <i>Frontiers in Human Neuroscience</i> , 2014, 8, 338.	2.0	7
105	Coupled oscillations enable rapid temporal recalibration to audiovisual asynchrony. <i>Communications Biology</i> , 2021, 4, 559.	4.4	7
106	Neurophysiological Changes Induced by Music-Supported Therapy for Recovering Upper Extremity Function after Stroke: A Case Series. <i>Brain Sciences</i> , 2021, 11, 666.	2.3	6
107	A simultaneous MEG and intracranial EEG study of task-related brain oscillations. <i>International Congress Series</i> , 2007, 1300, 421-424.	0.2	5
108	Electromagnetic Brain Mapping Using MEG and EEG. , 2011, , .		5

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109	Forward and Inverse Problems of MEG/EEG. , 2014, , 1-8.		5
110	Tagged MEG measures binocular rivalry in a cortical network that predicts alternation rate. PLoS ONE, 2019, 14, e0218529.	2.5	5
111	Tracking cortical activity from M/EEG using graph cuts with spatiotemporal constraints. NeuroImage, 2011, 54, 1930-1941.	4.2	4
112	Feature detection and tracking in optical flow on non-flat manifolds. Pattern Recognition Letters, 2011, 32, 2047-2052.	4.2	4
113	Mutual information spectrum for selection of event-related spatial components. Application to eloquent motor cortex mapping. Frontiers in Neuroinformatics, 2013, 7, 53.	2.5	4
114	Overnight Ictal Magnetoencephalography. Neurology: Clinical Practice, 2021, 11, e732-e735.	1.6	4
115	Biased intelligence: on the subjectivity of digital objectivity. BMJ Health and Care Informatics, 2020, 27, e100146.	3.0	4
116	MNI SISCOM: an Open-Source Tool for Computing Subtraction Ictal Single-Photon Emission CT Coregistered to MRI. Journal of Digital Imaging, 2021, 34, 357-361.	2.9	4
117	Over the rainbow: Guidelines for meaningful use of colour maps in neurophysiology. NeuroImage, 2021, 245, 118628.	4.2	4
118	New interinstitutional, multimodal presurgical evaluation protocol associated with improved seizure freedom for poorly defined cases of focal epilepsy in children. Journal of Neurosurgery: Pediatrics, 2022, 29, 74-82.	1.3	3
119	Forward and Inverse Problems of MEG/EEG. , 2015, , 1226-1233.		3
120	Cross-Frequency Brain Network Dynamics Support Pitch Change Detection. Journal of Neuroscience, 2022, 42, 3823-3835.	3.6	3
121	Challenging the estimation of cortical activity from MEG with simulated fMRI-constrained retinotopic maps. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4945-8.	0.5	2
122	Beamformer-based imaging of phase-amplitude coupling using electromagnetic brain activity. , 2015, 2015, 7558-61.		2
123	MagnÃ©toencÃ©phalographie / Ã©lectroencÃ©phalographie et imagerie cÃ©rÃ©brale fonctionnelle. Annales De L'Institut Pasteur / ActualitÃ©s, 1998, 9, 215-226.	0.1	1
124	Competitive segmentation of the hippocampus and the amygdala from MRI data: validation on young healthy controls and Alzheimer's disease patients. , 2006, 6144, 178.		1
125	Mapping and Tracking the Flow of Brain Activations using MEG/EEG: Hypothesis and Methods. , 2007, , .		1
126	Commentary: Evaluation of Phase-Amplitude Coupling in Resting State Magnetoencephalographic Signals: Effect of Surrogates and Evaluation Approach. Frontiers in Computational Neuroscience, 2018, 12, 26.	2.1	1



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127	Short-term ocular dominance changes in human V1.. Journal of Vision, 2015, 15, 378.	0.3	1
128	MEG-Clinic: A Comprehensive Software Solution for Routine MEG Analysis. IFMBE Proceedings, 2010, , 128-131.	0.3	1
129	Prosopagnosia seizure semiology in a 10-year-old boy: a functional neuroimaging study. BMJ Case Reports, 2020, 13, e237228.	0.5	1
130	A MEG Multiresolution Model Selection Procedure Reveals the Cortical Somatotopy of Hand-Fingers. , 2007, , .		0
131	Cortical flow: Investigating the spatiotemporal dynamics of the brain. , 2008, , .		0
132	Synchronisations corticales locale et distance: un mécanisme d'initiation des absences?. Epilepsies, 2010, 22, 18-32.	0.0	0
133	Gamma power correlates with clinical response to repetitive transcranial magnetic stimulation (rTMS) for depression. , 2013, , .		0
134	Dynamics of dichoptic masking in the primary visual cortex. BMC Neuroscience, 2014, 15, .	1.9	0
135	Local and long-range phase-amplitude coupling in a cortical spiking network model. BMC Neuroscience, 2014, 15, .	1.9	0
136	Reply to "Clinical practice guidelines or clinical research guidelines?". Clinical Neurophysiology, 2018, 129, 2056-2057.	1.5	0
137	Estimation of Velocity Fields and Propagation on Non-Euclidian Domains: Application to the Exploration of Cortical Spatiotemporal Dynamics. Lecture Notes in Mathematics, 2009, , 203-226.	0.2	0
138	Magnetoencephalography. , 2011, , 77-89.		0
139	MEG in the Presurgical Epilepsy Evaluation. , 2015, , 195-212.		0
140	Interocular Conflict Predicts Individual Differences in Binocular Rivalry. Journal of Vision, 2019, 19, 131.	0.3	0
141	Perceptual filling-in dispels the veridicality problem of conscious perception research. Consciousness and Cognition, 2022, 100, 103316.	1.5	0
142	Tracking the dynamics of perisaccadic visual signals with magnetoencephalography. , 2021, , .		0
143	Forward and Inverse Problems of MEG/EEG. , 2022, , 1464-1471.		0