

Matti S Hämmäläinen

List of Publications by Year in descending order

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Version: 2024-02-01

68
papers

10,410
citations

186265

28
h-index

128289

60
g-index

71
all docs

71
docs citations

71
times ranked

8219
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetoencephalography—theory, instrumentation, and applications to noninvasive studies of the working human brain. <i>Reviews of Modern Physics</i> , 1993, 65, 413-497.	45.6	3,939
2	MEG and EEG data analysis with MNE-Python. <i>Frontiers in Neuroscience</i> , 2013, 7, 267.	2.8	1,864
3	MNE software for processing MEG and EEG data. <i>NeuroImage</i> , 2014, 86, 446-460.	4.2	1,431
4	Neural mechanisms of transient neocortical beta rhythms: Converging evidence from humans, computational modeling, monkeys, and mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E4885-94.	7.1	360
5	Task-modulated "what" and "where" pathways in human auditory cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 14608-14613.	7.1	315
6	Local and long-range functional connectivity is reduced in concert in autism spectrum disorders. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3107-3112.	7.1	260
7	Sensitivity of MEG and EEG to Source Orientation. <i>Brain Topography</i> , 2010, 23, 227-232.	1.8	208
8	Somatosensory cortex functional connectivity abnormalities in autism show opposite trends, depending on direction and spatial scale. <i>Brain</i> , 2015, 138, 1394-1409.	7.6	125
9	A Review of Issues Related to Data Acquisition and Analysis in EEG/MEG Studies. <i>Brain Sciences</i> , 2017, 7, 58.	2.3	112
10	Cancellation of EEG and MEG signals generated by extended and distributed sources. <i>Human Brain Mapping</i> , 2010, 31, 140-149.	3.6	111
11	IFCN-endorsed practical guidelines for clinical magnetoencephalography (MEG). <i>Clinical Neurophysiology</i> , 2018, 129, 1720-1747.	1.5	111
12	Altered Development and Multifaceted Band-Specific Abnormalities of Resting State Networks in Autism. <i>Biological Psychiatry</i> , 2015, 77, 794-804.	1.3	107
13	Sparsity enables estimation of both subcortical and cortical activity from MEG and EEG. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E10465-E10474.	7.1	106
14	Multimodal neuroimaging dissociates hemodynamic and electrophysiological correlates of error processing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 17556-17561.	7.1	97
15	Early visual brain areas reflect the percept of an ambiguous scene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20500-20504.	7.1	90
16	Effects of sutures and fontanels on MEG and EEG source analysis in a realistic infant head model. <i>NeuroImage</i> , 2013, 76, 282-293.	4.2	88
17	A Reproducible MEG/EEG Group Study With the MNE Software: Recommendations, Quality Assessments, and Good Practices. <i>Frontiers in Neuroscience</i> , 2018, 12, 530.	2.8	82
18	Attention Drives Synchronization of Alpha and Beta Rhythms between Right Inferior Frontal and Primary Sensory Neocortex. <i>Journal of Neuroscience</i> , 2015, 35, 2074-2082.	3.6	79

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19	Head movements of children in MEG: Quantification, effects on source estimation, and compensation. <i>NeuroImage</i> , 2008, 40, 541-550.	4.2	73
20	Human Neocortical Neurosolver (HNN), a new software tool for interpreting the cellular and network origin of human MEG/EEG data. <i>ELife</i> , 2020, 9, .	6.0	68
21	BabyMEG: A whole-head pediatric magnetoencephalography system for human brain development research. <i>Review of Scientific Instruments</i> , 2016, 87, 094301.	1.3	66
22	Spatiotemporal Signatures of Lexical Semantic Prediction. <i>Cerebral Cortex</i> , 2016, 26, 1377-1387.	2.9	62
23	Targeting of White Matter Tracts with Transcranial Magnetic Stimulation. <i>Brain Stimulation</i> , 2014, 7, 80-84.	1.6	56
24	Maturation trajectories of cortical resting-state networks depend on the mediating frequency band. <i>NeuroImage</i> , 2018, 174, 57-68.	4.2	53
25	Spatial fidelity of MEG/EEG source estimates: A general evaluation approach. <i>NeuroImage</i> , 2021, 224, 117430.	4.2	46
26	A Subspace Pursuit-based Iterative Greedy Hierarchical solution to the neuromagnetic inverse problem. <i>NeuroImage</i> , 2014, 87, 427-443.	4.2	41
27	Auditory processing in noise is associated with complex patterns of disrupted functional connectivity in autism spectrum disorder. <i>Autism Research</i> , 2017, 10, 631-647.	3.8	41
28	Parallel input makes the brain run faster. <i>NeuroImage</i> , 2008, 40, 1792-1797.	4.2	40
29	Detectability of cerebellar activity with magnetoencephalography and electroencephalography. <i>Human Brain Mapping</i> , 2020, 41, 2357-2372.	3.6	36
30	Clinical value of magnetoencephalographic spike propagation represented by spatiotemporal source analysis: Correlation with surgical outcome. <i>Epilepsy Research</i> , 2014, 108, 280-288.	1.6	22
31	Lateralized parietotemporal oscillatory phase synchronization during auditory selective attention. <i>NeuroImage</i> , 2014, 86, 461-469.	4.2	22
32	Individual Resting-State Brain Networks Enabled by Massive Multivariate Conditional Mutual Information. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 1957-1966.	8.9	21
33	Boundary Element Fast Multipole Method for Enhanced Modeling of Neurophysiological Recordings. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 308-318.	4.2	21
34	High-Density EEG in Current Clinical Practice and Opportunities for the Future. <i>Journal of Clinical Neurophysiology</i> , 2021, 38, 112-123.	1.7	20
35	MNE Scan: Software for real-time processing of electrophysiological data. <i>Journal of Neuroscience Methods</i> , 2018, 303, 55-67.	2.5	17
36	Rapid computation of TMS-induced E-fields using a dipole-based magnetic stimulation profile approach. <i>NeuroImage</i> , 2021, 237, 118097.	4.2	17

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37	Synchronization patterns reveal neuronal coding of working memory content. <i>Cell Reports</i> , 2021, 36, 109566.	6.4	17
38	Altered Onset Response Dynamics in Somatosensory Processing in Autism Spectrum Disorder. <i>Frontiers in Neuroscience</i> , 2016, 10, 255.	2.8	15
39	New Cognitive Neurotechnology Facilitates Studies of Cortical–Subcortical Interactions. <i>Trends in Biotechnology</i> , 2020, 38, 952-962.	9.3	15
40	Source EEG reveals that Rolandic epilepsy is a regional epileptic encephalopathy. <i>NeuroImage: Clinical</i> , 2022, 33, 102956.	2.7	14
41	Multimodal neuroimaging evidence for looser lexico-semantic networks in schizophrenia: Evidence from masked indirect semantic priming. <i>Neuropsychologia</i> , 2019, 124, 337-349.	1.6	12
42	Suppression of irrelevant sounds during auditory working memory. <i>NeuroImage</i> , 2017, 161, 1-8.	4.2	11
43	Cortical Signal Suppression (CSS) for Detection of Subcortical Activity Using MEG and EEG. <i>Brain Topography</i> , 2019, 32, 215-228.	1.8	11
44	Whole-head OPM-MEG enables noninvasive assessment of functional connectivity. <i>Trends in Neurosciences</i> , 2021, 44, 510-512.	8.6	11
45	Sources of Variability in MEG. , 2007, 10, 751-759.		11
46	Auditory Conflict Resolution Correlates with Medial–Lateral Frontal Theta/Alpha Phase Synchrony. <i>PLoS ONE</i> , 2014, 9, e110989.	2.5	10
47	Contextual MEG and EEG Source Estimates Using Spatiotemporal LSTM Networks. <i>Frontiers in Neuroscience</i> , 2021, 15, 552666.	2.8	10
48	Interacting parallel pathways associate sounds with visual identity in auditory cortices. <i>NeuroImage</i> , 2016, 124, 858-868.	4.2	9
49	Normal Evoked Response to Rapid Sequences of Tactile Pulses in Autism Spectrum Disorders. <i>Frontiers in Human Neuroscience</i> , 2016, 10, 433.	2.0	7
50	Noise cancellation for a whole-head magnetometer-based MEG system in hospital environment. <i>Biomedical Physics and Engineering Express</i> , 2018, 4, 055014.	1.2	6
51	Magnetoencephalography Signal Processing, Forward Modeling, Inverse Source Imaging, and Coherence Analysis. <i>Neuroimaging Clinics of North America</i> , 2020, 30, 125-143.	1.0	6
52	Age-Related EEG Power Reductions Cannot Be Explained by Changes of the Conductivity Distribution in the Head Due to Brain Atrophy. <i>Frontiers in Aging Neuroscience</i> , 2021, 13, 632310.	3.4	5
53	Altered maturation and atypical cortical processing of spoken sentences in autism spectrum disorder. <i>Progress in Neurobiology</i> , 2021, 203, 102077.	5.7	5
54	Distinct Regional Oscillatory Connectivity Patterns During Auditory Target and Novelty Processing. <i>Brain Topography</i> , 2020, 33, 477-488.	1.8	5

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55	Versatile synchronized real-time MEG hardware controller for large-scale fast data acquisition. <i>Review of Scientific Instruments</i> , 2017, 88, 055110.	1.3	4
56	Cortical signatures of auditory object binding in children with autism spectrum disorder are anomalous in concordance with behavior and diagnosis. <i>PLoS Biology</i> , 2022, 20, e3001541.	5.6	4
57	Left-Lateralized Contributions of Saccades to Cortical Activity During a One-Back Word Recognition Task. <i>Frontiers in Neural Circuits</i> , 2018, 12, 38.	2.8	3
58	A computational paradigm for real-time MEG neurofeedback for dynamic allocation of spatial attention. <i>BioMedical Engineering OnLine</i> , 2020, 19, 45.	2.7	3
59	Sparse component selection with application to MEG source localization. , 2013, , .		2
60	Improving the Nulling Beamformer Using Subspace Suppression. <i>Frontiers in Computational Neuroscience</i> , 2018, 12, 35.	2.1	2
61	Classification of evoked responses to inverted faces reveals both spatial and temporal cortical response abnormalities in Autism spectrum disorder. <i>NeuroImage: Clinical</i> , 2021, 29, 102501.	2.7	1
62	Auditory cues facilitate object movement processing in human extrastriate visual cortex during simulated self-motion: A pilot study. <i>Brain Research</i> , 2021, 1765, 147489.	2.2	1
63	MEG/EEG source reconstruction based on Gabor thresholding in the source space. , 2011, , .		0
64	Vector \times ∞ ; ∞ ; latent-space principal component analysis. , 2014, , .		0
65	Reply to “Prospective advances in fetal biomagnetometry” Challenges remain. <i>Clinical Neurophysiology</i> , 2018, 129, 505-506.	1.5	0
66	Epileptic Activity Intrinsically Generated in the Human Cerebellum. <i>Annals of Neurology</i> , 2020, 88, 418-422.	5.3	0
67	Influence of unfused cranial bones on magnetoencephalography signals in human infants. <i>Clinical Neurophysiology</i> , 2021, 132, 708-719.	1.5	0
68	Weighted Blind Source Separation Can Decompose the Frequency Mismatch Response by Deviant Concatenation: An MEG Study. <i>Frontiers in Neurology</i> , 2022, 13, 762497.	2.4	0