Matti Hamalainen

List of Publications by Year in descending order

55 papers	9,086 citations	201674 27 h-index	197818 49 g-index
59 all docs	59 docs citations	59 times ranked	7294 citing authors

#	Article	IF	Citations
1	Magnetoencephalographyâ€”theory, instrumentation, and applications to noninvasive studies of the working human brain. Reviews of Modern Physics, 1993, 65, 413-497.	45.6	3,939
2	MEG and EEG data analysis with MNE-Python. Frontiers in Neuroscience, 2013, 7, 267.	2.8	1,864
3	Seeing speech: visual information from lip movements modifies activity in the human auditory cortex. Neuroscience Letters, 1991, 127, 141-145.	2.1	371
4	Task-modulated "what" and "where" pathways in human auditory cortex. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14608-14613.	7.1	315
5	Cued Spatial Attention Drives Functionally Relevant Modulation of the Mu Rhythm in Primary Somatosensory Cortex. Journal of Neuroscience, 2010, 30, 13760-13765.	3.6	234
6	Quantitative Analysis and Biophysically Realistic Neural Modeling of the MEG Mu Rhythm: Rhythmogenesis and Modulation of Sensory-Evoked Responses. Journal of Neurophysiology, 2009, 102, 3554-3572.	1.8	203
7	Neuromagnetic steadyâ€state responses to auditory stimuli. Journal of the Acoustical Society of America, 1989, 86, 1033-1039.	1.1	178
8	Mixed-norm estimates for the M/EEG inverse problem using accelerated gradient methods. Physics in Medicine and Biology, 2012, 57, 1937-1961.	3.0	169
9	Neural Correlates of Tactile Detection: A Combined Magnetoencephalography and Biophysically Based Computational Modeling Study. Journal of Neuroscience, 2007, 27, 10751-10764.	3.6	142
10	Cortical Activity Elicited by Changes in Auditory Stimuli: Different Sources for the Magnetic N1OOm and Mismatch Responses. Psychophysiology, 1991, 28, 21-29.	2.4	131
11	A Review of Issues Related to Data Acquisition and Analysis in EEG/MEG Studies. Brain Sciences, 2017, 7, 58.	2.3	112
12	IFCN-endorsed practical guidelines for clinical magnetoencephalography (MEG). Clinical Neurophysiology, 2018, 129, 1720-1747.	1.5	111
13	Onset timing of crossâ€sensory activations and multisensory interactions in auditory and visual sensory cortices. European Journal of Neuroscience, 2010, 31, 1772-1782.	2.6	107
14	Attention-driven auditory cortex short-term plasticity helps segregate relevant sounds from noise. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4182-4187.	7.1	99
15	Early visual brain areas reflect the percept of an ambiguous scene. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20500-20504.	7.1	90
16	Enhanced Spontaneous Oscillations in the Supplementary Motor Area Are Associated with Sleep-Dependent Offline Learning of Finger-Tapping Motor-Sequence Task. Journal of Neuroscience, 2013, 33, 13894-13902.	3.6	80
17	Attention Drives Synchronization of Alpha and Beta Rhythms between Right Inferior Frontal and Primary Sensory Neocortex. Journal of Neuroscience, 2015, 35, 2074-2082.	3.6	79
18	Human Neocortical Neurosolver (HNN), a new software tool for interpreting the cellular and network origin of human MEG/EEG data. ELife, 2020, 9, .	6.0	68

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19	BabyMEG: A whole-head pediatric magnetoencephalography system for human brain development research. Review of Scientific Instruments, 2016, 87, 094301.	1.3	66
20	Dynamic Oscillatory Processes Governing Cued Orienting and Allocation of Auditory Attention. Journal of Cognitive Neuroscience, 2013, 25, 1926-1943.	2.3	65
21	Landau-Kleffner syndrome. NeuroReport, 1991, 2, 201-204.	1.2	55
22	Location specific sleep spindle activity in the early visual areas and perceptual learning. Vision Research, 2014, 99, 162-171.	1.4	55
23	Transformations in oscillatory activity and evoked responses in primary somatosensory cortex in middle age: A combined computational neural modeling and MEG study. NeuroImage, 2010, 52, 897-912.	4.2	44
24	Magnetoencephalographic Characterization of Dynamic Brain Activation: Basic Principles and Methods of Data Collection and Source Analysis. , 2002, , 227-253.		43
25	Human auditory cortical mechanisms of sound lateralization: I. Interaural time differences within sound. Hearing Research, 1993, 67, 89-97.	2.0	42
26	MRI-constrained spectral imaging of benzodiazepine modulation of spontaneous neuromagnetic activity in human cortex. NeuroImage, 2007, 35, 577-582.	4.2	41
27	Auditory processing in noise is associated with complex patterns of disrupted functional connectivity in autism spectrum disorder. Autism Research, 2017, 10, 631-647.	3.8	41
28	Parallel input makes the brain run faster. NeuroImage, 2008, 40, 1792-1797.	4.2	40
29	Localizing on-scalp MEG sensors using an array of magnetic dipole coils. PLoS ONE, 2018, 13, e0191111.	2.5	27
30	Similarities and differences between on-scalp and conventional in-helmet magnetoencephalography recordings. PLoS ONE, 2017, 12, e0178602.	2.5	25
31	MEG versus EEG localization test. Annals of Neurology, 1991, 30, 222-223.	5.3	24
32	Lateralized parietotemporal oscillatory phase synchronization during auditory selective attention. NeuroImage, 2014, 86, 461-469.	4.2	22
33	Boundary Element Fast Multipole Method for Enhanced Modeling of Neurophysiological Recordings. IEEE Transactions on Biomedical Engineering, 2021, 68, 308-318.	4.2	21
34	Benchmarking for On-Scalp MEG Sensors. IEEE Transactions on Biomedical Engineering, 2017, 64, 1270-1276.	4.2	20
35	Permutation Statistics for Connectivity Analysis between Regions of Interest in EEG and MEG Data. Scientific Reports, 2019, 9, 7942.	3.3	18
36	Synchronization patterns reveal neuronal coding of working memory content. Cell Reports, 2021, 36, 109566.	6.4	17

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37	Spatiotemporal Mapping the Neural Correlates of Acupuncture with MEG. Journal of Alternative and Complementary Medicine, 2008, 14, 679-688.	2.1	15
38	Dynamics of Dynamics within a Single Data Acquisition Session: Variation in Neocortical Alpha Oscillations in Human MEG. PLoS ONE, 2011, 6, e24941.	2.5	14
39	Dissociable Influences of Auditory Object vs. Spatial Attention on Visual System Oscillatory Activity. PLoS ONE, 2012, 7, e38511.	2.5	12
40	Functional Mapping with Simultaneous MEG and EEG. Journal of Visualized Experiments, 2010, , .	0.3	11
41	Suppression of irrelevant sounds during auditory working memory. NeuroImage, 2017, 161, 1-8.	4.2	11
42	Sources of Variability in MEG. , 2007, 10, 751-759.		11
43	Auditory Conflict Resolution Correlates with Medialâ€“Lateral Frontal Theta/Alpha Phase Synchrony. PLoS ONE, 2014, 9, e110989.	2.5	10
44	Interacting parallel pathways associate sounds with visual identity in auditory cortices. NeuroImage, 2016, 124, 858-868.	4.2	9
45	MEG Source Localization Using Invariance of Noise Space. PLoS ONE, 2013, 8, e58408.	2.5	8
46	A Distributed Spatio-temporal EEG/MEG Inverse Solver. Lecture Notes in Computer Science, 2008, 11, 26-34.	1.3	6
47	Magnetoencephalography Signal Processing, Forward Modeling, Inverse Source Imaging, and Coherence Analysis. Neuroimaging Clinics of North America, 2020, 30, 125-143.	1.0	6
48	Versatile synchronized real-time MEG hardware controller for large-scale fast data acquisition. Review of Scientific Instruments, 2017, 88, 055110.	1.3	4
49	Multimodal Functional Imaging Using fMRI-Informed Regional EEG/MEG Source Estimation. Lecture Notes in Computer Science, 2009, , 88-100.	1.3	2
50	Viability of sharing MEG data using minimum-norm imaging. Proceedings of SPIE, 2011, , .	0.8	1
51	Auditory cues facilitate object movement processing in human extrastriate visual cortex during simulated self-motion: A pilot study. Brain Research, 2021, 1765, 147489.	2.2	1
52	A novel time-delayed correlation method decomposes mismatch response without using subtraction. , 2021, 2021, 484-487.		1
53	A Novel Approach to Estimating the Cortical Sources of Sleep Spindles Using Simultaneous EEG/MEG. Frontiers in Neurology, 0, 13, .	2.4	1
54	Multiscale Modeling of EEG/MEG Response of a Compact Cluster of Tightly Spaced Pyramidal Neocortical Neurons. , 2021, , 195-211.		0

#	Article	IF	Citations
55	Weighted Blind Source Separation Can Decompose the Frequency Mismatch Response by Deviant Concatenation: An MEG Study. Frontiers in Neurology, 2022, 13, 762497.	2.4	0