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	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
2	Boundary Element Fast Multipole Method for Enhanced Modeling of Neurophysiological Recordings. IEEE Transactions on Biomedical Engineering, 2021, 68, 308-318.	4.2	21
3	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
4	Synchronization patterns reveal neuronal coding of working memory content. Cell Reports, 2021, 36, 109566.	6.4	17
5	Multiscale Modeling of EEG/MEG Response of a Compact Cluster of Tightly Spaced Pyramidal Neocortical Neurons. , 2021, , 195-211.		0
6	A novel time-delayed correlation method decomposes mismatch response without using subtraction. , 2021, 2021, 484-487.		1
7	Magnetoencephalography Signal Processing, Forward Modeling, Inverse Source Imaging, and Coherence Analysis. Neuroimaging Clinics of North America, 2020, 30, 125-143.	1.0	6
8	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
9	Permutation Statistics for Connectivity Analysis between Regions of Interest in EEG and MEG Data. Scientific Reports, 2019, 9, 7942.	3.3	18
10	IFCN-endorsed practical guidelines for clinical magnetoencephalography (MEG). Clinical Neurophysiology, 2018, 129, 1720-1747.	1.5	111
11	Localizing on-scalp MEG sensors using an array of magnetic dipole coils. PLoS ONE, 2018, 13, e0191111.	2.5	27
12	Versatile synchronized real-time MEG hardware controller for large-scale fast data acquisition. Review of Scientific Instruments, 2017, 88, 055110.	1.3	4
13	Benchmarking for On-Scalp MEG Sensors. IEEE Transactions on Biomedical Engineering, 2017, 64, 1270-1276.	4.2	20
14	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
15	Suppression of irrelevant sounds during auditory working memory. NeuroImage, 2017, 161, 1-8.	4.2	11
16	A Review of Issues Related to Data Acquisition and Analysis in EEG/MEG Studies. Brain Sciences, 2017, 7, 58.	2.3	112
17	Similarities and differences between on-scalp and conventional in-helmet magnetoencephalography recordings. PLoS ONE, 2017, 12, e0178602.	2.5	25
18	BabyMEG: A whole-head pediatric magnetoencephalography system for human brain development research. Review of Scientific Instruments, 2016, 87, 094301.	1.3	66

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19	Interacting parallel pathways associate sounds with visual identity in auditory cortices. NeuroImage, 2016, 124, 858-868.	4.2	9
20	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
21	Auditory Conflict Resolution Correlates with Medialâ€“Lateral Frontal Theta/Alpha Phase Synchrony. PLoS ONE, 2014, 9, e110989.	2.5	10
22	Lateralized parietotemporal oscillatory phase synchronization during auditory selective attention. NeuroImage, 2014, 86, 461-469.	4.2	22
23	Location specific sleep spindle activity in the early visual areas and perceptual learning. Vision Research, 2014, 99, 162-171.	1.4	55
24	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
25	Dynamic Oscillatory Processes Governing Cued Orienting and Allocation of Auditory Attention. Journal of Cognitive Neuroscience, 2013, 25, 1926-1943.	2.3	65
26	MEG and EEG data analysis with MNE-Python. Frontiers in Neuroscience, 2013, 7, 267.	2.8	1,864
27	MEG Source Localization Using Invariance of Noise Space. PLoS ONE, 2013, 8, e58408.	2.5	8
28	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
29	Dissociable Influences of Auditory Object vs. Spatial Attention on Visual System Oscillatory Activity. PLoS ONE, 2012, 7, e38511.	2.5	12
30	Viability of sharing MEG data using minimum-norm imaging. Proceedings of SPIE, 2011, , .	0.8	1
31	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
32	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
33	Functional Mapping with Simultaneous MEG and EEG. Journal of Visualized Experiments, 2010, , .	0.3	11
34	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
35	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
36	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

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37	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
38	Multimodal Functional Imaging Using fMRI-Informed Regional EEG/MEG Source Estimation. Lecture Notes in Computer Science, 2009, , 88-100.	1.3	2
39	A Distributed Spatio-temporal EEG/MEG Inverse Solver. Lecture Notes in Computer Science, 2008, 11, 26-34.	1.3	6
40	Parallel input makes the brain run faster. NeuroImage, 2008, 40, 1792-1797.	4.2	40
41	Spatiotemporal Mapping the Neural Correlates of Acupuncture with MEG. Journal of Alternative and Complementary Medicine, 2008, 14, 679-688.	2.1	15
42	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
43	Neural Correlates of Tactile Detection: A Combined Magnetoencephalography and Biophysically Based Computational Modeling Study. Journal of Neuroscience, 2007, 27, 10751-10764.	3.6	142
44	MRI-constrained spectral imaging of benzodiazepine modulation of spontaneous neuromagnetic activity in human cortex. NeuroImage, 2007, 35, 577-582.	4.2	41
45	Sources of Variability in MEG. , 2007, 10, 751-759.		11
46	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
47	Magnetoencephalographic Characterization of Dynamic Brain Activation: Basic Principles and Methods of Data Collection and Source Analysis. , 2002, , 227-253.		43
48	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
49	Human auditory cortical mechanisms of sound lateralization: I. Interaural time differences within sound. Hearing Research, 1993, 67, 89-97.	2.0	42
50	Seeing speech: visual information from lip movements modifies activity in the human auditory cortex. Neuroscience Letters, 1991, 127, 141-145.	2.1	371
51	Landau-Kleffner syndrome. NeuroReport, 1991, 2, 201-204.	1.2	55
52	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
53	MEG versus EEG localization test. Annals of Neurology, 1991, 30, 222-223.	5.3	24
54	Neuromagnetic steadyâ€€state responses to auditory stimuli. Journal of the Acoustical Society of America, 1989, 86, 1033-1039.	1.1	178

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55	A Novel Approach to Estimating the Cortical Sources of Sleep Spindles Using Simultaneous EEG/MEG. Frontiers in Neurology, 0, 13, .	2.4	1