

# Marcello Massimini

## List of Publications by Year in Descending Order

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**Version:** 2024-04-28

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

112  
papers

13,531  
citations

54  
h-index

116  
g-index

121  
ext. papers

16,705  
ext. citations

6.9  
avg, IF

6.36  
L-index

#	Paper	IF	Citations
112	The rt-TEP tool: real-time visualization of TMS-Evoked Potentials to maximize cortical activation and minimize artifacts.. <i>Journal of Neuroscience Methods</i> , <b>2022</b> , 370, 109486	3	8
111	Quantifying arousal and awareness in altered states of consciousness using interpretable deep learning.. <i>Nature Communications</i> , <b>2022</b> , 13, 1064	17.4	1
110	Measures of differentiation and integration: One step closer to consciousness.. <i>Behavioral and Brain Sciences</i> , <b>2022</b> , 45, e54	0.9	
109	Spontaneous and Perturbational Complexity in Cortical Cultures. <i>Brain Sciences</i> , <b>2021</b> , 11,	3.4	2
108	Mechanisms Underlying Disorders of Consciousness: Bridging Gaps to Move Toward an Integrated Translational Science. <i>Neurocritical Care</i> , <b>2021</b> , 35, 37-54	3.3	7
107	Simultaneous human intracerebral stimulation and HD-EEG, ground-truth for source localization methods. <i>Scientific Data</i> , <b>2020</b> , 7, 127	8.2	9
106	Cortical Excitability, Plasticity and Oscillations in Major Psychiatric Disorders: A Neuronavigated TMS-EEG Based Approach <b>2020</b> , 209-222		
105	Are There Islands of Awareness?. <i>Trends in Neurosciences</i> , <b>2020</b> , 43, 6-16	13.3	24
104	Local sleep-like cortical reactivity in the awake brain after focal injury. <i>Brain</i> , <b>2020</b> , 143, 3672-3684	11.2	12
103	Subcortical atrophy correlates with the perturbational complexity index in patients with disorders of consciousness. <i>Brain Stimulation</i> , <b>2020</b> , 13, 1426-1435	5.1	6
102	Reproducibility in TMS-EEG studies: A call for data sharing, standard procedures and effective experimental control. <i>Brain Stimulation</i> , <b>2019</b> , 12, 787-790	5.1	58
101	A fast and general method to empirically estimate the complexity of brain responses to transcranial and intracranial stimulations. <i>Brain Stimulation</i> , <b>2019</b> , 12, 1280-1289	5.1	24
100	Sleep as a model to understand neuroplasticity and recovery after stroke: Observational, perturbational and interventional approaches. <i>Journal of Neuroscience Methods</i> , <b>2019</b> , 313, 37-43	3	7
99	Assessing recurrent interactions in cortical networks: Modeling EEG response to transcranial magnetic stimulation. <i>Journal of Neuroscience Methods</i> , <b>2019</b> , 312, 93-104	3	3
98	The spectral exponent of the resting EEG indexes the presence of consciousness during unresponsiveness induced by propofol, xenon, and ketamine. <i>NeuroImage</i> , <b>2019</b> , 189, 631-644	7.9	62
97	Cerebral organoids: ethical issues and consciousness assessment. <i>Journal of Medical Ethics</i> , <b>2018</b> , 44, 606-610	2.5	59
96	Human fronto-parietal response scattering subserves vigilance at night. <i>NeuroImage</i> , <b>2018</b> , 175, 354-364	7.9	14

95	Bistability, Causality, and Complexity in Cortical Networks: An In Vitro Perturbational Study. <i>Cerebral Cortex</i> , <b>2018</b> , 28, 2233-2242	5.1	29
94	Cerebral organoids and consciousness: how far are we willing to go?. <i>Journal of Medical Ethics</i> , <b>2018</b> , 44, 613-614	2.5	15
93	Global structural integrity and effective connectivity in patients with disorders of consciousness. <i>Brain Stimulation</i> , <b>2018</b> , 11, 358-365	5.1	26
92	Meditation-induced modulation of brain response to transcranial magnetic stimulation. <i>Brain Stimulation</i> , <b>2018</b> , 11, 1397-1400	5.1	7
91	Tracking Dynamic Interactions Between Structural and Functional Connectivity: A TMS/EEG-dMRI Study. <i>Brain Connectivity</i> , <b>2017</b> , 7, 84-97	2.7	17
90	Measures of metabolism and complexity in the brain of patients with disorders of consciousness. <i>NeuroImage: Clinical</i> , <b>2017</b> , 14, 354-362	5.3	78
89	Shaping the Default Activity Pattern of the Cortical Network. <i>Neuron</i> , <b>2017</b> , 94, 993-1001	13.9	77
88	Are the Neural Correlates of Consciousness in the Front or in the Back of the Cerebral Cortex? Clinical and Neuroimaging Evidence. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 9603-9613	6.6	192
87	Global and local complexity of intracranial EEG decreases during NREM sleep. <i>Neuroscience of Consciousness</i> , <b>2017</b> , 2017, niw022	3.3	52
86	Consciousness Regained: Disentangling Mechanisms, Brain Systems, and Behavioral Responses. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 10882-10893	6.6	63
85	The spectral features of EEG responses to transcranial magnetic stimulation of the primary motor cortex depend on the amplitude of the motor evoked potentials. <i>PLoS ONE</i> , <b>2017</b> , 12, e0184910	3.7	60
84	The Potential of nTMS/EEG: Measuring Consciousness <b>2017</b> , 257-265		
83	Functional Neuroimaging Techniques <b>2016</b> , 31-47		0
82	Consciousness and cortical responsiveness: a within-state study during non-rapid eye movement sleep. <i>Scientific Reports</i> , <b>2016</b> , 6, 30932	4.9	34
81	Circadian dynamics in measures of cortical excitation and inhibition balance. <i>Scientific Reports</i> , <b>2016</b> , 6, 33661	4.9	46
80	Exploring the Neurophysiological Correlates of Loss and Recovery of Consciousness: Perturbational Complexity <b>2016</b> , 93-104		2
79	Circadian regulation of human cortical excitability. <i>Nature Communications</i> , <b>2016</b> , 7, 11828	17.4	89
78	Integrated information theory: from consciousness to its physical substrate. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 450-61	13.5	543

77	Neural correlates of consciousness: progress and problems. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 307-315	21.5	591
76	Stratification of unresponsive patients by an independently validated index of brain complexity. <i>Annals of Neurology</i> , <b>2016</b> , 80, 718-729	9.4	180
75	Posterior and anterior cortex - where is the difference that makes the difference?. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 666	13.5	30
74	Erratum to "Consensus Paper: Probing Homeostatic Plasticity of Human Cortex With Non-invasive Transcranial Brain Stimulation" <i>Brain Stimulation</i> 8 (2015) 442-454. <i>Brain Stimulation</i> , <b>2015</b> , 8, 992	5.1	2
73	Shared reduction of oscillatory natural frequencies in bipolar disorder, major depressive disorder and schizophrenia. <i>Journal of Affective Disorders</i> , <b>2015</b> , 184, 111-5	6.6	37
72	Bistability breaks-off deterministic responses to intracortical stimulation during non-REM sleep. <i>NeuroImage</i> , <b>2015</b> , 112, 105-113	7.9	98
71	Transcranial Magnetic Stimulation and Electroencephalography <b>2015</b> , 125-132		
70	Consciousness and Complexity during Unresponsiveness Induced by Propofol, Xenon, and Ketamine. <i>Current Biology</i> , <b>2015</b> , 25, 3099-105	6.3	189
69	On the cerebral origin of EEG responses to TMS: insights from severe cortical lesions. <i>Brain Stimulation</i> , <b>2015</b> , 8, 142-9	5.1	55
68	Stimulus set meaningfulness and neurophysiological differentiation: a functional magnetic resonance imaging study. <i>PLoS ONE</i> , <b>2015</b> , 10, e0125337	3.7	39
67	Consensus Paper: Probing Homeostatic Plasticity of Human Cortex With Non-invasive Transcranial Brain Stimulation. <i>Brain Stimulation</i> , <b>2015</b> , 8, 442-54	5.1	78
66	Consensus Paper: Probing Homeostatic Plasticity of Human Cortex With Non-invasive Transcranial Brain Stimulation. <i>Brain Stimulation</i> , <b>2015</b> , 8, 993-1006	5.1	74
65	Assessing consciousness in coma and related states using transcranial magnetic stimulation combined with electroencephalography. <i>Annales Francaises DAnesthesie Et De Reanimation</i> , <b>2014</b> , 33, 65-71		26
64	Quantifying cortical EEG responses to TMS in (un)consciousness. <i>Clinical EEG and Neuroscience</i> , <b>2014</b> , 45, 40-9	2.3	77
63	Reduced mediodorsal thalamic volume and prefrontal cortical spindle activity in schizophrenia. <i>NeuroImage</i> , <b>2014</b> , 102 Pt 2, 540-7	7.9	52
62	Transcranial magnetic stimulation combined with high-density EEG in altered states of consciousness. <i>Brain Injury</i> , <b>2014</b> , 28, 1180-9	2.1	29
61	Directed information transfer in scalp electroencephalographic recordings: insights on disorders of consciousness. <i>Clinical EEG and Neuroscience</i> , <b>2014</b> , 45, 33-9	2.3	28
60	Hippocampal sleep spindles preceding neocortical sleep onset in humans. <i>NeuroImage</i> , <b>2014</b> , 86, 425-32	7.9	61

59	Fluid boundaries between wake and sleep: experimental evidence from Stereo-EEG recordings. <i>Archives Italiennes De Biologie</i> , <b>2014</b> , 152, 169-77	1.1	23
58	Human cortical excitability increases with time awake. <i>Cerebral Cortex</i> , <b>2013</b> , 23, 332-8	5.1	170
57	Sleep and Consciousness <b>2013</b> , 133-182		14
56	Assessing the effects of electroconvulsive therapy on cortical excitability by means of transcranial magnetic stimulation and electroencephalography. <i>Brain Topography</i> , <b>2013</b> , 26, 326-37	4.3	54
55	The PredictAD project: development of novel biomarkers and analysis software for early diagnosis of the Alzheimer's disease. <i>Interface Focus</i> , <b>2013</b> , 3, 20120072	3.9	19
54	A theoretically based index of consciousness independent of sensory processing and behavior. <i>Science Translational Medicine</i> , <b>2013</b> , 5, 198ra105	17.5	553
53	Brain connectivity in disorders of consciousness. <i>Brain Connectivity</i> , <b>2012</b> , 2, 1-10	2.7	69
52	Using Transcranial Magnetic Stimulation to Measure Cerebral Connectivity in Patients with Disorders of Consciousness <b>2012</b> , 79-84		
51	Slow EEG rhythms and inter-hemispheric synchronization across sleep and wakefulness in the human hippocampus. <i>NeuroImage</i> , <b>2012</b> , 60, 497-504	7.9	39
50	Multivariate autoregressive models with exogenous inputs for intracerebral responses to direct electrical stimulation of the human brain. <i>Frontiers in Human Neuroscience</i> , <b>2012</b> , 6, 317	3.3	21
49	Recovery of cortical effective connectivity and recovery of consciousness in vegetative patients. <i>Brain</i> , <b>2012</b> , 135, 1308-20	11.2	285
48	Reduced natural oscillatory frequency of frontal thalamocortical circuits in schizophrenia. <i>Archives of General Psychiatry</i> , <b>2012</b> , 69, 766-74		91
47	Computational Study of Rhythm Propagation Induced by TMS Stimuli in Different Brain Regions. <i>Studies in Computational Intelligence</i> , <b>2012</b> , 389-403	0.8	
46	A neural mass model of interconnected regions simulates rhythm propagation observed via TMS-EEG. <i>NeuroImage</i> , <b>2011</b> , 57, 1045-58	7.9	52
45	Preserved feedforward but impaired top-down processes in the vegetative state. <i>Science</i> , <b>2011</b> , 332, 858-62	33.3	370
44	Propofol anesthesia and sleep: a high-density EEG study. <i>Sleep</i> , <b>2011</b> , 34, 283-91A	1.1	257
43	Transcranial magnetic stimulation-evoked EEG/cortical potentials in physiological and pathological aging. <i>NeuroReport</i> , <b>2011</b> , 22, 592-7	1.7	46
42	Combining Transcranial Magnetic Stimulation with Electroencephalography to Study Human Cortical Excitability and Effective Connectivity. <i>NeuroMethods</i> , <b>2011</b> , 435-457	0.4	12

41	Time-frequency spectral analysis of TMS-evoked EEG oscillations by means of Hilbert-Huang transform. <i>Journal of Neuroscience Methods</i> , <b>2011</b> , 198, 236-45	3	41
40	Electrophysiological correlates of behavioural changes in vigilance in vegetative state and minimally conscious state. <i>Brain</i> , <b>2011</b> , 134, 2222-32	11.2	103
39	Response to Comment on "Preserved Feedforward But Impaired Top-Down Processes in the Vegetative State". <i>Science</i> , <b>2011</b> , 334, 1203-1203	33.3	44
38	New insights into Alzheimer's disease progression: a combined TMS and structural MRI study. <i>PLoS ONE</i> , <b>2011</b> , 6, e26113	3.7	32
37	The cortical topography of local sleep. <i>Current Topics in Medicinal Chemistry</i> , <b>2011</b> , 11, 2438-46	3	39
36	EEG responses to TMS are sensitive to changes in the perturbation parameters and repeatable over time. <i>PLoS ONE</i> , <b>2010</b> , 5, e10281	3.7	140
35	Breakdown in cortical effective connectivity during midazolam-induced loss of consciousness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 2681-6	11.5	340
34	General indices to characterize the electrical response of the cerebral cortex to TMS. <i>NeuroImage</i> , <b>2010</b> , 49, 1459-68	7.9	108
33	Cortical reactivity and effective connectivity during REM sleep in humans. <i>Cognitive Neuroscience</i> , <b>2010</b> , 1, 176-183	1.7	130
32	Source modeling sleep slow waves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 1608-13	11.5	318
31	Consensus paper: combining transcranial stimulation with neuroimaging. <i>Brain Stimulation</i> , <b>2009</b> , 2, 58-80	9.1	239
30	Augmentative repetitive navigated transcranial magnetic stimulation (rTMS) in drug-resistant bipolar depression. <i>Bipolar Disorders</i> , <b>2009</b> , 11, 76-81	3.8	103
29	Slow waves, synaptic plasticity and information processing: insights from transcranial magnetic stimulation and high-density EEG experiments. <i>European Journal of Neuroscience</i> , <b>2009</b> , 29, 1761-70	3.5	97
28	Natural frequencies of human corticothalamic circuits. <i>Journal of Neuroscience</i> , <b>2009</b> , 29, 7679-85	6.6	428
27	A perturbational approach for evaluating the brain's capacity for consciousness. <i>Progress in Brain Research</i> , <b>2009</b> , 177, 201-14	2.9	100
26	Theoretical approaches to the diagnosis of altered states of consciousness. <i>Progress in Brain Research</i> , <b>2009</b> , 177, 383-98	2.9	34
25	The slow-wave components of the cyclic alternating pattern (CAP) have a role in sleep-related learning processes. <i>Neuroscience Letters</i> , <b>2008</b> , 432, 228-31	3.3	56
24	Reduced evoked gamma oscillations in the frontal cortex in schizophrenia patients: a TMS/EEG study. <i>American Journal of Psychiatry</i> , <b>2008</b> , 165, 996-1005	11.9	166

23	Why does consciousness fade in early sleep?. <i>Annals of the New York Academy of Sciences</i> , <b>2008</b> , 1129, 330-4	6.5	70
22	Sleep, Consciousness and the Brain: A Perturbational Approach <b>2008</b> , 253-258		
21	TMS-induced cortical potentiation during wakefulness locally increases slow wave activity during sleep. <i>PLoS ONE</i> , <b>2007</b> , 2, e276	3.7	161
20	Sleep homeostasis and cortical synchronization: III. A high-density EEG study of sleep slow waves in humans. <i>Sleep</i> , <b>2007</b> , 30, 1643-57	1.1	272
19	Triggering sleep slow waves by transcranial magnetic stimulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 8496-501	11.5	311
18	Reduced sleep spindle activity in schizophrenia patients. <i>American Journal of Psychiatry</i> , <b>2007</b> , 164, 483-92	11.9	335
17	Repetitive transcranial magnetic stimulation dissociates working memory manipulation from retention functions in the prefrontal, but not posterior parietal, cortex. <i>Journal of Cognitive Neuroscience</i> , <b>2006</b> , 18, 1712-22	3.1	107
16	A direct demonstration of cortical LTP in humans: a combined TMS/EEG study. <i>Brain Research Bulletin</i> , <b>2006</b> , 69, 86-94	3.9	251
15	Sleepy dialogues between cortex and hippocampus: who talks to whom?. <i>Neuron</i> , <b>2006</b> , 52, 748-9	13.9	26
14	Arm immobilization causes cortical plastic changes and locally decreases sleep slow wave activity. <i>Nature Neuroscience</i> , <b>2006</b> , 9, 1169-76	25.5	432
13	Breakdown of cortical effective connectivity during sleep. <i>Science</i> , <b>2005</b> , 309, 2228-32	33.3	1049
12	The sleep slow oscillation as a traveling wave. <i>Journal of Neuroscience</i> , <b>2004</b> , 24, 6862-70	6.6	754
11	Local sleep and learning. <i>Nature</i> , <b>2004</b> , 430, 78-81	50.4	1362
10	A [17F]-fluoromethane PET/TMS study of effective connectivity. <i>Brain Research Bulletin</i> , <b>2004</b> , 64, 103-13	13.9	45
9	EEG slow (approximately 1 Hz) waves are associated with nonstationarity of thalamo-cortical sensory processing in the sleeping human. <i>Journal of Neurophysiology</i> , <b>2003</b> , 89, 1205-13	3.2	92
8	Spatial buffering during slow and paroxysmal sleep oscillations in cortical networks of glial cells in vivo. <i>Journal of Neuroscience</i> , <b>2002</b> , 22, 1042-53	6.6	160
7	Glial and neuronal interactions during slow wave and paroxysmal activities in the neocortex. <i>Cerebral Cortex</i> , <b>2002</b> , 12, 1101-13	5.1	72
6	Extracellular calcium fluctuations and intracellular potentials in the cortex during the slow sleep oscillation. <i>Journal of Neurophysiology</i> , <b>2001</b> , 85, 1346-50	3.2	120

5	Effects of spinal section and of positive-feedback excitatory reflex on sympathetic and heart rate variability. <i>Hypertension</i> , <b>2000</b> , 36, 1029-34	8.5	36
4	A fast and general method to empirically estimate the complexity of brain responses to transcranial and intracranial stimulations		1
3	Are the neural correlates of consciousness in the front or in the back of the cerebral cortex? Clinical and neuroimaging evidence		2
2	Depth of sedation with dexmedetomidine modulates cortical excitability non-linearly		1
1	Consciousness and complexity: a consilience of evidence. <i>Neuroscience of Consciousness</i> ,	3-3	4