Michael Wibral

List of Publications by Year
in descending order

130 papers	9,735 citations	50276 46 h-index	45317 90 g-index
149 all docs	149 docs citations	149 times ranked	10872 citing authors

#	Article	IF	Citations
1	Elimination versus mitigation of SARS-CoV-2 in the presence of effective vaccines. The Lancet Global Health, 2022, 10, e142-e147.	6.3	35
2	Rethinking COVID-19 vaccine allocation: it is time to care about our neighbours. Lancet Regional Health - Europe, The, 2022, 12, 100277.	5.6	3
3	The benefits, costs and feasibility of a low incidence COVID-19 strategy. Lancet Regional Health - Europe, The, 2022, 13, 100294.	5.6	17
4	New year, new SARS-CoV-2 variant: Resolutions on genomic surveillance protocols to face Omicron. The Lancet Regional Health Americas, 2022, 7, 100203.	2.6	3
5	Early lock-in of structured and specialised information flows during neural development. ELife, 2022, 11, .	6.0	3
6	Calling for pan-European commitment for rapid and sustained reduction in SARS-CoV-2 infections. Lancet, The, 2021, 397, 92-93.	13.7	71
7	Introducing a differentiable measure of pointwise shared information. Physical Review E, 2021, 103, 032149.	2.1	20
8	Right inferior frontal gyrus implements motor inhibitory control via beta-band oscillations in humans. ELife, 2021, 10, .	6.0	42
9	Assessing criticality in pre-seizure single-neuron activity of human epileptic cortex. PLoS Computational Biology, 2021, 17, e1008773.	3.2	19
10	Presynaptic activity and protein turnover are correlated at the single-synapse level. Cell Reports, 2021, 34, 108841.	6.4	16
11	A neural correlate of visual feature binding in primate lateral prefrontal cortex. NeuroImage, 2021, 229, 117757.	4.2	9
12	Self-Organization Toward Criticality by Synaptic Plasticity. Frontiers in Physics, 2021, 9, .	2.1	50
13	Predictive Coding Over the Lifespan: Increased Reliance on Perceptual Priors in Older Adults—A Magnetoencephalography and Dynamic Causal Modeling Study. Frontiers in Aging Neuroscience, 2021, 13, 631599.	3.4	15
14	Embedding optimization reveals long-lasting history dependence in neural spiking activity. PLoS Computational Biology, 2021, 17, e1008927.	3.2	7
15	Risking further COVID-19 waves despite vaccination. Lancet Infectious Diseases, The, 2021, 21, 745-746.	9.1	37
16	Reducing the Mobility of SARS-CoV-2 Variants to Safeguard Containments. Intereconomics, 2021, 56, 234-236.	2.2	2
17	Towards a European strategy to address the COVID-19 pandemic. Lancet, The, 2021, 398, 838-839.	13.7	36
18	Relaxing restrictions at the pace of vaccination increases freedom and guards against further COVID-19 waves. PLoS Computational Biology, 2021, 17, e1009288.	3.2	47

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19	A look into the future of the COVID-19 pandemic in Europe: an expert consultation. Lancet Regional Health - Europe, The, 2021, 8, 100185.	5.6	72
20	The challenges of containing SARS-CoV-2 via test-trace-and-isolate. Nature Communications, 2021, 12, 378.	12.8	123
21	Perceptual Gains and Losses in Synesthesia and Schizophrenia. Schizophrenia Bulletin, 2021, 47, 722-730.	4.3	6
22	Low case numbers enable long-term stable pandemic control without lockdowns. Science Advances, 2021, 7, eabg2243.	10.3	25
23	Local dendritic balance enables learning of efficient representations in networks of spiking neurons. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	13
24	Implications of Information Theory for Computational Modeling of Schizophrenia. Computational Psychiatry, 2020, 1, 82.	2.0	18
25	Scientific consensus on the COVID-19 pandemic: we need to act now. Lancet, The, 2020, 396, e71-e72.	13.7	189
26	The UK needs a sustainable strategy for COVID-19. Lancet, The, 2020, 396, 1800-1801.	13.7	23
27	A MEG Study of Visual Repetition Priming in Schizophrenia: Evidence for Impaired High-Frequency Oscillations and Event-Related Fields in Thalamo-Occipital Cortices. Frontiers in Psychiatry, 2020, 11, 561973.	2.6	5
28	Characterizing spreading dynamics of subsampled systems with nonstationary external input. Physical Review E, 2020, 102, 040301.	2.1	3
29	Inferring change points in the spread of COVID-19 reveals the effectiveness of interventions. Science, 2020, 369, .	12.6	648
30	Significance of Beta-Band Oscillations in Autism Spectrum Disorders During Motor Response Inhibition Tasks: A MEG Study. Brain Topography, 2020, 33, 355-374.	1.8	4
31	Control of criticality and computation in spiking neuromorphic networks with plasticity. Nature Communications, 2020, 11, 2853.	12.8	70
32	Description of spreading dynamics by microscopic network models and macroscopic branching processes can differ due to coalescence. Physical Review E, 2020, 101, 022301.	2.1	18
33	Tailored ensembles of neural networks optimize sensitivity to stimulus statistics. Physical Review Research, 2020, 2, .	3.6	15
34	Measuring spectrally-resolved information transfer. PLoS Computational Biology, 2020, 16, e1008526.	3.2	21
35	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0
36	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0

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37	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0
38	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0
39	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0
40	Measuring spectrally-resolved information transfer. , 2020, 16, e1008526.		0
41	Large-scale directed network inference with multivariate transfer entropy and hierarchical statistical testing. Network Neuroscience, 2019, 3, 827-847.	2.6	68
42	Microtiming Deviations and Swing Feel in Jazz. Scientific Reports, 2019, 9, 19824.	3.3	7
43	Assessing Criticality in Experiments. Springer Series on Bio- and Neurosystems, 2019, , 199-232.	0.2	4
44	Fading Memory, Plasticity, and Criticality in Recurrent Networks. Springer Series on Bio- and Neurosystems, 2019, , 95-115.	0.2	4
45	IDTxl: The Information Dynamics Toolkit xl: a Python package for the efficient analysis of multivariate information dynamics in networks. Journal of Open Source Software, 2019, 4, 1081.	4.6	69
46	Predictable information in neural signals during resting state is reduced in autism spectrum disorder. Human Brain Mapping, 2018, 39, 3227-3240.	3.6	20
47	Endogenously generated gamma€band oscillations in early visual cortex: A neurofeedback study. Human Brain Mapping, 2018, 39, 3487-3502.	3.6	5
48	Operating in a Reverberating Regime Enables Rapid Tuning of Network States to Task Requirements. Frontiers in Systems Neuroscience, 2018, 12, 55.	2.5	40
49	Can a time varying external drive give rise to apparent criticality in neural systems?. PLoS Computational Biology, 2018, 14, e1006081.	3.2	39
50	Homeostatic Plasticity and External Input Shape Neural Network Dynamics. Physical Review X, 2018, 8, .	8.9	38
51	Information Decomposition of Target Effects from Multi-Source Interactions: Perspectives on Previous, Current and Future Work. Entropy, 2018, 20, 307.	2.2	89
52	Acute ketamine dysregulates task-related gamma-band oscillations in thalamo-cortical circuits in schizophrenia. Brain, 2018, 141, 2511-2526.	7.6	51
53	Inferring collective dynamical states from widely unobserved systems. Nature Communications, 2018, 9, 2325.	12.8	89
54	Correlated microtiming deviations in jazz and rock music. PLoS ONE, 2018, 13, e0186361.	2.5	4

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55	Resting-state gamma-band power alterations in schizophrenia reveal E/I-balance abnormalities across illness-stages. ELife, 2018, 7, .	6.0	92
56	Partial information decomposition as a unified approach to the specification of neural goal functions. Brain and Cognition, 2017, 112, 25-38.	1.8	93
57	The resilience framework as a strategy to combat stress-related disorders. Nature Human Behaviour, 2017, 1, 784-790.	12.0	420
58	Neural Architecture of Selective Stopping Strategies: Distinct Brain Activity Patterns Are Associated with Attentional Capture But Not with Outright Stopping. Journal of Neuroscience, 2017, 37, 9785-9794.	3.6	25
59	Impairment in predictive processes during auditory mismatch negativity in ScZ: Evidence from event†related fields. Human Brain Mapping, 2017, 38, 5082-5093.	3.6	21
60	Information-Theoretic Evidence for Predictive Coding in the Face-Processing System. Journal of Neuroscience, 2017, 37, 8273-8283.	3.6	34
61	Interhemispheric Binding of Ambiguous Visual Motion Is Associated with Changes in Beta Oscillatory Activity but Not with Gamma Range Synchrony. Journal of Cognitive Neuroscience, 2017, 29, 1829-1844.	2.3	8
62	Criticality meets learning: Criticality signatures in a self-organizing recurrent neural network. PLoS ONE, 2017, 12, e0178683.	2.5	52
63	Breakdown of local information processing may underlie isoflurane anesthesia effects. PLoS Computational Biology, 2017, 13, e1005511.	3.2	52
64	Quantifying Information Modification in Developing Neural Networks via Partial Information Decomposition. Entropy, 2017, 19, 494.	2.2	47
65	Whole-Brain Source-Reconstructed MEG-Data Reveal Reduced Long-Range Synchronization in Chronic Schizophrenia. ENeuro, 2017, 4, ENEURO.0338-17.2017.	1.9	32
66	Early effects of previous experience on conscious perception. Neuroscience of Consciousness, 2016, 2016, niw004.	2.6	33
67	MEG-measured visually induced gamma-band oscillations in chronic schizophrenia: Evidence for impaired generation of rhythmic activity in ventral stream regions. Schizophrenia Research, 2016, 176, 177-185.	2.0	42
68	Dissociable attentional and inhibitory networks of dorsal and ventral areas of the right inferior frontal cortex: a combined task-specific and coordinate-based meta-analytic fMRI study. Brain Structure and Function, 2016, 221, 1635-1651.	2.3	67
69	Expecting to See a Letter: Alpha Oscillations as Carriers of Top-Down Sensory Predictions. Cerebral Cortex, 2016, 26, 3146-3160.	2.9	88
70	Quantifying the distance to criticality under subsampling. BMC Neuroscience, 2015, 16, .	1.9	0
71	Bits from Brains for Biologically Inspired Computing. Frontiers in Robotics and AI, 2015, 2, .	3.2	74
72	Anesthesia-related changes in information transfer may be caused by reduction in local information generation. , 2015, 2015, 4045-8.		5

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73	The Faces of Predictive Coding. Journal of Neuroscience, 2015, 35, 8997-9006.	3.6	74
74	Ketamine Dysregulates the Amplitude and Connectivity of High-Frequency Oscillations in Cortical–Subcortical Networks in Humans: Evidence From Resting-State Magnetoencephalography-Recordings. Schizophrenia Bulletin, 2015, 41, 1105-1114.	4.3	126
75	Untangling cross-frequency coupling in neuroscience. Current Opinion in Neurobiology, 2015, 31, 51-61.	4.2	455
76	A Graph Algorithmic Approach to Separate Direct from Indirect Neural Interactions. PLoS ONE, 2015, 10, e0140530.	2.5	12
77	Local active information storage as a tool to understand distributed neural information processing. Frontiers in Neuroinformatics, 2014, 8, 1.	2.5	168
78	Reduced predictable information in brain signals in autism spectrum disorder. Frontiers in Neuroinformatics, 2014, 8, 9.	2.5	45
79	Transfer Entropy in Neuroscience. Understanding Complex Systems, 2014, , 3-36.	0.6	67
80	The dual facet of gamma oscillations: Separate visual and decision making circuits as revealed by simultaneous EEG/fMRI. Human Brain Mapping, 2014, 35, 5219-5235.	3.6	45
81	How to measure local active information storage in neural systems. , 2014, , .		2
82	Source-Reconstruction of Event-Related Fields Reveals Hyperfunction and Hypofunction of Cortical Circuits in Antipsychotic-Naive, First-Episode Schizophrenia Patients during Mooney Face Processing. Journal of Neuroscience, 2014, 34, 5909-5917.	3.6	58
83	Directed Information Measures in Neuroscience. Understanding Complex Systems, 2014, , .	0.6	95
84	Spike avalanches in vivo suggest a driven, slightly subcritical brain state. Frontiers in Systems Neuroscience, 2014, 8, 108.	2.5	246
85	Efficient Estimation of Information Transfer. Understanding Complex Systems, 2014, , 37-58.	0.6	5
86	Efficient Transfer Entropy Analysis of Non-Stationary Neural Time Series. PLoS ONE, 2014, 9, e102833.	2.5	113
87	Learning more by sampling less: subsampling effects are model specific. BMC Neuroscience, 2013, 14, .	1.9	2
88	Neuronal avalanches change from wakefulness to deep sleep - a study of intracranial depth recordings in humans. BMC Neuroscience, 2013, 14, .	1.9	0
89	Graphical analyses in delay interaction networks. BMC Neuroscience, 2013, 14, .	1.9	0
90	Evidence for dysregulated high-frequency oscillations during sensory processing in medication-naïve, first episode schizophrenia. Schizophrenia Research, 2013, 150, 519-525.	2.0	86

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91	Good practice for conducting and reporting MEG research. NeuroImage, 2013, 65, 349-363.	4.2	604
92	Transfer entropy as a tool for reconstructing interaction delays in neural signals. , 2013, , .		3
93	Neuronal Avalanches Differ from Wakefulness to Deep Sleep – Evidence from Intracranial Depth Recordings in Humans. PLoS Computational Biology, 2013, 9, e1002985.	3.2	170
94	The Phase of Thalamic Alpha Activity Modulates Cortical Gamma-Band Activity: Evidence from Resting-State MEG Recordings. Journal of Neuroscience, 2013, 33, 17827-17835.	3.6	154
95	Measuring Information-Transfer Delays. PLoS ONE, 2013, 8, e55809.	2.5	209
96	Brain-wide slowing of spontaneous alpha rhythms in mild cognitive impairment. Frontiers in Aging Neuroscience, 2013, 5, 100.	3.4	78
97	Deficits in high- (>60 Hz) gamma-band oscillations during visual processing in schizophrenia. Frontiers in Human Neuroscience, 2013, 7, 88.	2.0	124
98	Separable Neural Bases for Subprocesses of Recognition in Working Memory. Cerebral Cortex, 2012, 22, 1950-1958.	2.9	19
99	Impaired Gamma-Band Activity during Perceptual Organization in Adults with Autism Spectrum Disorders: Evidence for Dysfunctional Network Activity in Frontal-Posterior Cortices. Journal of Neuroscience, 2012, 32, 9563-9573.	3.6	139
100	Gamma-Band Activity in Human Prefrontal Cortex Codes for the Number of Relevant Items Maintained in Working Memory. Journal of Neuroscience, 2012, 32, 12411-12420.	3.6	279
101	Spatiotemporal Dynamics of Bimanual Integration in Human Somatosensory Cortex and Their Relevance to Bimanual Object Manipulation. Journal of Neuroscience, 2012, 32, 5667-5677.	3.6	28
102	Revisiting Wiener's principle of causality — interaction-delay reconstruction using transfer entropy and multivariate analysis on delay-weighted graphs. , 2012, 2012, 3676-9.		10
103	Quantifying additive evoked contributions to the event-related potential. NeuroImage, 2012, 59, 2607-2624.	4.2	13
104	Setting Up the Speech Production Network: How Oscillations Contribute to Lateralized Information Routing. Frontiers in Psychology, 2012, 3, 169.	2.1	57
105	Repetition of complex frequency-modulated sweeps enhances neuromagnetic responses in the human auditory cortex. Hearing Research, 2011, 282, 216-224.	2.0	7
106	A new look at gamma? High- (>60 Hz) γ-band activity in cortical networks: Function, mechanisms and impairment. Progress in Biophysics and Molecular Biology, 2011, 105, 14-28.	2.9	173
107	Transfer entropy in magnetoencephalographic data: Quantifying information flow in cortical and cerebellar networks. Progress in Biophysics and Molecular Biology, 2011, 105, 80-97.	2.9	166
108	TRENTOOL: A Matlab open source toolbox to analyse information flow in time series data with transfer entropy. BMC Neuroscience, 2011, 12, 119.	1.9	189

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109	Transfer entropy—a model-free measure of effective connectivity for the neurosciences. Journal of Computational Neuroscience, 2011, 30, 45-67.	1.0	753
110	Investigating human audio-visual object perception with a combination of hypothesis-generating and hypothesis-testing fMRI analysis tools. Experimental Brain Research, 2011, 213, 309-320.	1.5	9
111	TRENTOOL: an open source toolbox to estimate neural directed interactions with transfer entropy. BMC Neuroscience, 2011, 12, .	1.9	4
112	Analyzing possible pitfalls of cross-frequency analysis. BMC Neuroscience, 2011, 12, .	1.9	1
113	Neuroelectromagnetic Correlates of Perceptual Closure Processes. Journal of Neuroscience, 2010, 30, 8342-8352.	3.6	74
114	3.7 Integration of Separately Recorded EEG/MEG and fMRI Data. , 2010, , 209-234.		4
115	The Timing of Feedback to Early Visual Cortex in the Perception of Long-Range Apparent Motion. Cerebral Cortex, 2009, 19, 1567-1582.	2.9	66
116	Cortical Oscillatory Activity Is Critical for Working Memory as Revealed by Deficits in Early-Onset Schizophrenia. Journal of Neuroscience, 2009, 29, 9481-9489.	3.6	254
117	Subsampling effects in neuronal avalanche distributions recorded in vivo. BMC Neuroscience, 2009, 10, 40.	1.9	119
118	Response to: Yuval-Greenberg et al., "Transient Induced Gamma-Band Response in EEG as a Manifestation of Miniature Saccades." Neuron 58, 429–441. Neuron, 2009, 62, 8-10.	8.1	34
119	Task- and performance-related modulation of domain-specific auditory short-term memory representations in the gamma-band. NeuroImage, 2009, 46, 1127-1136.	4.2	34
120	Decomposition of working memory-related scalp ERPs: Crossvalidation of fMRI-constrained source analysis and ICA. International Journal of Psychophysiology, 2008, 67, 200-211.	1.0	19
121	Distinct Gamma-Band Components Reflect the Short-Term Memory Maintenance of Different Sound Lateralization Angles. Cerebral Cortex, 2008, 18, 2286-2295.	2.9	43
122	Alpha synchronization during auditory spatial short-term memory. NeuroReport, 2007, 18, 1129-1132.	1.2	26
123	Combining electrophysiology and functional imaging – different methods for different questions. Trends in Cognitive Sciences, 2007, 11, 500-502.	7.8	15
124	Time-dependent effects of hyperoxia on the BOLD fMRI signal in primate visual cortex and LGN. NeuroImage, 2007, 35, 1044-1063.	4.2	18
125	Processing of location and pattern changes of natural sounds in the human auditory cortex. NeuroImage, 2007, 35, 1192-1200.	4.2	85
126	Tight covariation of BOLD signal changes and slow ERPs in the parietal cortex in a parametric spatial imagery task with haptic acquisition. European Journal of Neuroscience, 2006, 23, 1910-1918.	2.6	32

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127	Mental Chronometry of Working Memory Retrieval: A Combined Functional Magnetic Resonance Imaging and Event-Related Potentials Approach. Journal of Neuroscience, 2006, 26, 821-829.	3.6	131
128	Localizing P300 Generators in Visual Target and Distractor Processing: A Combined Event-Related Potential and Functional Magnetic Resonance Imaging Study. Journal of Neuroscience, 2004, 24, 9353-9360.	3.6	496
129	Bits from Brains: Analyzing Distributed Computation in Neural Systems. , 0, , 429-467.		0
130	Describing a landscape we are yet discovering. AStA Advances in Statistical Analysis, 0, , .	0.9	2