

Helmut Laufs

List of Publications by Citations

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112
papers

8,339
citations

47
h-index

91
g-index

133
ext. papers

9,888
ext. citations

6
avg, IF

6.14
L-index

#	Paper	IF	Citations
112	Electroencephalographic signatures of attentional and cognitive default modes in spontaneous brain activity fluctuations at rest. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 11053-8	11.5	773
111	EEG-correlated fMRI of human alpha activity. <i>NeuroImage</i> , 2003 , 19, 1463-76	7.9	769
110	Decoding wakefulness levels from typical fMRI resting-state data reveals reliable drifts between wakefulness and sleep. <i>Neuron</i> , 2014 , 82, 695-708	13.9	408
109	Endogenous cortical rhythms determine cerebral specialization for speech perception and production. <i>Neuron</i> , 2007 , 56, 1127-34	13.9	324
108	Where the BOLD signal goes when alpha EEG leaves. <i>NeuroImage</i> , 2006 , 31, 1408-18	7.9	298
107	On the Stability of BOLD fMRI Correlations. <i>Cerebral Cortex</i> , 2017 , 27, 4719-4732	5.1	274
106	Temporal lobe interictal epileptic discharges affect cerebral activity in "default mode" brain regions. <i>Human Brain Mapping</i> , 2007 , 28, 1023-32	5.9	237
105	Increased Global Functional Connectivity Correlates with LSD-Induced Ego Dissolution. <i>Current Biology</i> , 2016 , 26, 1043-50	6.3	237
104	EEG-fMRI of idiopathic and secondarily generalized epilepsies. <i>NeuroImage</i> , 2006 , 31, 1700-10	7.9	227
103	Inhibition of the spontaneous apoptosis of neutrophil granulocytes by the intracellular parasite <i>Leishmania major</i> . <i>Journal of Immunology</i> , 2002 , 169, 898-905	5.3	198
102	Dynamic BOLD functional connectivity in humans and its electrophysiological correlates. <i>Frontiers in Human Neuroscience</i> , 2012 , 6, 339	3.3	197
101	Modelling large motion events in fMRI studies of patients with epilepsy. <i>Magnetic Resonance Imaging</i> , 2007 , 25, 894-901	3.3	184
100	Endogenous brain oscillations and related networks detected by surface EEG-combined fMRI. <i>Human Brain Mapping</i> , 2008 , 29, 762-9	5.9	156
99	Linking generalized spike-and-wave discharges and resting state brain activity by using EEG/fMRI in a patient with absence seizures. <i>Epilepsia</i> , 2006 , 47, 444-8	6.4	153
98	Recent advances in recording electrophysiological data simultaneously with magnetic resonance imaging. <i>NeuroImage</i> , 2008 , 40, 515-528	7.9	152
97	Breakdown of long-range temporal dependence in default mode and attention networks during deep sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 15419-24	11.5	141
96	Intracellular survival of <i>Leishmania major</i> in neutrophil granulocytes after uptake in the absence of heat-labile serum factors. <i>Infection and Immunity</i> , 2002 , 70, 826-35	3.7	127

95	EEG microstates of wakefulness and NREM sleep. <i>NeuroImage</i> , 2012 , 62, 2129-39	7.9	125
94	Causal hierarchy within the thalamo-cortical network in spike and wave discharges. <i>PLoS ONE</i> , 2009 , 4, e6475	3.7	116
93	Automatic sleep staging using fMRI functional connectivity data. <i>NeuroImage</i> , 2012 , 63, 63-72	7.9	115
92	Functional imaging of seizures and epilepsy: evolution from zones to networks. <i>Current Opinion in Neurology</i> , 2012 , 25, 194-200	7.1	115
91	EEG correlated functional MRI and postoperative outcome in focal epilepsy. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2010 , 81, 922-7	5.5	109
90	The sensory cortical representation of the human penis: revisiting somatotopy in the male homunculus. <i>Journal of Neuroscience</i> , 2005 , 25, 5984-7	6.6	106
89	Epileptic networks in focal cortical dysplasia revealed using electroencephalography-functional magnetic resonance imaging. <i>Annals of Neurology</i> , 2011 , 70, 822-37	9.4	105
88	Chemokines, natural killer cells and granulocytes in the early course of <i>Leishmania major</i> infection in mice. <i>Medical Microbiology and Immunology</i> , 2001 , 190, 73-6	4	105
87	Large-scale signatures of unconsciousness are consistent with a departure from critical dynamics. <i>Journal of the Royal Society Interface</i> , 2016 , 13, 20151027	4.1	100
86	<i>Leishmania</i> promastigotes release a granulocyte chemotactic factor and induce interleukin-8 release but inhibit gamma interferon-inducible protein 10 production by neutrophil granulocytes. <i>Infection and Immunity</i> , 2002 , 70, 4177-84	3.7	100
85	Electroencephalography/functional MRI in human epilepsy: what it currently can and cannot do. <i>Current Opinion in Neurology</i> , 2007 , 20, 417-23	7.1	94
84	BOLD and perfusion changes during epileptic generalised spike wave activity. <i>NeuroImage</i> , 2008 , 39, 608-18	7.9	88
83	To wake or not to wake? The two-sided nature of the human K-complex. <i>NeuroImage</i> , 2012 , 59, 1631-8	7.9	87
82	Converging PET and fMRI evidence for a common area involved in human focal epilepsies. <i>Neurology</i> , 2011 , 77, 904-10	6.5	85
81	A personalized history of EEG-fMRI integration. <i>NeuroImage</i> , 2012 , 62, 1056-67	7.9	83
80	Working memory performance of early MS patients correlates inversely with modularity increases in resting state functional connectivity networks. <i>NeuroImage</i> , 2014 , 94, 385-395	7.9	82
79	The brain functional connectome is robustly altered by lack of sleep. <i>NeuroImage</i> , 2016 , 127, 324-332	7.9	81
78	Noncanonical spike-related BOLD responses in focal epilepsy. <i>Human Brain Mapping</i> , 2008 , 29, 329-45	5.9	79

77	Large-scale brain functional modularity is reflected in slow electroencephalographic rhythms across the human non-rapid eye movement sleep cycle. <i>NeuroImage</i> , 2013 , 70, 327-39	7.9	76
76	Independent component analysis of interictal fMRI in focal epilepsy: comparison with general linear model-based EEG-correlated fMRI. <i>NeuroImage</i> , 2007 , 38, 488-500	7.9	75
75	Discovery of key whole-brain transitions and dynamics during human wakefulness and non-REM sleep. <i>Nature Communications</i> , 2019 , 10, 1035	17.4	72
74	Propagated infra-slow intrinsic brain activity reorganizes across wake and slow wave sleep. <i>ELife</i> , 2015 , 4,	8.9	69
73	Awakening: Predicting external stimulation to force transitions between different brain states. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 18088-18097	11.5	65
72	Imaging haemodynamic changes related to seizures: comparison of EEG-based general linear model, independent component analysis of fMRI and intracranial EEG. <i>NeuroImage</i> , 2010 , 53, 196-205	7.9	64
71	Human cortical-hippocampal dialogue in wake and slow-wave sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E6868-E6876	11.5	63
70	Brain activation and hypothalamic functional connectivity during human non-rapid eye movement sleep: an EEG/fMRI studyS-its limitations and an alternative approach. <i>Brain</i> , 2007 , 130, e75; author reply e76	11.2	57
69	On wakefulness fluctuations as a source of BOLD functional connectivity dynamics. <i>Scientific Reports</i> , 2017 , 7, 5908	4.9	53
68	Combined EEG-fMRI and tractography to visualise propagation of epileptic activity. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2008 , 79, 594-7	5.5	49
67	Increased Stability and Breakdown of Brain Effective Connectivity During Slow-Wave Sleep: Mechanistic Insights from Whole-Brain Computational Modelling. <i>Scientific Reports</i> , 2017 , 7, 4634	4.9	48
66	EEG-fMRI in children with pharmaco-resistant focal epilepsy. <i>Epilepsia</i> , 2007 , 48, 385-9	6.4	48
65	Perturbation of whole-brain dynamics in silico reveals mechanistic differences between brain states. <i>NeuroImage</i> , 2018 , 169, 46-56	7.9	41
64	Analysis of EEG-fMRI data in focal epilepsy based on automated spike classification and Signal Space Projection. <i>NeuroImage</i> , 2006 , 31, 1015-24	7.9	40
63	The Voxel-Wise Functional Connectome Can Be Efficiently Derived from Co-activations in a Sparse Spatio-Temporal Point-Process. <i>Frontiers in Neuroscience</i> , 2016 , 10, 381	5.1	40
62	Altered FMRI connectivity dynamics in temporal lobe epilepsy might explain seizure semiology. <i>Frontiers in Neurology</i> , 2014 , 5, 175	4.1	39
61	Conjugate eye deviation in acute stroke: incidence, hemispheric asymmetry, and lesion pattern. <i>Stroke</i> , 2006 , 37, 2726-32	6.7	39
60	Multimodal imaging of dynamic functional connectivity. <i>Frontiers in Neurology</i> , 2015 , 6, 10	4.1	38

59	Information-theoretical analysis of resting state EEG microstate sequences - non-Markovianity, non-stationarity and periodicities. <i>NeuroImage</i> , 2017 , 158, 99-111	7.9	36
58	A stochastic model for EEG microstate sequence analysis. <i>NeuroImage</i> , 2015 , 104, 199-208	7.9	35
57	EEG-fMRI mapping of asymmetrical delta activity in a patient with refractory epilepsy is concordant with the epileptogenic region determined by intracranial EEG. <i>Magnetic Resonance Imaging</i> , 2006 , 24, 367-71	3.3	35
56	Deep sleep divides the cortex into opposite modes of anatomical-functional coupling. <i>Brain Structure and Function</i> , 2016 , 221, 4221-4234	4	33
55	Simultaneous electroencephalography-functional MRI at 3 T: an analysis of safety risks imposed by performing anatomical reference scans with the EEG equipment in place. <i>Journal of Magnetic Resonance Imaging</i> , 2012 , 35, 561-71	5.6	31
54	Resting-state fMRI in sleeping infants more closely resembles adult sleep than adult wakefulness. <i>PLoS ONE</i> , 2017 , 12, e0188122	3.7	28
53	fMRI temporal clustering analysis in patients with frequent interictal epileptiform discharges: comparison with EEG-driven analysis. <i>NeuroImage</i> , 2005 , 26, 309-16	7.9	28
52	Sleep neuroimaging and models of consciousness. <i>Frontiers in Psychology</i> , 2013 , 4, 256	3.4	27
51	Novel Intrinsic Ignition Method Measuring Local-Global Integration Characterizes Wakefulness and Deep Sleep. <i>ENeuro</i> , 2017 , 4,	3.9	27
50	An investigation of the relationship between BOLD and perfusion signal changes during epileptic generalised spike wave activity. <i>Magnetic Resonance Imaging</i> , 2008 , 26, 870-3	3.3	26
49	Impact of interictal epileptic activity on normal brain function in epileptic encephalopathy: an electroencephalography-functional magnetic resonance imaging study. <i>Epilepsy and Behavior</i> , 2007 , 11, 460-5	3.2	25
48	Occupation-Associated Fatal Limbic Encephalitis Caused by Variegated Squirrel Bornavirus 1, Germany, 2013. <i>Emerging Infectious Diseases</i> , 2018 , 24, 978-987	10.2	23
47	Classification of EEG abnormalities in partial epilepsy with simultaneous EEG-fMRI recordings. <i>NeuroImage</i> , 2014 , 99, 461-76	7.9	23
46	Modeling regional changes in dynamic stability during sleep and wakefulness. <i>NeuroImage</i> , 2020 , 215, 116833	7.9	20
45	Narcoleptic Patients Show Fragmented EEG-Microstructure During Early NREM Sleep. <i>Brain Topography</i> , 2015 , 28, 619-35	4.3	19
44	Advanced CT for diagnosis of seizure-related stroke mimics. <i>European Radiology</i> , 2018 , 28, 1791-1800	8	19
43	Hemi-spinal cord infarction due to vertebral artery dissection in congenital afibrinogenemia. <i>Neurology</i> , 2004 , 63, 1522-3	6.5	19
42	Giant cell myocarditis in a 12-year-old girl with common variable immunodeficiency. <i>Mayo Clinic Proceedings</i> , 2002 , 77, 92-6	6.4	17

41	Analytical and empirical fluctuation functions of the EEG microstate random walk - Short-range vs. long-range correlations. <i>NeuroImage</i> , 2016 , 141, 442-451	7.9	17
40	Multimodal analysis of resting state cortical activity: what does EEG add to our knowledge of resting state BOLD networks?. <i>NeuroImage</i> , 2010 , 52, 1171-2	7.9	16
39	EEG Microstate Sequences From Different Clustering Algorithms Are Information-Theoretically Invariant. <i>Frontiers in Computational Neuroscience</i> , 2018 , 12, 70	3.5	16
38	Mutual information identifies spurious Hurst phenomena in resting state EEG and fMRI data. <i>Physical Review E</i> , 2018 , 97, 022415	2.4	14
37	Progression to deep sleep is characterized by changes to BOLD dynamics in sensory cortices. <i>NeuroImage</i> , 2016 , 130, 293-305	7.9	14
36	Signature of consciousness in brain-wide synchronization patterns of monkey and human fMRI signals. <i>NeuroImage</i> , 2021 , 226, 117470	7.9	14
35	Connectivity dynamics from wakefulness to sleep. <i>NeuroImage</i> , 2020 , 220, 117047	7.9	13
34	Human non-REM sleep and the mean global BOLD signal. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2019 , 39, 2210-2222	7.3	12
33	A combinatorial framework to quantify peak/pit asymmetries in complex dynamics. <i>Scientific Reports</i> , 2018 , 8, 3557	4.9	11
32	Low-Frequency Oscillations Code Speech during Verbal Working Memory. <i>Journal of Neuroscience</i> , 2019 , 39, 6498-6512	6.6	9
31	Non-linear Relationship between BOLD Activation and Amplitude of Beta Oscillations in the Supplementary Motor Area during Rhythmic Finger Tapping and Internal Timing. <i>Frontiers in Human Neuroscience</i> , 2017 , 11, 582	3.3	9
30	Spatio-Temporal Dynamics of Intrinsic Networks in Functional Magnetic Imaging Data Using Recurrent Neural Networks. <i>Frontiers in Neuroscience</i> , 2018 , 12, 600	5.1	8
29	Perturbations in dynamical models of whole-brain activity dissociate between the level and stability of consciousness. <i>PLoS Computational Biology</i> , 2021 , 17, e1009139	5	8
28	Mapping visual dominance in human sleep. <i>NeuroImage</i> , 2017 , 150, 250-261	7.9	7
27	Magnetic Measurement of Electrically Evoked Muscle Responses With Optically Pumped Magnetometers. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020 , 28, 756-765	4.8	7
26	The avalanche-like behaviour of large-scale haemodynamic activity from wakefulness to deep sleep. <i>Journal of the Royal Society Interface</i> , 2019 , 16, 20190262	4.1	6
25	Decoding Pedophilia: Increased Anterior Insula Response to Infant Animal Pictures. <i>Frontiers in Human Neuroscience</i> , 2017 , 11, 645	3.3	6
24	EEG-correlated fMRI of human alpha (de-)synchronization. <i>Clinical Neurophysiology</i> , 2019 , 130, 1375-1384	4.3	5

23	EEGfMRI Information Fusion: Biophysics and Data Analysis 2009 , 511-526		5
22	Generative Embeddings of Brain Collective Dynamics Using Variational Autoencoders. <i>Physical Review Letters</i> , 2020 , 125, 238101	7.4	5
21	EEG microstate periodicity explained by rotating phase patterns of resting-state alpha oscillations. <i>NeuroImage</i> , 2021 , 224, 117372	7.9	5
20	Data augmentation based on dynamical systems for the classification of brain states. <i>Chaos, Solitons and Fractals</i> , 2020 , 139, 110069	9.3	4
19	Information-Theoretical Analysis of EEG Microstate Sequences in Python. <i>Frontiers in Neuroinformatics</i> , 2018 , 12, 30	3.9	4
18	Perturbations in dynamical models of whole-brain activity dissociate between the level and stability of consciousness		4
17	Decoding brain states on the intrinsic manifold of human brain dynamics across wakefulness and sleep. <i>Communications Biology</i> , 2021 , 4, 854	6.7	4
16	Noise-driven multistability vs deterministic chaos in phenomenological semi-empirical models of whole-brain activity. <i>Chaos</i> , 2021 , 31, 023127	3.3	4
15	Magnetoneurography of an Electrically Stimulated Arm Nerve. <i>Current Directions in Biomedical Engineering</i> , 2018 , 4, 363-366	0.5	4
14	Aufgaben und Struktur moderner Epilepsiezentren in Deutschland. <i>Aktuelle Neurologie</i> , 2018 , 45, 513-533		3
13	Capturing the non-stationarity of whole-brain dynamics underlying human brain states. <i>NeuroImage</i> , 2021 , 244, 118551	7.9	3
12	Unifying turbulent dynamics framework distinguishes different brain states		2
11	Connectivity dynamics from wakefulness to sleep		2
10	Nonequilibrium brain dynamics as a signature of consciousness. <i>Physical Review E</i> , 2021 , 104, 014411	2.4	2
9	Die Darstellung gesunder und pathologischer Hirnzustände mittels EEG-kombinierter funktioneller Kernspintomografie (EEG-fMRT). <i>Klinische Neurophysiologie</i> , 2011 , 42, 183-193	0.2	1
8	BOLD signatures of sleep		1
7	Signal Modeling and Simulation of Temporal Dispersion and Conduction Block in Motor Nerves. <i>IEEE Transactions on Biomedical Engineering</i> , 2020 , 67, 2094-2102	5	1
6	Unconsciousness reconfigures modular brain network dynamics. <i>Chaos</i> , 2021 , 31, 093117	3.3	1

5 Neuroimaging of wakefulness 91-95

4 Methodology of combined EEG and fMRI 82-90

3 Polysomnographie während funktioneller Magnetresonanztomographie. *Neurophysiologie-Labor*, **2011**, 33, 70-76 0.1

2 Brain Rhythms **2009**, 263-277

1 Hirnfunktionelle korrelate typischer Muster des Klinischen Routine-EEGs. *Klinische Neurophysiologie*, **2016**, 47, 92-99 0.2