

Niels Birbaumer

List of Publications by Citations

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107
papers

6,116
citations

37
h-index

77
g-index

117
ext. papers

7,138
ext. citations

4.6
avg, IF

6.07
L-index

#	Paper	IF	Citations
107	Brain-machine interface in chronic stroke rehabilitation: a controlled study. <i>Annals of Neurology</i> , 2013 , 74, 100-8	9.4	566
106	Deficient fear conditioning in psychopathy: a functional magnetic resonance imaging study. <i>Archives of General Psychiatry</i> , 2005 , 62, 799-805		525
105	Brain-computer interfaces: communication and restoration of movement in paralysis. <i>Journal of Physiology</i> , 2007 , 579, 621-36	3.9	496
104	Breaking the silence: brain-computer interfaces (BCI) for communication and motor control. <i>Psychophysiology</i> , 2006 , 43, 517-32	4.1	432
103	Brain-computer interfaces for communication and rehabilitation. <i>Nature Reviews Neurology</i> , 2016 , 12, 513-25	15	349
102	Brain-computer interface in paralysis. <i>Current Opinion in Neurology</i> , 2008 , 21, 634-8	7.1	190
101	Brain-machine interfaces in neurorehabilitation of stroke. <i>Neurobiology of Disease</i> , 2015 , 83, 172-9	7.5	185
100	Aversive Pavlovian conditioning in psychopaths: Peripheral and central correlates. <i>Psychophysiology</i> , 2002 , 39, 505-518	4.1	159
99	Learned regulation of brain metabolism. <i>Trends in Cognitive Sciences</i> , 2013 , 17, 295-302	14	151
98	Brain-Computer Interface-Based Communication in the Completely Locked-In State. <i>PLoS Biology</i> , 2017 , 15, e1002593	9.7	142
97	Real-time fMRI feedback training may improve chronic tinnitus. <i>European Radiology</i> , 2010 , 20, 696-703	8	141
96	The thought-translation device (TTD): neurobehavioral mechanisms and clinical outcome. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2003 , 11, 120-3	4.8	131
95	Real-time fMRI brain computer interfaces: self-regulation of single brain regions to networks. <i>Biological Psychology</i> , 2014 , 95, 4-20	3.2	116
94	Predictability of Brain-Computer Communication. <i>Journal of Psychophysiology</i> , 2004 , 18, 121-129	1	112
93	Alcohol affects emotion through cognition. <i>Psychological Science</i> , 2001 , 12, 527-31	7.9	111
92	Neurofeedback and brain-computer interface clinical applications. <i>International Review of Neurobiology</i> , 2009 , 86, 107-17	4.4	103
91	Recognition of point-light biological motion displays by young children. <i>Perception</i> , 2001 , 30, 925-33	1.2	102

90	Mapping entrained brain oscillations during transcranial alternating current stimulation (tACS). <i>NeuroImage</i> , 2016 , 140, 89-98	7.9	100
89	Consensus on the reporting and experimental design of clinical and cognitive-behavioural neurofeedback studies (CRED-nf checklist). <i>Brain</i> , 2020 , 143, 1674-1685	11.2	93
88	Brain communication in a completely locked-in patient using bedside near-infrared spectroscopy. <i>Neurology</i> , 2014 , 82, 1930-2	6.5	93
87	The cortical somatotopic map and phantom phenomena in subjects with congenital limb atrophy and traumatic amputees with phantom limb pain. <i>European Journal of Neuroscience</i> , 1998 , 10, 1095-102	3.5	83
86	Manipulating motor performance and memory through real-time fMRI neurofeedback. <i>Biological Psychology</i> , 2015 , 108, 85-97	3.2	76
85	Improving Motor Corticothalamic Communication After Stroke Using Real-Time fMRI Connectivity-Based Neurofeedback. <i>Neurorehabilitation and Neural Repair</i> , 2016 , 30, 671-5	4.7	67
84	Cortical correlates of semantic classical conditioning. <i>Psychophysiology</i> , 1996 , 33, 644-9	4.1	67
83	Semantic memory impairment in Alzheimer's disease. <i>Journal of Clinical and Experimental Neuropsychology</i> , 1996 , 18, 648-65	2.1	61
82	Lower Limb Movement Preparation in Chronic Stroke: A Pilot Study Toward an fNIRS-BCI for Gait Rehabilitation. <i>Neurorehabilitation and Neural Repair</i> , 2014 , 28, 564-75	4.7	57
81	Short-term effects of behavioral treatment on movement initiation and postural control in Parkinson's disease: a controlled clinical study. <i>Movement Disorders</i> , 1997 , 12, 306-14	7	56
80	Physiological regulation of thinking: brain-computer interface (BCI) research. <i>Progress in Brain Research</i> , 2006 , 159, 369-91	2.9	56
79	Brain oscillatory signatures of motor tasks. <i>Journal of Neurophysiology</i> , 2015 , 113, 3663-82	3.2	51
78	Volitional regulation of brain responses to food stimuli in overweight and obese subjects: A real-time fMRI feedback study. <i>Appetite</i> , 2017 , 112, 188-195	4.5	49
77	Direct brain control and communication in paralysis. <i>Brain Topography</i> , 2014 , 27, 4-11	4.3	44
76	The distribution of mislocalizations across fingers demonstrates training-induced neuroplastic changes in somatosensory cortex. <i>Experimental Brain Research</i> , 2001 , 139, 435-42	2.3	43
75	Motor learning: passing a skill from one hand to the other. <i>Current Biology</i> , 2007 , 17, R1024-6	6.3	41
74	Auditory habituation in the fetus and neonate: an fMEG study. <i>Developmental Science</i> , 2013 , 16, 287-295	4.5	40
73	Neurophysiological correlates of mental arithmetic. <i>Psychophysiology</i> , 1996 , 33, 522-9	4.1	39

72	Investigation of brain dynamics in Parkinson's disease by methods derived from nonlinear dynamics. <i>Experimental Brain Research</i> , 2001 , 137, 103-10	2.3	38
71	Enhancing Hebbian Learning to Control Brain Oscillatory Activity. <i>Cerebral Cortex</i> , 2015 , 25, 2409-15	5.1	37
70	Cerebral processing of words and the development of chronic pain. <i>Psychophysiology</i> , 1997 , 34, 474-81	4.1	37
69	Brain-Machine Interface in Chronic Stroke: Randomized Trial Long-Term Follow-up. <i>Neurorehabilitation and Neural Repair</i> , 2019 , 33, 188-198	4.7	36
68	Ideomotor silence: the case of complete paralysis and brain-computer interfaces (BCI). <i>Psychological Research</i> , 2012 , 76, 183-91	2.5	36
67	Brain self-regulation in criminal psychopaths. <i>Scientific Reports</i> , 2015 , 5, 9426	4.9	35
66	Pavlovian aversive and appetitive odor conditioning in humans: subjective, peripheral, and electrocortical changes. <i>Experimental Brain Research</i> , 2000 , 132, 203-15	2.3	33
65	Decoding upper limb residual muscle activity in severe chronic stroke. <i>Annals of Clinical and Translational Neurology</i> , 2015 , 2, 1-11	5.3	32
64	Voxel-based morphometry in opera singers: Increased gray-matter volume in right somatosensory and auditory cortices. <i>NeuroImage</i> , 2016 , 133, 477-483	7.9	32
63	Real-time fMRI neurofeedback training to improve eating behavior by self-regulation of the dorsolateral prefrontal cortex: A randomized controlled trial in overweight and obese subjects. <i>NeuroImage</i> , 2019 , 191, 596-609	7.9	31
62	Learned self-regulation of the lesioned brain with epidural electrocorticography. <i>Frontiers in Behavioral Neuroscience</i> , 2014 , 8, 429	3.5	31
61	Cortex integrity relevance in muscle synergies in severe chronic stroke. <i>Frontiers in Human Neuroscience</i> , 2014 , 8, 744	3.3	31
60	Slow potentials, event-related potentials, "gamma-band" activity, and motor responses during aversive conditioning in humans. <i>Experimental Brain Research</i> , 1996 , 112, 298-312	2.3	31
59	Category-specific semantic impairment in Alzheimer's disease and temporal lobe dysfunction: a comparative study. <i>Journal of Clinical and Experimental Neuropsychology</i> , 1994 , 16, 689-701	2.1	30
58	Differential effects of aging on explicit and implicit memory. <i>Aging, Neuropsychology, and Cognition</i> , 1997 , 4, 33-44	2.1	25
57	Learned maintenance of pain: Muscle tension reduces central nervous system processing of painful stimulation in chronic and subchronic pain patients. <i>Psychophysiology</i> , 1999 , 36, 755-764	4.1	24
56	Simultaneous transcranial direct current stimulation (tDCS) and whole-head magnetoencephalography (MEG): assessing the impact of tDCS on slow cortical magnetic fields. <i>NeuroImage</i> , 2016 , 140, 33-40	7.9	22
55	Self-Regulation of Anterior Insula with Real-Time fMRI and Its Behavioral Effects in Obsessive-Compulsive Disorder: A Feasibility Study. <i>PLoS ONE</i> , 2015 , 10, e0135872	3.7	22

54	Neuropsychological and neurophysiological aspects of brain-computer-interface (BCI) control in paralysis. <i>Journal of Physiology</i> , 2021 , 599, 2351-2359	3.9	22
53	Epidural electrocorticography of phantom hand movement following long-term upper-limb amputation. <i>Frontiers in Human Neuroscience</i> , 2014 , 8, 285	3.3	20
52	Deficient discrimination of EMG levels and overestimation of perceived tension in chronic pain patients. <i>Applied Psychophysiology Biofeedback</i> , 1999 , 24, 55-66	3.4	19
51	Perception of Emotional Facial Expressions in Amyotrophic Lateral Sclerosis (ALS) at Behavioural and Brain Metabolic Level. <i>PLoS ONE</i> , 2016 , 11, e0164655	3.7	19
50	Event-related desynchronization during movement attempt and execution in severely paralyzed stroke patients: An artifact removal relevance analysis. <i>NeuroImage: Clinical</i> , 2018 , 20, 972-986	5.3	16
49	EMG-based multi-joint kinematics decoding for robot-aided rehabilitation therapies 2015 ,		15
48	Brain oscillatory activity as a biomarker of motor recovery in chronic stroke. <i>Human Brain Mapping</i> , 2020 , 41, 1296-1308	5.9	15
47	Magnetoencephalography in Stroke Recovery and Rehabilitation. <i>Frontiers in Neurology</i> , 2016 , 7, 35	4.1	14
46	Pain reduction due to novel sensory-motor training in Complex Regional Pain Syndrome I - A pilot study. <i>Scandinavian Journal of Pain</i> , 2017 , 15, 30-37	1.9	13
45	Simultaneous epidural functional near-infrared spectroscopy and cortical electrophysiology as a tool for studying local neurovascular coupling in primates. <i>NeuroImage</i> , 2015 , 120, 394-9	7.9	13
44	Direct brain communication: neuroelectric and metabolic approaches at Tübingen. <i>Cognitive Processing</i> , 2005 , 6, 65-74	1.5	13
43	Changes in EEG power spectra during biofeedback of slow cortical potentials in epilepsy. <i>Applied Psychophysiology Biofeedback</i> , 1999 , 24, 213-33	3.4	13
42	Residual Upper Arm Motor Function Primes Innervation of Paretic Forearm Muscles in Chronic Stroke after Brain-Machine Interface (BMI) Training. <i>PLoS ONE</i> , 2015 , 10, e0140161	3.7	13
41	Movement-related brain oscillations vary with lesion location in severely paralyzed chronic stroke patients. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1664-1667	0.9	12
40	Aversive Pavlovian conditioning in psychopaths: Peripheral and central correlates 2002 , 39, 505		11
39	Semantic and BCI-performance in completely paralyzed patients: Possibility of language attrition in completely locked in syndrome. <i>Brain and Language</i> , 2019 , 194, 93-97	2.9	10
38	Real-Time Subject-Independent Pattern Classification of Overt and Covert Movements from fNIRS Signals. <i>PLoS ONE</i> , 2016 , 11, e0159959	3.7	10
37	Design and effectiveness evaluation of mirror myoelectric interfaces: a novel method to restore movement in hemiplegic patients. <i>Scientific Reports</i> , 2018 , 8, 16688	4.9	10

36	Intermittent theta burst stimulation over right somatosensory larynx cortex enhances vocal pitch-regulation in nonsingers. <i>Human Brain Mapping</i> , 2019 , 40, 2174-2187	5.9	9
35	Sleep in the completely locked-in state (CLIS) in amyotrophic lateral sclerosis. <i>Sleep</i> , 2019 , 42,	1.1	8
34	Learning from brain control: clinical application of brain-computer interfaces. <i>E-Neuroforum</i> , 2015 , 6, 87-95		8
33	Auditory Electrooculogram-based Communication System for ALS Patients in Transition from Locked-in to Complete Locked-in State. <i>Scientific Reports</i> , 2020 , 10, 8452	4.9	8
32	Myofascial triggerpoint release (MTR) for treating chronic shoulder pain: A novel approach. <i>Journal of Bodywork and Movement Therapies</i> , 2016 , 20, 614-22	1.6	8
31	BRAIN-COMPUTER INTERFACES FOR VERBAL COMMUNICATION. <i>Series on Bioengineering and Biomedical Engineering</i> , 2004 , 1146-1157		8
30	Open Software/Hardware Platform for Human-Computer Interface Based on Electrooculography (EOG) Signal Classification. <i>Sensors</i> , 2020 , 20,	3.8	7
29	A new hand assessment instrument for severely affected stroke patients. <i>NeuroRehabilitation</i> , 2014 , 34, 409-27	2	7
28	Spelling interface using intracortical signals in a completely locked-in patient enabled via auditory neurofeedback training.. <i>Nature Communications</i> , 2022 , 13, 1236	17.4	7
27	Epidural electrocorticography for monitoring of arousal in locked-in state. <i>Frontiers in Human Neuroscience</i> , 2014 , 8, 861	3.3	6
26	Neural mechanisms of savant calendar calculating in autism: an MEG-study of few single cases. <i>Brain and Cognition</i> , 2014 , 90, 157-64	2.7	5
25	Functional synergy recruitment index as a reliable biomarker of motor function and recovery in chronic stroke patients. <i>Journal of Neural Engineering</i> , 2021 , 18,	5	5
24	EEG power spectral density in locked-in and completely locked-in state patients: a longitudinal study. <i>Cognitive Neurodynamics</i> , 2021 , 15, 473-480	4.2	4
23	Self-Myofascial Vibro-Shearing: a Randomized Controlled Trial of Biomechanical and Related Changes in Male Breakdancers. <i>Sports Medicine - Open</i> , 2018 , 4, 13	6.1	3
22	A 20-Questions-Based Binary Spelling Interface for Communication Systems. <i>Brain Sciences</i> , 2018 , 8,	3.4	3
21	Sensorimotor rhythm modulation depends on resting-state oscillations and cortex integrity in severely paralyzed stroke patients 2019 ,		3
20	The physiology of brain-computer interfaces. <i>Journal of Physiology</i> , 2007 , 579, 570-570	3.9	3
19	Applied psychophysiology and learned physiological regulation. <i>Applied Psychophysiology Biofeedback</i> , 1999 , 24, 35-7; discussion 43-54	3.4	3

18	Psychophysiological treatment of chronic tinnitus: A review.. <i>Clinical Psychology and Psychotherapy</i> , 2022 ,	2.9	3
17	A dataset of EEG and EOG from an auditory EOG-based communication system for patients in locked-in state. <i>Scientific Data</i> , 2021 , 8, 8	8.2	3
16	Brain Computer Interfaces for Assisted Communication in Paralysis and Quality of Life. <i>International Journal of Neural Systems</i> , 2021 , 31, 2130003	6.2	3
15	Memory: reconsolidation allows modification of motor memories. <i>Current Biology</i> , 2010 , 20, R709-10	6.3	2
14	A leg to stand on: Learning creates pain. <i>Behavioral and Brain Sciences</i> , 1997 , 20, 441-442	0.9	2
13	Phantom limb pain: a report of two cases. <i>European Journal of Pain</i> , 2001 , 5, 449-55	3.7	2
12	On the Extraction of Purely Motor EEG Neural Correlates during an Upper Limb Visuomotor Task.. <i>Cerebral Cortex</i> , 2021 ,	5.1	2
11	Learned maintenance of pain: Muscle tension reduces central nervous system processing of painful stimulation in chronic and subchronic pain patients 1999 , 36, 755		2
10	Spatial characteristics of spontaneous and stimulus-induced individual functional connectivity networks in severe disorders of consciousness. <i>Brain and Cognition</i> , 2019 , 131, 10-21	2.7	2
9	Balancing the brain of offenders with psychopathy? Resting state EEG and electrodermal activity after a pilot study of brain self-regulation training. <i>PLoS ONE</i> , 2021 , 16, e0242830	3.7	2
8	Habit learning and brain-machine interfaces (BMI): a tribute to Valentino Braitenberg's "Vehicles". <i>Biological Cybernetics</i> , 2014 , 108, 595-601	2.8	1
7	Neural signatures of modified memories. <i>Neuron</i> , 2014 , 81, 3-5	13.9	1
6	Communication in locked-in state after brainstem stroke: a brain-computer-interface approach. <i>Annals of Translational Medicine</i> , 2015 , 3, S29	3.2	1
5	Real-time monitoring and regulating auditory cortex alpha activity in patients with chronic tinnitus. <i>Journal of Neural Engineering</i> , 2020 , 17, 016032	5	1
4	Neurophysiological aspects of the completely locked-in syndrome in patients with advanced amyotrophic lateral sclerosis. <i>Clinical Neurophysiology</i> , 2021 , 132, 1064-1076	4.3	1
3	SPR Award, 2004. For distinguished contributions to psychophysiology: Robert M. Stern. <i>Psychophysiology</i> , 2007 , 44, 1	4.1	0
2	Tom Budzynski: The Hero of Neurofeedback. <i>Biofeedback</i> , 2011 , 39, 146-147	0.6	
1	Binary Semantic Classification Using Cortical Activation with Pavlovian-Conditioned Vestibular Responses in Healthy and Locked-In Individuals. <i>Cerebral Cortex Communications</i> , 2021 , 2, tgab046	1.9	

