Mikhail A Lebedev

List of Publications by Year
in descending order

121	10,051	76326	37204
papers	citations	40 h-index	96 g-index

139	139	139	7629
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cognitive Augmentation Via a Brain/Cloud Interface. Contemporary Clinical Neuroscience, 2021, , 357-386.	0.3	0
2	Augmentation Through Interconnection: Brain-Nets and Telemedicine. Contemporary Clinical Neuroscience, 2021, , 343-355.	0.3	0
3	Modern Approaches to Augmenting the Brain Functions. Contemporary Clinical Neuroscience, 2021, , 57-89.	0.3	0
4	Decoding and interpreting cortical signals with a compact convolutional neural network. Journal of Neural Engineering, 2021, 18, 026019.	3.5	12
5	Generating artificial sensations with spinal cord stimulation in primates and rodents. Brain Stimulation, 2021, 14, 825-836.	1.6	12
6	Capturing spike train temporal pattern with wavelet average coefficient for brain machine interface. Scientific Reports, 2021, 11, 19020.	3.3	2
7	Augmentation of Brain Functions byÂNanotechnology. Contemporary Clinical Neuroscience, 2021, , 233-259.	0.3	0
8	Exploration of Cortical Dynamics in the Center-Out with Stylus Paradigm. , 2021, , .		0
9	Exploring time interval estimation for familiar and unfamiliar musical pieces. , 2021, , .		0
10	Cortical and autonomic responses during staged Taoist meditation: Two distinct meditation strategies. PLoS ONE, 2021, 16, e0260626.	2.5	6
11	A P300 Brain-Computer Interface With a Reduced Visual Field. Frontiers in Neuroscience, 2020, 14, 604629.	2.8	11
12	Neuroengineering challenges of fusing robotics and neuroscience. Science Robotics, 2020, 5, .	17.6	36
13	Consensus on the reporting and experimental design of clinical and cognitive-behavioural neurofeedback studies (CRED-nf checklist). Brain, 2020, 143, 1674-1685.	7.6	188
14	Editorial: Nanotechnologies in Neuroscience and Neuroengineering. Frontiers in Neuroscience, 2020, 14, 33.	2.8	11
15	Editorial: Application of Neural Technology to Neuro-Management and Neuro-Marketing. Frontiers in Neuroscience, 2020, 14, 53.	2.8	8
16	Editorial: Neuromodulatory Control of Brainstem Function in Health and Disease. Frontiers in Neuroscience, 2020, 14, 86.	2.8	1
17	Digital filters for low-latency quantification of brain rhythms in real time. Journal of Neural Engineering, 2020, 17, 046022.	3.5	11
18	Short-delay neurofeedback facilitates training of the parietal alpha rhythm. Journal of Neural Engineering, 2020, 17, 066012.	3.5	17

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19	Creating a neuroprosthesis for active tactile exploration of textures. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21821-21827.	7.1	24
20	Decoding Movements from Cortical Ensemble Activity Using a Long Short-Term Memory Recurrent Network. Neural Computation, 2019, 31, 1085-1113.	2.2	30
21	Human Brain/Cloud Interface. Frontiers in Neuroscience, 2019, 13, 112.	2.8	47
22	Decoding Movement From Electrocorticographic Activity: A Review. Frontiers in Neuroinformatics, 2019, 13, 74.	2.5	61
23	Analysis of neuronal ensemble activity reveals the pitfalls and shortcomings of rotation dynamics. Scientific Reports, 2019, 9, 18978.	3.3	26
24	Interbrain cortical synchronization encodes multiple aspects of social interactions in monkey pairs. Scientific Reports, 2018, 8, 4699.	3.3	20
25	Towards a versatile brain-machine interface: Neural decoding of multiple behavioral variables and delivering sensory feedback versatile brain-machine interface. , 2018, , .		0
26	NFBLabâ€"A Versatile Software for Neurofeedback and Brain-Computer Interface Research. Frontiers in Neuroinformatics, 2018, 12, 100.	2.5	15
27	Training with brain-machine interfaces, visuo-tactile feedback and assisted locomotion improves sensorimotor, visceral, and psychological signs in chronic paraplegic patients. PLoS ONE, 2018, 13, e0206464.	2.5	32
28	Editorial: Augmentation of Brain Function: Facts, Fiction and Controversy. Frontiers in Systems Neuroscience, 2018, 12, 45.	2.5	10
29	Navigation Patterns and Scent Marking: Underappreciated Contributors to Hippocampal and Entorhinal Spatial Representations?. Frontiers in Behavioral Neuroscience, 2018, 12, 98.	2.0	9
30	Commentary: Injecting Instructions into Premotor Cortex. Frontiers in Cellular Neuroscience, 2018, 12, 65.	3.7	6
31	Commentary: Spatial Olfactory Learning Contributes to Place Field Formation in the Hippocampus. Frontiers in Systems Neuroscience, 2018, 12, 8.	2.5	7
32	Bidirectional Neural Interfaces. , 2018, , 701-720.		1
33	EXiOâ€"A Brain-Controlled Lower Limb Exoskeleton for Rhesus Macaques. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 131-141.	4.9	36
34	Neurofeedback learning modifies the incidence rate of alpha spindles, but not their duration and amplitude. Scientific Reports, 2017, 7, 3772.	3.3	20
35	Cortical neurons multiplex reward-related signals along with sensory and motor information. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4841-E4850.	7.1	55
36	Interfacing to the brainâ€™s motor decisions. Journal of Neurophysiology, 2017, 117, 1305-1319.	1.8	36

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37	Brain-Machine Interfaces: From Basic Science to Neuroprostheses and Neurorehabilitation. Physiological Reviews, 2017, 97, 767-837.	28.8	409
38	A novel paraplegia model in awake behaving macaques. Journal of Neurophysiology, 2017, 118, 1800-1808.	1.8	6
39	Controlling Attention with Neurofeedback. Springer Series in Cognitive and Neural Systems, 2017, , 545-572.	0.1	1
40	Dazzled by the Mystery of Mentalism: The Cognitive Neuroscience of Mental Athletes. Frontiers in Human Neuroscience, 2017, 11, 287.	2.0	2
41	Commentary: Cortical activity in the null space: permitting preparation without movement. Frontiers in Neuroscience, 2017, 11, 502.	2.8	2
42	Commentary: Emergence of a Stable Cortical Map for Neuroprosthetic Control. Frontiers in Neuroscience, 2017, 11, 642.	2.8	0
43	Recent Advances in Brain-Computer Interface Researchâ€"A Summary of the BCI Award 2016 and BCI Research Trends. Springer Briefs in Electrical and Computer Engineering, 2017, , 127-134.	0.5	2
44	Prefrontal Cortical Microcircuits Support the Emergence of Mind. Springer Series in Cognitive and Neural Systems, 2017, , 69-94.	0.1	1
45	Neostriatal Neuronal Activity Correlates Better with Movement Kinematics under Certain Rewards. Frontiers in Neuroscience, 2016, 10, 336.	2.8	3
46	Mechatronic Wearable Exoskeletons for Bionic Bipedal Standing and Walking: A New Synthetic Approach. Frontiers in Neuroscience, 2016, 10, 343.	2.8	37
47	Neurofeedback Therapy for Enhancing Visual Attention: State-of-the-Art and Challenges. Frontiers in Neuroscience, 2016, 10, 352.	2.8	50
48	Wireless Cortical Brain-Machine Interface for Whole-Body Navigation in Primates. Scientific Reports, 2016, 6, 22170.	3.3	61
49	A Closed Loop Brain-machine Interface for Epilepsy Control Using Dorsal Column Electrical Stimulation. Scientific Reports, 2016, 6, 32814.	3.3	47
50	An automatic experimental apparatus to study arm reaching in New World monkeys. Journal of Neuroscience Methods, 2016, 264, 57-64.	2.5	0
51	A dynamical model improves reconstruction of handwriting from multichannel electromyographic recordings. Frontiers in Neuroscience, 2015, 9, 389.	2.8	14
52	Health, pathology, and rehabilitation of the sensoryâ€"motor loop. Neuropsychologia, 2015, 79, 173-174.	1.6	0
53	Computing Arm Movements with a Monkey Brainet. Scientific Reports, 2015, 5, 10767.	3.3	43
54	Building an organic computing device with multiple interconnected brains. Scientific Reports, 2015, 5, 11869.	3.3	63

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55	Brain-Machine Interfaces: From Macro- to Microcircuits. , 2015, , 407-428.		1
56	Cortical and thalamic contributions to response dynamics across layers of the primary somatosensory cortex during tactile discrimination. Journal of Neurophysiology, 2015, 114, 1652-1676.	1.8	16
57	Signal-independent timescale analysis (SITA) and its application for neural coding during reaching and walking. Frontiers in Computational Neuroscience, 2014, 8, 91.	2.1	2
58	How to read neuron-dropping curves?. Frontiers in Systems Neuroscience, 2014, 8, 102.	2.5	21
59	Brain-machine interfaces: an overview. Translational Neuroscience, 2014, 5, .	1.4	64
60	Joint cross-correlation analysis reveals complex, time-dependent functional relationship between cortical neurons and arm electromyograms. Journal of Neurophysiology, 2014, 112, 2865-2887.	1.8	10
61	Chronic, wireless recordings of large-scale brain activity in freely moving rhesus monkeys. Nature Methods, 2014, 11, 670-676.	19.0	358
62	A Brain-Machine Interface Enables Bimanual Arm Movements in Monkeys. Science Translational Medicine, 2013, 5, 210ra154.	12.4	140
63	A Brain-to-Brain Interface for Real-Time Sharing of Sensorimotor Information. Scientific Reports, 2013, 3, 1319.	3.3	173
64	Simultaneous Top-down Modulation of the Primary Somatosensory Cortex and Thalamic Nuclei during Active Tactile Discrimination. Journal of Neuroscience, 2013, 33, 4076-4093.	3.6	46
65	Expanding the primate body schema in sensorimotor cortex by virtual touches of an avatar. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15121-15126.	7.1	74
66	Subcortical Neuronal Ensembles: An Analysis of Motor Task Association, Tremor, Oscillations, and Synchrony in Human Patients. Journal of Neuroscience, 2012, 32, 8620-8632.	3.6	33
67	Stochastic Facilitation of Artificial Tactile Sensation in Primates. Journal of Neuroscience, 2012, 32, 14271-14275.	3.6	27
68	High-Side Digitally Current Controlled Biphasic Bipolar Microstimulator. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 331-340.	4.9	15
69	Neuronal Variability during Handwriting: Lognormal Distribution. PLoS ONE, 2012, 7, e34759.	2.5	9
70	Reprogramming movements: extraction of motor intentions from cortical ensemble activity when movement goals change. Frontiers in Neuroengineering, 2012, 5, 16.	4.8	21
71	Virtual Active Touch Using Randomly Patterned Intracortical Microstimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 85-93.	4.9	70
72	Time-Dependent Statistical and Correlation Properties of Neural Signals during Handwriting. PLoS ONE, 2012, 7, e43945.	2.5	9

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73	Toward a whole-body neuroprosthetic. Progress in Brain Research, 2011, 194, 47-60.	1.4	41
74	Active tactile exploration using a brainâ€“machineâ€“brain interface. Nature, 2011, 479, 228-231.	27.8	605
75	Future developments in brain-machine interface research. Clinics, 2011, 66, 25-32.	1.5	96
76	Motor Planning under Unpredictable Reward: Modulations of Movement Vigor and Primate Striatum Activity. Frontiers in Neuroscience, 2011, 5, 61.	2.8	79
77	Cortical Correlates of Fittsâ€™ Law. Frontiers in Integrative Neuroscience, 2011, 5, 85.	2.1	19
78	Adaptive Decoding for Brain-Machine Interfaces Through Bayesian Parameter Updates. Neural Computation, 2011, 23, 3162-3204.	2.2	107
79	Signal-to-noise ratio of binned spike-counts and the timescales of neural coding. BMC Neuroscience, 2010, 11, .	1.9	0
80	Coherence Potentials: Loss-Less, All-or-None Network Events in the Cortex. PLoS Biology, 2010, 8, e1000278.	5.6	40
81	Unscented Kalman Filter for Brain-Machine Interfaces. PLoS ONE, 2009, 4, e6243.	2.5	165
82	Extracting kinematic parameters for monkey bipedal walking from cortical neuronal ensemble activity. Frontiers in Integrative Neuroscience, 2009, 3, 3.	2.1	166
83	A brain-machine interface instructed by direct intracortical microstimulation. Frontiers in Integrative Neuroscience, 2009, 3, 20.	2.1	136
84	Spontaneous cortical activity in awake monkeys composed of neuronal avalanches. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15921-15926.	7.1	469
85	Multitasking of Attention and Memory Functions in the Primate Prefrontal Cortex. Journal of Neuroscience, 2009, 29, 5640-5653.	3.6	34
86	Enhanced neural modulations during BMI experiments: control perspective. BMC Neuroscience, 2009, 10, .	1.9	0
87	Principles of neural ensemble physiology underlying the operation of brainâ€“machine interfaces. Nature Reviews Neuroscience, 2009, 10, 530-540.	10.2	362
88	Robust satisficing linear regression: Performance/robustness trade-off and consistency criterion. Mechanical Systems and Signal Processing, 2009, 23, 1954-1964.	8.0	6
89	Three-dimensional, automated, real-time video system for tracking limb motion in brainâ€“machine interface studies. Journal of Neuroscience Methods, 2009, 180, 224-233.	2.5	24
90	Recognition of Handwriting from Electromyography. PLoS ONE, 2009, 4, e6791.	2.5	46

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91	Unscented Kalman Filter for Brain-Machine Interfaces. , 2009, 4, e6243.		0
92	Bin-width selected for Brain-Machine Interfaces optimizes rate decoding. BMC Neuroscience, 2008, 9, .	1.9	0
93	Decoding of Temporal Intervals From Cortical Ensemble Activity. Journal of Neurophysiology, 2008, 99, 166-186.	1.8	142
94	Primate Reaching Cued by Multichannel Spatiotemporal Cortical Microstimulation. Journal of Neuroscience, 2007, 27, 5593-5602.	3.6	137
95	Cortical Modulations Increase in Early Sessions with Brain-Machine Interface. PLoS ONE, 2007, 2, e619.	2.5	54
96	Building Brainâ€“Machine Interfaces to Restore Neurological Functions. Frontiers in Neuroscience, 2007, , 219-239.	0.0	1
97	Brainâ€“machine interfaces: past, present and future. Trends in Neurosciences, 2006, 29, 536-546.	8.6	1,438
98	Continuous Shared Control for Stabilizing Reaching and Grasping With Brain-Machine Interfaces. IEEE Transactions on Biomedical Engineering, 2006, 53, 1164-1173.	4.2	101
99	A comparison of optimal MIMO linear and nonlinear models for brainâ€“machine interfaces. Journal of Neural Engineering, 2006, 3, 145-161.	3.5	104
100	Frontal and parietal cortical ensembles predict single-trial muscle activity during reaching movements in primates. European Journal of Neuroscience, 2005, 22, 1529-1540.	2.6	56
101	Cortical Ensemble Adaptation to Represent Velocity of an Artificial Actuator Controlled by a Brain-Machine Interface. Journal of Neuroscience, 2005, 25, 4681-4693.	3.6	266
102	Stable Ensemble Performance with Single-Neuron Variability during Reaching Movements in Primates. Journal of Neuroscience, 2005, 25, 10712-10716.	3.6	139
103	Simultaneus prediction of four kinematic variables for a brain-machine interface using a single recurrent neural network. , 2004, 2004, 5321-4.		14
104	Representation of Attended Versus Remembered Locations in Prefrontal Cortex. PLoS Biology, 2004, 2, e365.	5.6	232
105	Ascertaining the Importance of Neurons to Develop Better Brain-Machine Interfaces. IEEE Transactions on Biomedical Engineering, 2004, 51, 943-953.	4.2	95
106	Learning to Control a Brainâ€“Machine Interface for Reaching and Grasping by Primates. PLoS Biology, 2003, 1, e42.	5.6	1,427
107	Insights into Seeing and Grasping: Distinguishing the Neural Correlates of Perception and Action. Behavioral and Cognitive Neuroscience Reviews, 2002, 1, 108-129.	3.9	36
108	Coding of stimulus location by spike timing in rat somatosensory cortex. Neurocomputing, 2002, 44-46, 573-578.	5.9	6

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109	Somatosensory cortical neuronal population activity across states of anaesthesia. European Journal of Neuroscience, 2002, 15, 744-752.	2.6	103
110	Insights Into Seeing and Grasping: Distinguishing the Neural Correlates of Perception and Action. Behavioral and Cognitive Neuroscience Reviews, 2002, 1, 108-129.	3.9	3
111	The Role of Spike Timing in the Coding of Stimulus Location in Rat Somatosensory Cortex. Neuron, 2001, 29, 769-777.	8.1	382
112	Prefrontal Cortex Neurons Reflecting Reports of a Visual Illusion. Journal of Neurophysiology, 2001, 85, 1395-1411.	1.8	15
113	A novel food-delivery device for neurophysiological and neuropsychological studies in monkeys. Journal of Neuroscience Methods, 2001, 109, 129-135.	2.5	7
114	Tuning for the orientation of spatial attention in dorsal premotor cortex. European Journal of Neuroscience, 2001, 13, 1002-1008.	2.6	76
115	Oscillations in the premotor cortex: single-unit activity from awake, behaving monkeys. Experimental Brain Research, 2000, 130, 195-215.	1.5	77
116	Experience-dependent Plasticity of Rat Barrel Cortex: Redistribution of Activity across Barrel-columns. Cerebral Cortex, 2000, 10, 23-31.	2.9	78
117	Rhythmically firing (20â€“50 Hz) neurons in monkey primary somatosensory cortex: Activity patterns during initiation of vibratory-cued hand movements. Journal of Computational Neuroscience, 1995, 2, 313-334.	1.0	38
118	Further observations on ischaemic suppression of motor units in human soleus muscle: A single case study. Journal of Electromyography and Kinesiology, 1993, 3, 183-186.	1.7	0
119	Analysis of surface EMG of human soleus muscle subjected to vibration. Journal of Electromyography and Kinesiology, 1992, 2, 26-35.	1.7	20
120	Impairment of human soleus motor units during ischemia. Journal of Electromyography and Kinesiology, 1991, 1, 244-249.	1.7	3
121	Analysis of the interference electromyogram of the human soleus muscle under vibrational stimulation. Neurophysiology, 1991, 23, 47-54.	0.3	5