Opher Donchin

List of Publications by Year
in descending order

75 papers	4,191 citations	136950 32 h-index	128289 60 g-index
89 all docs	89 docs citations	89 times ranked	3608 citing authors

#	Article	IF	Citations
1	Quantifying Generalization from Trial-by-Trial Behavior of Adaptive Systems that Learn with Basis Functions: Theory and Experiments in Human Motor Control. Journal of Neuroscience, 2003, 23, 9032-9045.	3.6	415
2	Learned Dynamics of Reaching Movements Generalize From Dominant to Nondominant Arm. Journal of Neurophysiology, 2003, 89, 168-176.	1.8	290
3	Motor Adaptation as a Process of Reoptimization. Journal of Neuroscience, 2008, 28, 2883-2891.	3.6	283
4	Primary motor cortex is involved in bimanual coordination. Nature, 1998, 395, 274-278.	27.8	265
5	Adaptation to Visuomotor Rotation and Force Field Perturbation Is Correlated to Different Brain Areas in Patients With Cerebellar Degeneration. Journal of Neurophysiology, 2009, 101, 1961-1971.	1.8	192
6	Cerebellar regions involved in adaptation to force field and visuomotor perturbation. Journal of Neurophysiology, 2012, 107, 134-147.	1.8	164
7	A Real-Time State Predictor in Motor Control: Study of Saccadic Eye Movements during Unseen Reaching Movements. Journal of Neuroscience, 2002, 22, 7721-7729.	3.6	143
8	Behavioural and neural basis of anomalous motor learning in children with autism. Brain, 2015, 138, 784-797.	7.6	117
9	Mechanisms Influencing Acquisition and Recall of Motor Memories. Journal of Neurophysiology, 2002, 88, 2114-2123.	1.8	116
10	Single-Unit Activity Related to Bimanual Arm Movements in the Primary and Supplementary Motor Cortices. Journal of Neurophysiology, 2002, 88, 3498-3517.	1.8	112
11	A Gain-Field Encoding of Limb Position and Velocity in the Internal Model of Arm Dynamics. PLoS Biology, 2003, 1, e25.	5.6	108
12	Behavioral effects of lipopolysaccharide in rats: involvement of endogenous opioids. Brain Research, 1994, 648, 80-86.	2.2	102
13	Neural interactions between motor cortical hemispheres during bimanual and unimanual arm movements. European Journal of Neuroscience, 2001, 14, 1881-1896.	2.6	99
14	Acquisition of internal models of motor tasks in children with autism. Brain, 2008, 131, 2894-2903.	7.6	98
15	Interleukin-1 Inhibits Sexual Behavior in Female but Not in Male Rats. Brain, Behavior, and Immunity, 1995, 9, 220-233.	4.1	92
16	Awareness of Sensorimotor Adaptation to Visual Rotations of Different Size. PLoS ONE, 2015, 10, e0123321.	2.5	89
17	Neuronal populations in primary motor cortex encode bimanual arm movements. European Journal of Neuroscience, 2002, 15, 1371-1380.	2.6	81
18	Impact of Transcranial Direct Current Stimulation (tDCS) on Neuronal Functions. Frontiers in Neuroscience, 2016, 10, 550.	2.8	73

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19	Current advances in lesion-symptom mapping of the human cerebellum. Neuroscience, 2009, 162, 836-851.	2.3	72
20	Local field potentials related to bimanual movements in the primary and supplementary motor cortices. Experimental Brain Research, 2001, 140, 46-55.	1.5	62
21	Pop-out in visual search of moving targets in the archer fish. Nature Communications, 2015, 6, 6476.	12.8	60
22	Pausing Purkinje cells in the cerebellum of the awake cat. Frontiers in Systems Neuroscience, 2009, 3, 2.	2.5	58
23	Dissociating Visual and Motor Directional Selectivity Using Visuomotor Adaptation. Journal of Neuroscience, 2015, 35, 6813-6821.	3.6	56
24	Behavioral Effects of Interleukin-1Î²: Modulation by Gender, Estrus Cycle, and Progesterone. Brain, Behavior, and Immunity, 1995, 9, 234-241.	4.1	54
25	Individual Movement Variability Magnitudes Are Explained by Cortical Neural Variability. Journal of Neuroscience, 2017, 37, 9076-9085.	3.6	51
26	Representation of edges, head direction, and swimming kinematics in the brain of freely-navigating fish. Scientific Reports, 2020, 10, 14762.	3.3	50
27	Internal Models and Contextual Cues: Encoding Serial Order and Direction of Movement. Journal of Neurophysiology, 2005, 93, 786-800.	1.8	49
28	Methods matter: Your measures of explicit and implicit processes in visuomotor adaptation affect your results. European Journal of Neuroscience, 2021, 53, 504-518.	2.6	48
29	Into the Square and out of the Box: The effects of Quadrato Motor Training on Creativity and Alpha Coherence. PLoS ONE, 2013, 8, e55023.	2.5	43
30	Cerebellar patients do not benefit from cerebellar or M1 transcranial direct current stimulation during force-field reaching adaptation. Journal of Neurophysiology, 2017, 118, 732-748.	1.8	43
31	Who Tells One Hand What the Other Is Doing. Neuron, 1999, 23, 15-18.	8.1	42
32	Timing of bimanual movements in human and non-human primates in relation to neuronal activity in primary motor cortex and supplementary motor area. Experimental Brain Research, 2002, 146, 322-335.	1.5	40
33	Mini-review: The Role of the Cerebellum in Visuomotor Adaptation. Cerebellum, 2022, 21, 306-313.	2.5	35
34	Effector-Invariant Movement Encoding in the Human Motor System. Journal of Neuroscience, 2017, 37, 9054-9063.	3.6	33
35	Ageing shows a pattern of cerebellar degeneration analogous, but not equal, to that in patients suffering from cerebellar degenerative disease. NeuroImage, 2015, 116, 196-206.	4.2	32
36	Intermanual transfer of visuomotor adaptation is related to awareness. PLoS ONE, 2019, 14, e0220748.	2.5	30

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37	TMS motor mapping: Comparing the absolute reliability of digital reconstruction methods to the golden standard. Brain Stimulation, 2019, 12, 309-313.	1.6	29
38	Individual Differences in Motor Noise and Adaptation Rate Are Optimally Related. ENeuro, 2018, 5, ENEURO.0170-18.2018.	1.9	28
39	Cerebellar Transcranial Direct Current Stimulation Effects on Saccade Adaptation. Neural Plasticity, 2015, 2015, 1-9.	2.2	27
40	Stimulation of PPC Affects the Mapping between Motion and Force Signals for Stiffness Perception But Not Motion Control. Journal of Neuroscience, 2016, 36, 10545-10559.	3.6	27
41	Wireless electrophysiology of the brain of freely swimming goldfish. Journal of Neuroscience Methods, 2017, 278, 76-86.	2.5	26
42	A Revised Computational Neuroanatomy for Motor Control. Journal of Cognitive Neuroscience, 2020, 32, 1823-1836.	2.3	26
43	Forward models and state estimation in compensatory eye movements. Frontiers in Cellular Neuroscience, 2009, 3, 13.	3.7	25
44	Structural correlates of motor adaptation deficits in patients with acute focal lesions of the cerebellum. Experimental Brain Research, 2014, 232, 2847-2857.	1.5	24
45	Archer fish fast hunting maneuver may be guided by directionally selective retinal ganglion cells. European Journal of Neuroscience, 2012, 35, 436-444.	2.6	20
46	Visual receptive field properties of cells in the optic tectum of the archer fish. Journal of Neurophysiology, 2013, 110, 748-759.	1.8	20
47	Deficient Use of Visual Information in Estimating Hand Position in Cerebellar Patients. Journal of Neuroscience, 2012, 32, 16274-16284.	3.6	19
48	Time Production and EEG Alpha Revisited. NeuroQuantology, 2009, 7, .	0.2	16
49	Cerebellar tDCS Does Not Enhance Performance in an Implicit Categorization Learning Task. Frontiers in Psychology, 2017, 08, 476.	2.1	16
50	Measures of explicit and implicit in motor learning: what we know and what we donâ€™t. Neuroscience and Biobehavioral Reviews, 2021, 128, 558-568.	6.1	16
51	Representing delayed force feedback as a combination of current and delayed states. Journal of Neurophysiology, 2017, 118, 2110-2131.	1.8	14
52	Cerebellar transcranial direct current stimulation interacts with BDNF Val66Met in motor learning. Brain Stimulation, 2018, 11, 759-771.	1.6	14
53	Eye Movements during Visuomotor Adaptation Represent Only Part of the Explicit Learning. ENeuro, 2019, 6, ENEURO.0308-19.2019.	1.9	13
54	Spontaneous Activity Does Not Predict Morphological Type in Cerebellar Interneurons. Journal of Neuroscience, 2015, 35, 1432-1442.	3.6	12

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55	Cerebellar tDCS does not improve performance in probabilistic classification learning. Experimental Brain Research, 2017, 235, 421-428.	1.5	12
56	Impairment of Long-Term Plasticity of Cerebellar Purkinje Cells Eliminates the Effect of Anodal Direct Current Stimulation on Vestibulo-Ocular Reflex Habituation. Frontiers in Neuroscience, 2017, 11, 444.	2.8	12
57	How to help cerebellar patients make the most of their remaining learning capacities. Brain, 2019, 142, 492-495.	7.6	7
58	Learning Dynamics of Reaching. Frontiers in Neuroscience, 2004, , .	0.0	7
59	Correlations in state space can cause sub-optimal adaptation of optimal feedback control models. Journal of Computational Neuroscience, 2012, 32, 297-307.	1.0	6
60	A Neuroanatomically Grounded Optimal Control Model of the Compensatory Eye Movement System in Mice. Frontiers in Systems Neuroscience, 2020, 14, 13.	2.5	5
61	Superposition Violations in the Compensatory Eye Movement System. , 2016, 57, 3554.		4
62	Recognition of natural objects in the archerfish. Journal of Experimental Biology, 2022, 225, .	1.7	4
63	Individual differences in error-related frontal midline theta activity during visuomotor adaptation. NeuroImage, 2021, 245, 118699.	4.2	4
64	Haptic Human-Robot Interaction. IEEE Transactions on Haptics, 2012, 5, 193-195.	2.7	3
65	Lesion-Symptom Mapping of the Human Cerebellum. , 2013, , 1627-1656.		3
66	Cerebellar involvement in categorisation: a bipolar tDCS study.. Brain Stimulation, 2014, 7, e4.	1.6	2
67	Polarity-dependent effects of trans-cranial direct current stimulation (tDCS) in cerebellar learning depends on the state of neuronal network. Brain Stimulation, 2014, 7, e3.	1.6	2
68	Pharmacological study of direction selectivity in the archer fish retina. Journal of Integrative Neuroscience, 2015, 14, 473-490.	1.7	2
69	Asymmetric generalization in adaptation to target displacement errors in humans and in a neural network model. Journal of Neurophysiology, 2015, 113, 2360-2375.	1.8	2
70	Long-range neural inhibition and stimulus competition in the archerfish optic tectum. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2019, 205, 537-552.	1.6	2
71	Lesion-Symptom Mapping. , 2016, , 489-497.		1
72	Prolonged feedback duration does not affect implicit recalibration in a visuomotor rotation task. ENeuro, 2022, , ENEURO.0447-21.2022.	1.9	1

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73	A zetetic's perspective on gesture, speech, and the evolution of right-handedness. Behavioral and Brain Sciences, 2003, 26, .	0.7	0
74	Where in the brain does the forward model lurk?. Behavioral and Brain Sciences, 2004, 27, 402-403.	0.7	0
75	Long Pauses in Cerebellar Interneurons in Anesthetized Animals. Cerebellum, 2017, 16, 293-305.	2.5	0